



# Carbon footprint digital mail

Kivra Sweden carbon footprint report 2024  
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# Content

1. Summary .....	5
2. Introduction .....	6
2.1 Participants.....	6
3. Method.....	7
3.1 Purpose .....	7
3.2 Service description .....	7
3.3 Functional unit.....	8
3.4 Reference flow .....	8
3.5 Organizational boundaries and business boundaries .....	8
3.6 System description .....	9
3.7 Land use and land use change (LULUC).....	12
3.8 Allocation .....	12
3.9 Data collection and data quality .....	12
3.10 Environmental impact assessment .....	15
3.11 Generalizability of the results.....	15
3.12 Third-party review .....	15
4. Additional information on selected areas.....	16
4.1 Purchase of goods and services.....	16
4.2 Upstream leased assets.....	19
4.3 Business travel .....	19
4.4 Commuting .....	19
4.5 User device .....	20
4.6 Investments and pensions.....	20
5. Results .....	22
5.1 Total climate impact and climate impact per shipment .....	22
5.2 Climate impact by category .....	23

5.3 Climate impact per digital document .....	25
6. References.....	27
7. Appendix Reporting principles according to the Greenhouse Gas Protocol .....	32

# Preface

For over a decade, we have built a platform that connects verified businesses, authorities, and citizens. A platform that makes it easy to communicate, grow businesses, and build relationships. As an important societal infrastructure in Sweden, Kivra's ongoing mission is to deliver a sustainable service from a number of perspectives. And today, we help over six million users in Sweden to receive their important documents digitally, which is around 300 000 more users compared to the end of 2023.

In total, we helped Sweden deliver 626 million digital letters and receipts in 2024. This is an increase of 80 million digital documents compared to the previous year. Letters that otherwise would have been printed on paper, enveloped, and transported are instead sent via Kivra. The carbon footprint of letters sent digitally via Kivra is 38 times lower than if they were sent via paper mail. In total, we have helped to reduce close to 6 000 tons of CO<sub>2</sub>e from being emitted into the atmosphere in 2024 (Kivra's Environmental Calculator, 2024).

Our own CO<sub>2</sub>e footprint for 2024 was 173 tons. This is an increase of 12% from the previous year. Foremost, we have done investments in our office. Making it more suitable for more employees coming back to the office with less remote working. Therefore, purchases to the office have increased. We also have employees that do not have Stockholm, or Sweden, as their main workplace. These employees travel more to work, due to the fact that we have more physical mandatory gatherings. This has also led to increased business travels.

The carbon footprint per content is still 0.28g CO<sub>2</sub>e, when calculating both letters and receipts. It is the same level as previous year and 69% lower than the first climate report in 2018. Our goal still remains to continue innovating our service in a sustainable direction - for our common environment and for society.

We would like to extend a big thank you to U&We, once again, for their help with this report. And to you who are reading this report, we welcome feedback on improvements. We look forward to continuing to drive digitalization for a safer and more sustainable world where everyone is included.

Henrik Lönnevi  
CEO, Kivra

Emelie Kagstedt  
Chief Sustainability Officer, Kivra

# Abbreviations

AR4	IPCC Assessment report 4 (2007)
AR5	IPCC Assessment report 5 (2013)
AR6	IPCC Assessment report 6 (2021)
CO <sub>2e</sub>	Carbon dioxide equivalents
EF	Emission factor
EPD	Environmental Product Declaration
GHG	Greenhouse gas
GHGP	Greenhouse Gas Protocol
GWP	Global Warming Potential
IPCC	Intergovernmental panel on climate change
LCA	Life cycle assessment, life cycle analysis
LU	Land use
LUC	Land-use change
PCR	Product Category Rules
RFI	Radiative forcing index

# 1. Summary

Kivra AB (Kivra) has, together with the consulting company U&We, calculated its total climate impact for the calendar year 2024 in accordance with the Greenhouse Gas Protocol. The scope of the calculation was the entire value chain for delivery of digital documents to users in Sweden, including all Kivra's operations. This corresponds to Scope 1, Scope 2 and all relevant categories in Scope 3.

The purpose of the calculation has been to follow up on Kivra's climate impact and to inform Kivra's stakeholders on the work that Kivra does to ensure that Kivra's services have a low climate footprint.

The calculations are based on internal data from Kivra and from Kivra's suppliers, in combination with generic data and emission factors from life cycle analyses, databases, scientific articles and published studies.

Kivra's climate impact was 173 tonnes of CO<sub>2</sub>e, including 2 tonnes of biogenic carbon dioxide (out of scope). The total impact divided on all letters and receipts correspond to 0.28 grams of CO<sub>2</sub>e per document. Kivra's impact increased by 12 percent compared to the previous year, the volume of items increased by 15 percent, and the impact per digital document showed a decrease of 3 percent.

