



TCX Fund Greenhouse gas (GHG) accounting report

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South Pole

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Acronyms and abbreviations

AC	air conditioning
AR	Assessment Report
BEIS	United Kingdom Department for Business, Energy and Industrial Strategy
CH ₄	methane
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
DACH	Austria, Germany and Switzerland
EIO	environmentally extended input-out tables
GHG	greenhouse gas
GJ	gigajoule
GRI	Global Reporting Initiative
GWP	Global Warming Potential

HFCs	hydrofluorocarbons
IPCC	Intergovernmental Panel on Climate Change
KPI	key performance indicator
m ²	square metre
m ³	cubic metre
MWh	megawatt hour
N ₂ O	nitrous oxide
PCAF	Partnership for Carbon Accounting Financials
PFCs	perfluorocarbons
pkm	passenger-kilometre
SBT	Science Based Target
SBTi	Science Based Targets initiative
SDA	Sectoral Decarbonisation Approach
SF ₆	sulphur hexafluoride
t	tonne
TCFD	Task Force on Climate-Related Financial Disclosure
TCX	The Currency Exchange Fund

Executive summary

The objective of this report is to outline the 2019 greenhouse gas (GHG) account of The Currency Exchange Fund (TCX). The total GHG footprint of TCX's operations and investment screening for the calendar year 2019 is 386 metric tonnes of carbon dioxide equivalent (tCO₂e). Table 1 and Table 2 provide overarching key performance indicators (KPIs) and main emissions by scope, while Figure 1 gives an overview of the emissions by source. Figure 2 displays an overview of the sources according to the GHG Protocol emission scopes.

The largest emission source in 2019 was business travel, followed by investments, which corresponded to 70% and 23% of total emissions respectively.

Table 1: Summary of KPIs

Number of employees	25	tCO₂e/employee	15.4
Profit	USD 114 million	tCO₂e/million USD	3.4
Premises area	651 m ²	tCO₂e/m²	0.6

(Source: South Pole, 2020)

Table 2: GHG emissions by emissions source

Scope	Emissions (tCO₂e)	% of total
Scope 1: direct GHG emissions	0	0.0%
Gross emissions without carbon neutral gas	2	
Avoided emissions from carbon neutral gas	2	
Scope 2: indirect GHG emissions from purchased electricity, heating, and cooling	0	0.0%
Gross emissions without contractual instruments	44	
Avoided emissions from contractual instruments ¹	44	
Scope 3: other indirect GHG emissions	386	100.0%
Gross emissions without contractual instruments	392	
Avoided emissions from contractual instruments ²	6	
Total GHG emissions	386	100.0%
Total avoided GHG emissions	52	

(Source: South Pole, 2020)

^{1,2} Contractual instruments refer to renewable energy purchase instruments and contracts such as renewable energy certificates, renewable power contracts, power purchase agreements and GoldPower offsets.

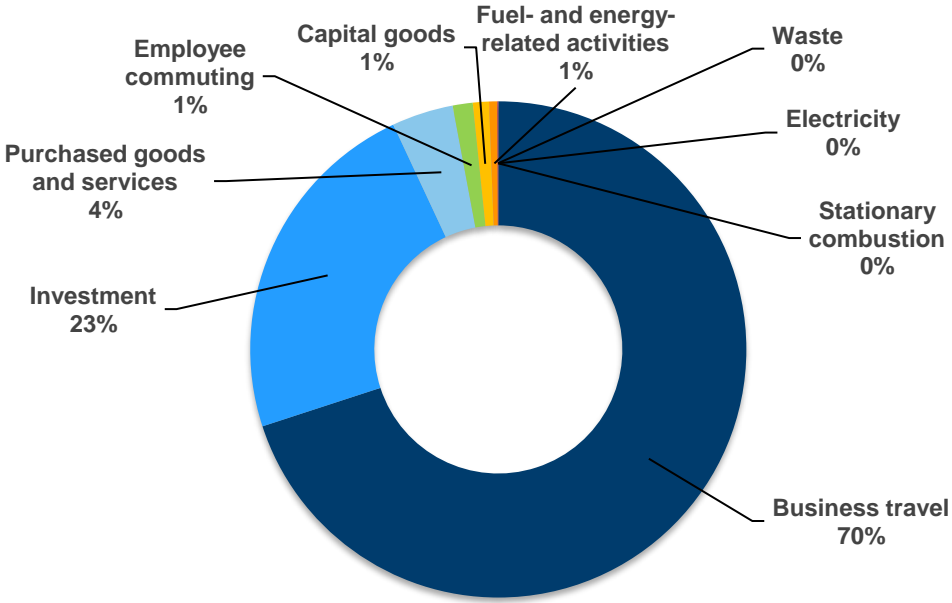


Figure 1: Sources of GHG emissions in 2019

(Source: South Pole, 2020)