Climate impact arises primarily in Kivra's operations, where purchases of food (8 percent), other consumables and furniture (29 percent), electronics (19 percent), business travel (17 percent) and pensions provisions (13 percent) were the major sources of emissions in 2024. Emissions from the purchase of food, consumables, furniture (plus 16 tonnes of CO<sub>2</sub>e) and business travel (plus 11 tonnes of CO<sub>2</sub>e) showed the largest increases. Emissions from pension provisions (minus 3.9 tonnes of CO<sub>2</sub>e), leases (minus 3.3 tonnes of CO<sub>2</sub>e), commuting (minus 2.1 tonnes of CO<sub>2</sub>e) and energy use at the office (minus 1.8 tonnes of CO<sub>2</sub>e) decreased. Kivra's production (server operation, scanning and printing service) had a climate impact of 7.4 tonnes of CO<sub>2</sub>e. Approximately 5.3 tonnes of CO<sub>2</sub>e came from renewable electricity and fuel for backup generators used to operate servers and the server hall.

Kivra buys carbon offsets for its total climate impact based on the results presented in this report.

## 2. Introduction

Kivra, together with U&We, has performed an annual climate assessment aligned with the Greenhouse Gas Protocol since 2018. The climate assessment is used to follow up Kivra's climate impact and to inform Kivra's stakeholders. Kivra also has a positive impact on the climate by avoiding greenhouse gas emissions as Kivra's service replaces other ways of delivering shipments with a higher climate impact. Neither Kivra's impact in areas other than climate nor Kivra's contribution to avoided emissions is included in this calculation. To read more about Kivra's positive impact, see, for example, Kivra's Environmental Calculator.

During 2024, Kivra has not made any significant changes, but the business has continued to grow in both the number of employees and the number of new users, senders and digital documents.

For several reasons, which you can read about in this report, Kivra already has a low carbon footprint compared to other ways of sending mail. Kivra continues to work actively to reduce its climate impact, for example through the purchase of used electronics for server operations, agreements on renewable electricity in the office and in the server hall, and agreements on occupational pensions with a relatively low climate impact.

Only minor methodological changes have occurred compared to the previous report. The scope of the report is somewhat decreased this year, with the aim of focusing on material areas.

### 2.1 Participants

Emelie Kagstedt, Chief Sustainability Officer at Kivra has been responsible for coordinating the data collection.

Håkan Emilsson and Katrin Dahlgren have participated in the work from U&We.

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### 3. Method

The calculations and the report meet the criteria in the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard Revised Edition (WRI 2004), the Greenhouse Gas Protocol Scope 2 Guidance (WRI 2015) and the Greenhouse Gas Protocol Value Chain (Scope 3) Reporting and Accounting Standard (WRI 2011).

The study is based on data relating to the calendar year 2024 and the results presented in this report relate to the same period.

The calculations are based on data from Kivra and from Kivra's suppliers, as well as generic data and emission factors from life cycle analyses, databases, scientific articles and other studies.

The results of the study are a consequence of the current state of scientific knowledge and prevailing standards and practices for calculations, which together with changes in operations are the main reasons why regular updates are recommended. For example, for calculating the climate impact of business travel by air, there are relatively large uncertainties in the methodology. For aviation, it is mainly the so-called high-altitude effect<sup>1</sup> that is uncertain, therefore an RFI factor of 1.7 is used, which is in line with what researchers recommend (Lee et al 2021).

#### 3.1 Purpose

The purpose is to calculate Kivra's climate assessment for the year 2024 and simultaneously update the calculation of the climate footprint of Kivra's services.

#### 3.2 Service description

Kivra mediates digital documents, such as mail and receipts, and offers a digital archive where the user can save documents indefinitely, to private individuals and companies in Sweden (see Table 3).

Kivra's senders are authorities, companies and organizations. Kivra also offers several additional services such as a scanning service for customers who want to have all their mail collected in Kivra, a signing service and a printing service of payslips for recipients who do not yet have a Kivra digital mailbox.

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<sup>1</sup> Water vapor and nitrogen oxides have a high climate impact because they are released at high altitude.



**Table 3. Kivra's users and senders at the end of the last three years. Users refer to private individuals and companies that receive important messages via Kivra's service and senders include those who send digital documents.**

	2024	2023	2022	2021
<b>Users</b>	6,245,490	5,941,199	5,604,256	5,072,293
<b>Senders</b>	51,270	46,365	39,394	32,000

All Kivra's services are included in this study and are reported on the main service of digital mail forwarding. Separate KPIs are also reported for the climate impact of mail and receipts respectively.

### 3.3 Functional unit

The functional unit for the services' climate footprint is defined as the delivery of a digital document. The choice is inspired by PCR UN CPC 6811 2014:01 (now expired) where the functional unit for letter services is proposed to be "delivery of a gram of letter to the recipient". Focusing on a digital document rather than a mailbox (user) has been deemed a good way to handle the rapidly increasing use of Kivra's services.

### 3.4 Reference flow

The reference flow is the 626 million documents sent with Kivra in 2024, of which 326 million were letters and 300 million were receipts.

### 3.5 Organizational boundaries and business boundaries

Kivra Sverige AB is Kivra AB's wholly owned subsidiary in Sweden. The holding company Kivra AB does not have its own operations, but some people at Kivra in Sweden are employed through Kivra AB. Both companies are included in the calculation.

Kivra AB started operations in Finland in 2018 through its subsidiary Kivra Oy with the aim of conducting similar operations as in Sweden. This is a joint venture with other companies and Kivra AB. The first shipments in Finland were sent in 2019 and Kivra Oy will prepare its own climate accounts from 2020 onwards.

Kivra Global IP AB is a legal entity that owns the intellectual property rights to, among other things, the brand "Kivra" and thus has no climate impact of its own.

Figure 1. Organizational chart of the Kivra companies. White background = included in the calculation.



### 3.6 System description

The climate assessment includes all steps in the product's value chain from cradle to grave, divided into scope 1, scope 2 and scope 3.

#### 3.6.1 Included processes

Table 4 presents the activities included in the calculations, divided by scope and categories in accordance with the Greenhouse Gas Protocol Corporate Value. Chain (Scope 3) Reporting Standard.

Table 4. Distribution of activities between different scopes and categories (GHGP 2014).

Scope	Category	Activities or comment
Scope 1	Direct emissions	Kivra has no direct emissions
Scope 2	Indirect emissions from production of purchased energy	Electricity, district heating and district cooling used in the office and electricity for Kivra's owned and leased servers in the server hall (computer load).
Scope 3	Purchasing of goods and services	Production of purchased food, office supplies, electronics (including servers, computers, mobile phones, screens) and office furniture. Purchase of services such as operation of the server hall where Kivra has its servers (electricity for ventilation and lighting, fuel for backup generator), scanning

Scope	Category	Activities or comment
		(electricity consumption) and printing service (electricity consumption and paper).
	Capital goods	Not relevant
	Activities related to fuel and energy production that are not included in scope 1 or scope 2	Transmission and distribution losses from the transmission of electricity. Upstream emissions to produce all energy consumed in scope 2, as well as the transport of fuel used in energy production.
	Transportation and distribution (upstream)	Office deliveries of food, furniture, electronics and mail.
	Waste generated in the business	Collection and handling of office waste and electronic waste.
	Business trips	Travel by plane, taxi, and train, as well as overnight stays in hotels.
	Commuting	Commuting trips by public transport, car, bicycle and walking, as well as energy consumption when working at home.
	Leased assets (upstream)	Agreements for leasing printers, water dispensers with cooling and coffee machines entered into during the year. No new leases in 2024.
	Transportation and distribution (downstream)	Not relevant
	Processing of sold products	Not relevant
	Use of sold products	The electricity consumption for the user to use the service including the transmission of information via the Internet and the telephone network.
	Disposal of sold products	Not relevant
	Leased assets (downstream)	Not relevant
	Franchising	Not relevant
	Investments	Pension provisions

### 3.6.2 Criteria for boundaries and excluded processes

The basic principle of this climate assessment is that all processes should be included, and that deviations should be justified (in accordance with the principle of completeness, WRI 2013, p. 23).

In this study, a few processes have been excluded due to a lack of sufficient information to reliably calculate their climate impact, see Table 5. A rough estimate has been made of the climate impact of each excluded process and the contribution has been estimated to be less than 1 percent.

**Table 5. Excluded processes and justification for exclusion**

Subsystem	Justification
<b>Manufacturing of the user's device</b>	The energy use for using Kivra's service has been included, but the manufacturing of the electronics used has not been included because computers/phones are used for many different purposes.
<b>Bicycle trips and bicycle couriers</b>	No climate impact from bicycle couriers or bicycle trips for commuting purposes has been included in this study; this impact is assumed to be negligible given that the climate impact of bicycle production is small in relation to how many couriers it is expected to deliver.
<b>Leased houseplants for the office</b>	As detailed data and relevant reference products are lacking, and the contribution to the overall climate accounts is assumed to be limited, these have been excluded.
<b>Changed land use</b>	Kivra predominantly purchases paper products from Scandinavian forests, and is therefore assessed to have an insignificant contribution to land use change (e.g. deforestation), see 5.10.

No future climate impact savings for waste to recycling or burdens for input materials have been included in this study (sometimes used for open-loop recycling). For office and server room waste, the system boundary is at delivery to the waste management facility.

3.6.3 System limits in time

Carbon is stored, for example, in food, furniture, packaging materials and biofuels. Only a few of these products have a lifespan longer than ten years, so the effect of carbon storage in products and delayed emissions has been assessed as not relevant in this study. All emissions and carbon storage have been calculated as if they were released or absorbed directly.