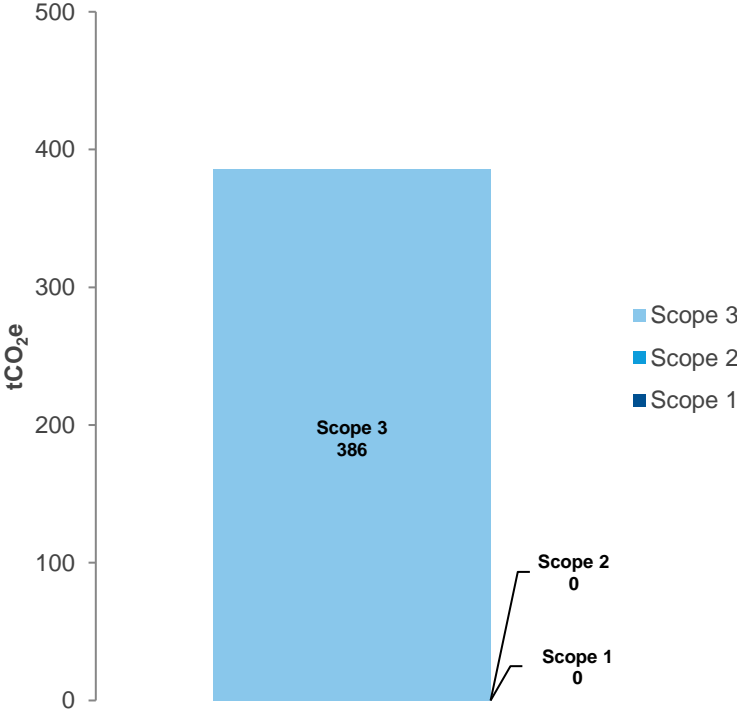


Figure 2: GHG emissions (tCO₂e) by scope in 2019

(Source: South Pole, 2020)

1 Introduction

This report provides a summary of the GHG emissions from TCX's operations from 1 January to 31 December 2019.

TCX was founded in 2007 by a group of Development Financial Institutions that specialise in Microfinance Investment Vehicles and donors to offer solutions to manage currency risk in emerging and frontier markets. As part of its commitment to achieving climate neutrality, TCX is continuously looking ahead and is determined to understand the GHG emissions of its operations as well as its liquid portfolio.

Company information and the reporting period are presented in Table 3.

Table 3: Company information

Company information	
Website	https://www.tcxfund.com
Business area	Finance
Reporting period	2019

(Source: South Pole, 2020)

1.1 Methodology

The GHG accounting and reporting procedure is based on the 'The Greenhouse Gas Protocol: GHG Protocol: A Corporate Accounting and Reporting Standard – Revised Edition' (GHG Protocol) and the complementary 'Corporate Value Chain (Scope 3) Accounting and Reporting Standard' – the most widely used international accounting tools for government and business leaders to understand, quantify, and manage GHG emissions. The standards were developed in a partnership between the World Resources Institute and the World Business Council for Sustainable Development.

The accounting was based on the principles of the 'GHG Protocol':

- **Relevance:** an appropriate inventory boundary that reflects the GHG emissions of the company and serves the decision-making needs of users;
- **Completeness:** accounting includes all emission sources within the chosen inventory boundary. Any specific exclusion is disclosed and specified;
- **Consistency:** meaningful comparison of information over time and transparently documented changes to the data;
- **Transparency:** data inventory sufficiency and clarity, where relevant issues are addressed in a coherent manner; and
- **Accuracy:** minimised uncertainty and avoided systematic over- or under-quantification of GHG emissions.

1.2 System boundaries

1.2.1 Organisational boundaries

System boundaries were defined by the control approach, i.e. covering all entities over which TCX has operational control. The 2019 accounting included the operational emissions of TCX's office in The Netherlands.

Table 4: Key figures for TCX's office in 2019

Office key figures	
Location	Mauritskade 64, Amsterdam
Area (m ²)	651
Headcount	25

(Source: South Pole, 2020)

1.2.2 Operational boundaries

Under the 'GHG Protocol', emissions are divided into direct and indirect emissions. Direct emissions are those originating from sources owned or controlled by the reporting entity. Indirect emissions are generated as a consequence of the reporting entity's activities, but occur at sources owned or controlled by another entity.

The direct and indirect emissions are divided into three scopes, as found below.

Scope 1

Scope 1 includes all carbon emissions that can be directly managed by the organisation (direct GHG emissions). This includes the emissions from the combustion of fossil fuels in mobile and stationary sources (e.g. owned or controlled boilers, power generators and vehicles) and carbon emissions generated by chemical and physical processes as well as fugitive emissions from the use of cooling and air conditioning (AC) equipment. Table 5 (below) gives an overview of the emission sources considered in Scope 1, based on the information provided by TCX.