3.7 Land use and land use change (LULUC)

Kivra has a potential impact on land use and land use change through its purchases of energy, food, paper, furniture and the fuel in the supplies Kivra purchases. Kivra is not a FLAG company (Forest, Land and Agriculture sector) and the potential climate impact from LULUC is assessed to be marginal in relation to Kivra’s total carbon footprint. The impact of land use is included in the EPDs on energy production and furniture used in the assessment, and in several of the LCAs on food.

3.8 Allocation

Kivra's total climate impact is allocated to letters and receipts based on the total volume (the number of letters and receipts respectively, multiplied by average size). Since letters are significantly larger on average (149 kb/piece versus 12 kb/piece), they constitute 93 percent of the number of digital documents.

For heating the office, the total use for the property has been allocated to Kivra based on Kivra’s share of the floor area.

3.9 Data collection and data quality

Specific data has been used as much as possible, but for some upstream and downstream processes generic data has been used instead (Table 7). All data is for the year 2024, unless otherwise stated.

Table 6. Description of data quality for different life cycle stages

Lifecycle stages	Description of data quality
Electricity, heating and cooling (office)	Office electricity: Specific information from the electricity company. Specific emission factor from the electricity company on the climate impact of their electricity mix (GodEl 2025 (unpublished)). Property electricity: Specific information about consumption and origin (renewable) for the entire

Lifecycle stages	Description of data quality
	<p>property, distributed between different tenants based on floor area.</p> <p>District heating and cooling: Specific information from property values, allocated based on Kivra's share of the property (floor area). Specific emission factor for the producer in the local network (Stockholm Exergi 2024).</p> <p>Working from home: Specific information in the 2025 employee survey on the distribution of work at home and in the office and what equipment is used to work from home. Climate impact calculated as average electricity (grid mix) for everyone regardless of agreement.</p>
<b>Electricity and cooling (server hall)</b>	<p>Specific information from the supplier on energy use in the servers (specific to Kivra) and a template from 2018 on the distribution of electricity consumption between energy use in the servers and operation of the server hall.</p> <p>Specific information on total fuel use for backup generators, but no distribution key for Kivra's share of the entire server hall. Assumed that Kivra is responsible for the entire consumption of fuel in the server hall.</p>
<b>Purchasing electronics</b>	<p>Specific information from Kivra about purchased electronics for the office (numbers divided into categories such as computers, mobile phones, projectors, screens, etc.) and for the server room.</p>
<b>Data traffic</b>	<p>Updated standard for electricity use for the transmission of information via the Internet and over the telephone network (Traficom 2023). Information about letters and receipts sent, notification emails and specific information from Kivra's cloud service provider. Grid mix has been used for electricity in data transmission, as Kivra is not considered to be able to choose between different telephone networks or fixed networks that their customers are connected to.</p>
<b>Purchasing for the office</b>	<p>Specific data from Kivra on purchases of food, consumables and furnishings. Aggregated by category for calculation, with estimated weights in relevant cases where weights were missing from the data. Where weights or meaningful counts were missing, spend data has been used.</p>
<b>Marketing</b>	<p>Specific information from Kivra about campaigns and layout. Information from the supplier about the number of posters and/or display areas as well as format and in</p>

Lifecycle stages	Description of data quality
	some cases paper weight. Conversion to material and calculation with general emission factors for poster paper and energy use in large-screen displays. Information about marketing in social media and general information about energy use for data transmission via the internet.
<b>Receipt</b>	Information from public sources about vehicle type and warehouse address for suppliers where such information was available. Assumption about vehicle type, fill level, etc. based on previous experience of transport calculations.
<b>Waste (office)</b>	Specific information from the property manager on waste volumes collected at the office.
<b>Business trips</b>	Specific information from Kivra; compilation of numbers and destinations of flights, train journeys and taxis, as well as number of hotel nights.
<b>Commuting</b>	Commuting statistics from the 2025 employee survey, extrapolated from the number of respondents to all employees.
<b>Use</b>	Specific information from Kivra about the average length (time) that users use the service and the distribution across different types of devices used. Assumption of electricity consumption in units based on general information. The Swedish average electricity mix (grid mix) is used for the calculation, as Kivra does not have the ability to influence which electricity contract their users have.
<b>Investments</b>	Specific information about Kivra's pension provisions. Information about the climate impact of current investments. Kivra has no investments in other companies.

The generic data has been used based on a precautionary principle, which means that we have chosen activity data or climate intensity data that are unlikely to underestimate actual emissions.

Previously, the purpose of the calculation was to quantify how much Kivra needed to carbon offset, to ensure that it offset at least as much as the climate impact it caused. For this purpose, a safety margin of 10percent was used and added to the result before publication, which was considered sufficient to ensure that Kivra would not underestimate its total climate impact. The purpose of the calculation has

gradually changed and the need for a safety margin no longer exists. Instead, the GHG Protocol's principle of precision, where the goal is to neither overestimate nor underestimate the climate impact, is becoming more prominent.

### **3.10 Environmental impact assessment**

All Kyoto gases stipulated by The Greenhouse Gas Protocol are included in the assessment. The climate impact of greenhouse gas emissions and removals has been calculated using the characterization factors from AR5 GWP-100 with feedbacks (IPCC 2013). Emissions of biogenic carbon dioxide have been included where available from underlying studies or databases.

In cases where information on emissions of various greenhouse gases was not available, information on the climate impact of the process has been used instead (expressed as carbon dioxide equivalents, CO<sub>2</sub>e).

### **3.11 Generalizability of the results**

These results are specific to Kivra's digital mail in Sweden and not directly generalizable to Kivra's services in Finland or other digital services. The results are specific to the period from 2024-01-01 to 2024-12-31. The calculation should be updated annually to be in line with Kivra's offering, sales and current knowledge of climate calculations of digital services.

### **3.12 Third-party review**

This report and the underlying calculations have not been reviewed by a third party prior to publication.



## 4. Additional information on selected areas

The following is a brief in-depth look at emission data and method choices within a few selected areas.

### 4.1 Purchase of goods and services

#### 4.1.1 Server operation

Kivra's server room supplier uses electricity to operate servers (computer load), electricity for the pump that drives the heating and ventilation, electricity for lighting and electricity for other operations of the building. The supplier also has backup generators to operate the server space during shorter periods of power supply disruptions.

In 2024 Kivra used both its own servers and leased servers. Kivra has control over the use of the leased servers, but their supplier has control over the electricity contract. GHGP states that in cases where the company rents, for example, space and uses an *operational control approach*, purchased energy should be recorded in scope 2 (GHGP Scope 2 Guidance, page 34), therefore the emissions from all servers in the server hall have been recorded in scope 2 regardless of whether Kivra owns or leases them. However, electricity consumption in the server hall for e.g. cooling and lighting has been interpreted as a service that Kivra purchases (and does not have direct control over) and recorded in scope 3 category 1.

The server space supplier has a contract for renewable electricity certified Bra Miljöval. No information was available on the specific origin of the electricity. Instead, statistics from the Swedish Society for Nature Conservation were used on the mix for Bra Miljöval (SNF 2022). Emission factors for hydropower and wind power from Vattenfall (EPD SP-00088; EPD SP-01435), solar power converted to Swedish conditions (Lindahl, 2018), and emission factors for bio-based CHP from Energiföretagen Sverige (2023) (assuming that the fuel is primary wood fuels, which is a conservative assumption) were used.

#### 4.1.2 Digital services

Climate impact from the digital services Kivra uses have been reported by the supplier. This includes the AI service that Kivra has access to.

### 4.1.3 Data traffic

The information stored on Kivra's servers is sent to the user's device via the internet and the mobile phone network. Email notifications, Kivra's own internal communication, and the use of digital services also use the internet. The climate impact from data traffic over the internet comes from electricity use in the devices that connect the network itself (name servers, switches etc.).

Trafficom (2022) collected specific information from the largest telecommunications companies in Finland and published the energy consumption for transmission of data that are used in this assessment for Kivra.

Since Kivra cannot themselves influence which infrastructure their users use to utilize their service, the climate impact has been calculated as a national electricity mix (grid mix), in line with the GHG protocol's guidance.

### 4.1.4 Purchasing scanning and printing services

Kivra offers, through subcontractors, a service for scanning of paper mail (so that the user receives all mail collected in their digital mailbox), and another service for printing (for users who have not yet chosen to receive digital mail).

Kivra can influence suppliers, make specific demands on them, and can change suppliers if they are not satisfied. Kivra has not yet collected supplier-specific values for climate impact. Instead, in this assessment, assumptions have been made about how much electricity is used for each service, and the climate impact has been calculated based on electricity consumption. For these services, the climate impact is calculated according to a market-based method with climate factors for residual electricity, which corresponds to how the suppliers themselves would proceed if they prepared a climate calculation. However, since this is not Kivra's electricity consumption but climate impact in Kivra's Scope 3, it is a deviation from the Greenhouse Gas Protocol (as the guidance on how market-based instruments should be applied only applies to Scope 2).

### 4.1.5 Purchasing of services related to marketing

Kivra's purchasing of marketing services varies from year to year. Historically, this has included paper advertisements in, for example, subways, out-of-home marketing (OOH) on large digital screens, advertisements in digital channels and various forms of paper products and giveaways. To estimate the climate impact of these services, a

division has been made between digital products and physical products (primarily paper). For digital products, assumptions about energy consumption have been made to calculate the total consumption of electricity for the message to reach the recipient. For transmission via the network and the recipient's equipment, the national electricity mix (grid mix) has been used in accordance with the GHG Protocol's guidance, but for out-of-home marketing specifically, the same reasoning has been applied as for scanning and printing (see 4.1.4) etcetera.

#### **4.1.6 Consumables**

Input data from Kivra are purchased consumables and office supplies (cleaning products, hygiene paper, copy paper, envelopes, plastic pockets, etc.) in count and in some cases including an estimate of the weight of these materials. In most cases spend data has been used, from Upphandlingsmyndigheten (2022), except for cleaning supplies where climate data is taken from (Axfood 2011).

#### **4.1.7 Food**

Input data are purchases from suppliers of food, fruit and delivered meals, with specification and weight, count or spend data. All food purchases have been categorized and in some cases input data has been supplemented with weight assumptions where relevant. Emission factors from Rööös (2014) and Upphandlingsmyndigheten (2022) have mainly been used for food.

Since the production of food is not part of the product's core process, a deeper analysis of the origin of the raw materials and production conditions has not been investigated or considered in the study.

#### **4.1.8 Furniture**

Input data is purchases of furnishings (e.g. desks, office chairs) from invoices. For furniture, there are EPDs of similar products (NEPD-3607-2538-EN, EPD S-P-03829, EPD SP-05928, EPD-EIS-0017726) that have been assessed as sufficient to cover the climate impact of some of the products Kivra purchased during the year. For the remainder, spend-based factors have been applied. For other fittings, we have made estimates based on the material and weight of the products and used emission factors for relevant materials. The volume of purchased furnishings varies greatly from year to year, and some furniture purchases have been reported for 2024 (none in 2023).

#### **4.1.9 Office electronics**

Electronics purchased for the office partially replace discarded equipment and otherwise meet business growth. Approximately 22 percent of purchased items have been calculated using specific product carbon footprint data for the product or a very close similar product. These are mainly computers, screens, phones and similar items. 55 percent of items have been calculated based on weight, with a generic electronics factor (DESNZ 2024), and these are mainly peripherals. 23 percent have been calculated based on estimated material composition, and this is mainly products that are not electronics, but rather screen covers, phone cases etcetera.

### **4.2 Upstream leased assets**

Kivra entered into no new leasing agreements in 2024, apart from a few additional office plants that have been excluded from the calculation (see Table 5 in 3.6.2). The leased equipment is managed as capital goods and 100 percent of the equipment's climate impact from manufacturing is included in the procurement year's calculation according to the same principle as previous leasing agreements and purchases of mechanical equipment.

In 2024, Kivra leased several servers in a server hall, in addition to the servers that Kivra owns. The climate impact from the operation of these is managed as if Kivra owned the servers (read more in 5.1.1). No climate impact from the manufacturing of these leased servers has been included.

### **4.3 Business travel**

Information about staff business travel and overnight stays has been collected by Kivra and refers to the period January 2024 to December 2024. Most flights are in economy class. Route information has been provided by Kivra. Emissions data has been obtained from DESNZ (2024), Naturvårdsverket (2024), SJ (2023), and EcoOnline (2024).

### **4.4 Commuting**

Data on commuting comes from Kivra's commuting survey conducted during the winter of 2024/2025. In cases where the respondent has indicated more than one option, we have assumed a distribution according to Table 7. For those who did not respond to the survey, we have extrapolated data based on those who did. Emissions data for the respective travel methods has been obtained from Naturvårdsverket

(2024). For electricity use when working from home, Swedish average electricity has been used (grid-mix), regardless of which type of electricity contract the employee has signed.

Table 7. Distribution of commuting trips

	If three options	If two options	If 1 option
Option 1	60%	65%	100%
Option 2	30%	35%	
Option 3	10%		

4.5 User device

The use of Kivra's service involves users logging into Kivra and reading their letters and receipts via a handheld device (mobile or tablet) or computer (laptop or desktop). The use results in energy use in the user's device and it is the production of this energy that contributes to the climate impact of the use-phase. Mobile devices and laptops have a relatively low electricity consumption compared to desktop computers.

Kivra has provided information on the proportion of users using different devices and how long the service is used. Energy use has then been calculated based on an assumed power on mobile devices of 3 W (Ericsson, 2020), laptop of 50 W (EON, 2020), and desktop computer of 300 W (EON, 2020). Climate impact has been calculated as the average electricity mix in Sweden.

4.6 Investments and pensions

Investments are an optional category for companies that are not private financial institutions (for example, commercial banks or credit institutions) (WRI 2015, page 51), and pension provisions are a type of investment that is optional to include (page 54, Other investments or financial services).

Kivra includes pensions on the basis that it makes the calculations more complete and Kivra's communication more credible.

Kivra has a collective agreement and allocates money for the employees' pension through a supplier. Kivra's employees' occupational pension is invested in a specific fund (non-choice option) if the employee does not make an active choice.

The fund that Kivra's supplier invests in contains both shares, interest-bearing securities and properties. The supplier provides information about the fund's climate impact relating to the equity portion of the portfolio. We have used the information about the climate impact relating to the equity portion of the non-elective fund for all provisions for employees' occupational pensions (Alecta 2024).

We have only included the provisions made in 2024. After initial provisions, the responsibility for and control of climate impact lies with the employee. The management of previously allocated funds for occupational pensions is not included.

## 5. Results

### 5.1 Total climate impact and climate impact per shipment

Kivra's climate impact for 2024 where 173 tons CO<sub>2</sub>e including biogenic emissions (Table 8). This is an increase of 12 percent compared to the previous year. The scope of the calculation is the same as the previous year.

Table 8. Climate impact (tCO<sub>2</sub>e) per scope and category.

Scope	Category	2024	2023	2022	2021
<b>Scope 1</b>	Direct emissions	0	0	0	0
<b>Scope 2</b>	Market-based method	4	5	28	42
	Location-based method	7	6	9	7
<b>Scope 3</b>	Purchasing of goods and services	108	90	126	64
	Capital goods	0	0	0	0
	Activities related to fuel and energy production that are not included in scope 1 or scope 2	3	2	2	1
	Transportation and distribution (upstream)	0	0	1	0
	Waste generated in the business	0	0	0	0
	Business trips	28	18	9	0
	Commuting	4	6	5	3
	Leased assets (upstream)	0	3	0	0
	Transportation and distribution (downstream)	0	0	0	0
	Processing of sold products	0	0	0	0
	Use of sold products	0	0	0	0
	Disposal of sold products	0	0	0	0
	Leased assets (downstream)	0	2	0	0
	Franchising	0	0	0	0
	Investments	23	27	26	28
<i>SUM Scope 3</i>		<i>166</i>	<i>148</i>	<i>170</i>	<i>97</i>
<b><i>SUM (refers to market-based method scope 2)</i></b>		<b><i>170</i></b>	<b><i>153</i></b>	<b><i>198</i></b>	<b><i>138</i></b>
Out - of -scope		2	2	2	2
<b><i>SUM (incl. biogenic carbon dioxide)</i></b>		<b><i>173</i></b>	<b><i>154</i></b>	<b><i>200</i></b>	<b><i>141</i></b>

The volume of digital documents has increased by 15 percent since the previous year. The emissions per document were 0.28 grams of CO<sub>2</sub>e, which is at the same level as previous year and 69 percent lower than the first climate assessment in 2018. The

number of users has increased by five percent and the number of employees has increased by two percent since last year.

## 5.2 Climate impact by category

The main contributing factors to climate impact (Table 10) are the purchases of food, consumer goods and furniture to the office (37 percent) and electronics (19 percent). Business travel (17 percent) and pension provisions (13 percent) are the other two categories that contributed significantly to emissions in 2024.

Table 10. Climate impact per life cycle stage, the impact per digital document and the life cycle stages' relative contribution to Kivra's total climate footprint. Excluding biogenic carbon dioxide (out of scope).

Lifecycle stages	Climate impact (tCO <sub>2</sub> e)	Climate impact (gCO <sub>2</sub> e/pc)	Relative importance (%)
Food, consumer goods, furniture etc.	62.6	0.10	37%
Electronics	32.2	0.05	19%
Business travel	28.2	0.04	17%
Pensions	22.8	0.04	13%
Production (server energy etc.)	7.4	0.01	4%
Services (office cleaning etc.)	7.0	0.01	4%
Office energy	5.6	0.01	3%
Commuting	4.2	0.01	2%
Transport	0.4	0.00	0%
User device	0.1	0.00	0%
Waste from the office	0.0	0.00	0%
Marketing	0.0	0.00	0%
Leased equipment	n/a	n/a	0%
<b>S:A</b>	<b>170</b>	<b>0.27</b>	<b>100%</b>

The purchase of food and drink contributes approximately 14 tonnes of CO<sub>2</sub>e in 2024 (8 percent). If all meals that are currently meals with beef or reported as unspecified were instead vegetarian meals, there is potential to reduce the climate impact by approximately 0.76 tonnes of CO<sub>2</sub>e, which corresponds to 0.5 percent of the entire footprint. Apart from meals, coffee and cheese are the food items that contribute the most to total food emissions.



Table 11. Climate impact (t CO<sub>2</sub>e) per category and financial year. Excluding biogenic carbon dioxide (out of scope).

Lifecycle stages	2024	2023	2022	2021
Food, consumer goods, furniture etc.	63	47	60	32
Electronics	32	33	48	20
Business trips	28	18	9.5	0.3
Pensions	23	27	26	28
Production (server energy etc.)	7.4	4.9	10	9.5
Services (office cleaning etc.)	7.0	6.2	6.2	1.9
Office energy	5.6	7.5	29	42
Commuting	4.2	6.3	4.7	3.0
Transport	0.4	0.5	1.2	0.3
User device	0.1	0.1	0.3	0.3
Marketing	0.0	0.1	2.9	1.3
Waste from the office	0.0	0.0	0.0	0.0
Leased equipment	n/a	3.3	n/a	n/a
<b>S:A</b>	<b>170</b>	<b>153</b>	<b>198</b>	<b>139</b>

Compared to the previous year, purchases of consumer goods, furniture etc. have increased significantly in 2024 (plus 16 tonnes of CO<sub>2</sub>e) but are by no means extreme compared to 2022.

A source of uncertainty are data points where reliable weights, or counts combined with weight per piece, are missing and where spend-based calculations are used. Spend-based calculations are less accurate and tend to – on average - over-estimate the outcome. However, whether Kivra's specific results would increase or decrease with less spend-based data is an empirical question.

Business travel shows an increase of 11 tonnes of CO<sub>2</sub>e, due to increased air travel.

Emissions from production increased (plus 2.5 tonnes of CO<sub>2</sub>e) mainly because of increased fuel use for backup generators in the server hall during the year, due to more maintenance than usual.

Emissions from pensions decreased (minus 3.9 tonnes of CO<sub>2</sub>e) even though there was an increase in total provisions (due to more employees). The standard fund for pensions provisions, where pensions are invested if the employee does not make an

active choice, have further divested its portfolio, leading to a reduction of 27 percent per invested krona.

This year there were no new leasing contracts for equipment (minus 3.3 tonnes of CO<sub>2</sub>e), and Kivra rented a smaller area from the landlord as they did not have a tenant and therefor used less energy for the office (minus 1.8 tonnes of CO<sub>2</sub>e).

In 2024/2025 Kivra made a new survey of employee commuting. This results in a reduction of 2.1 tonnes of CO<sub>2</sub>e. Kivra's employees are at the office more often than in 2022 when the previous commuting survey was carried out, but the average commuting distance is now shorter (minus 30 percent). There is also a significant reduction in the emissions intensity of some commuting options (car, bus and train) due to new data and a reduction in fossil fuel use, mainly in the buses in Stockholm.

Remaining categories (Table 11) show a difference of less than one tonne of carbon dioxide equivalents compared to the previous year.

### 5.3 Climate impact per digital document

Kivra has two main offers for their customers, the delivery of letters and receipts. Climate impact can be allocated between letters and receipts based on their relative share of the total volume of documents sent and based on how "heavy" letters and receipts are, on average (kb per piece) (Table 12).

The volume of digital documents has increased slightly more (15 %) than the total climate impact (12 %) since last year, leading to a slight decrease of less than 0.01 grams of CO<sub>2</sub>e per piece (-3 percent).

**Table 12. Average size of the two types of documents (kilobyte per piece), and the total climate impact (incl. biogenic carbon dioxide) allocated between mail and receipts. Previous year's outcome in parentheses.**

Type of document	Number of documents (1000 pcs)	Average weight (kb/pc)	Climate impact (g CO <sub>2</sub> e /pc)
<b>Letters</b>	326 301	149	0.49 (0.51)
<b>Receipts</b>	300 023	12	0.04 (0.04)
<b>SUM</b>	626 323		0.28 (0.28)

Kivra's services have a low climate impact from a life cycle perspective compared to, for example, sending letters via traditional mail (Postnord 2021) because transports associated with distribution of mail and the manufacture of paper and envelopes is avoided.

Kivra has also made choices that lead to a lower climate impact than they would otherwise have, for example: by using a server service provider that purchases renewable electricity, by themselves having procured renewable office electricity, by renting premises from a property manager who procures renewable electricity and by choosing an occupational pension fund with a low climate impact.

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## 7. Appendix Reporting principles according to the Greenhouse Gas Protocol

Description	Supplementary information
Standard	In accordance with the GHGP Corporate Standard and the GHGP Scope 3 Standard
System boundaries	See 3.5-3.6
Consolidation method	Operational control
Clarification of activities included in scope 3	See 3.6
Reporting period	Full year 2024
Electricity	Calculated in accordance with the GHGP Scope 2 Guidance (WRI 2015), both market-based and location-based calculation methods are applied.
Greenhouse gases	see Environmental Impact Assessment 3.10
Activity data	see Data Quality 3.9 and the chapter on Life Cycle Inventory 4
Conversion factors and emission factors	see Data Quality 3.9 and the chapter on Life Cycle Inventory 4
Biogenic carbon emissions	Reported separately from the other greenhouse gases as Outside of Scope, see 5 Results.
Characterization factors	AR5 with feedback, see 3.10.
Base year	Base year is not relevant because Kivra has not set targets for emissions reductions. But if they must have a base year to be in compliance with the GHGP, it is 2018 because that was the first calculation.