Table 5: Overview of Scope 1 emission sources for 2019

Category	Emission sources	Boundary
Stationary combustion	Generation of electricity and heat	Included
Mobile combustion	Company-owned or leased vehicles	Included, no emissions
Physical or chemical processing	Manufacture or processing of chemicals and materials	Not applicable
Fugitive emissions	Emissions from the use of cooling systems and AC equipment, leakage from CO ₂ tanks or methane tubes	Not applicable

Scope 2

Scope 2 includes indirect GHG emissions from the generation of purchased electricity, steam, heat, or cooling purchased by the organisation from external energy providers. Table 6 below gives an overview of the emission sources considered in Scope 2.

Table 6: Overview of Scope 2 emission sources for 2019

Category	Emission sources	Boundary
Electricity	Purchased electricity	Included

Category	Emission sources	Boundary
Steam	Purchased steam	Not applicable
District heating	Purchased district heating	Not applicable
District cooling	Purchased district cooling	Not applicable

Scope 3

Scope 3 includes other indirect emissions, such as emissions from the extraction and production of purchased materials and services, vehicles not owned or controlled by the reporting entity, outsourced activities, and waste disposal.

According to the 'GHG Protocol', companies shall separately account for and report on emissions from Scope 1 and 2. Scope 3 is an optional reporting category, but its reporting is often required for Climate Neutrality Labels.

Table 7 below gives an overview of the emission sources considered in Scope 3.

Table 7: Overview of Scope 3 emission sources for 2019

Category	Emission sources	Boundary
Purchased goods and services	Purchased goods (raw materials) and services	Partially included (i.e. food products, water supply, and furniture)
Capital goods	Production of capital goods (e.g. machinery, IT equipment)	Included
Fuel- and energy-related activities	Upstream life cycle emissions from fuel and electricity generation, incl. transmission and distribution losses	Included
Upstream transportation and distribution	Transportation and distribution of goods and services to the company	Not included, immaterial emissions
Waste generated in operations	Waste management of operational waste (landfilling, recycling, etc.)	Included
Business travel	Travel and accommodation of employees/contractors	Included
Employee commuting	Employee travel between home and work	Included
Upstream leased assets	Operation of assets leased by the organisation (lessee) in the reporting year and not included in Scope 1 or 2	Included in Scope 1 and Scope 2
Downstream transportation and distribution	Transportation and distribution of products sold by the organisation	Not applicable
Processing of sold products	Processing of intermediate products sold by the organisation	Not applicable
Use of sold products	Use of sold goods that require energy to operate	Not applicable

Category	Emission sources	Boundary
End-of-life treatment of sold products	Waste disposal and treatment of sold products	Not applicable
Downstream leased assets	Operation of assets owned by the company (lessor) and leased to other entities, not included in Scope 1 or 2	Not applicable
Franchises	Operation of franchises not included in Scope 1 or 2	Not applicable
Investments	Operation of investments not included in Scope 1 or 2	Included

1.3 Data inventory and assumptions

TCX has provided data on natural gas consumption for leased office, purchased electricity, business travel, employee commuting, IT equipment, food and beverages, water supply, and waste generation. Where activity data of the inventory was lacking, extrapolations and estimations were made. These are summarised in **Error! Reference source not found.**

Overall, the data inventory, emission factors, and assumptions are based on the 'GHG Protocol'. The choice of assumptions and emission factors followed a conservative approach. Unless otherwise specified, all emission values in this report are given in tCO₂e.

Where activity data of the inventory was lacking, extrapolations and estimations were made. These are summarised in **Error! Reference source not found.**

1.4 Global Warming Potentials

Global Warming Potential (GWP) is a measure of the climate impact of a GHG compared to carbon dioxide over a time horizon. GHG emissions have different GWP values depending on their efficiency in absorbing longwave radiation and the atmospheric lifetime of the gas. The GWP values used in GHG accounting include the six GHGs covered by the United Nations Framework Convention on Climate Change and Kyoto Protocol and combinations of these. They are presented in Table 8. These are the GWPs used by the United Kingdom's Department for Business, Energy and Industrial Strategy (BEIS) and are based on the 'Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report (AR4)'. Although the 'AR5' is more recent, it has not been accepted internationally by all stakeholders.

Table 8: Applied global warming potentials

GHG	GWP (100 years)
Carbon dioxide (CO ₂)	1
Methane (CH ₄)	25
Nitrous oxide (N ₂ O)	298
Hydrofluorocarbons (HFCs)	<u>See IPCC AR4 – Table 2.14</u>
Perfluorocarbons (PFCs)	<u>See IPCC AR4 – Table 2.14</u>
Sulphur hexafluoride (SF ₆)	22,800

(Source: IPCC AR4, 2007)

1.5 South Pole’s investment footprint approach

The impact assessment carried out by South Pole analyses the climate impact of TCX’s liquidity portfolio. South Pole’s approach is based on the methodological guidelines of the GHG Protocol and the recommendations of the Partnership for Carbon Accounting Financials (PCAF), which are introduced in this section in greater detail. Our approach delivers absolute and intensity metrics that enable TCX to understand the carbon exposure of its portfolio and provide a first step towards future climate-related action, such as setting Science Based Targets (SBTs) and/or aligning the public equity portfolio with a 1.5°C pathway (i.e. Paris alignment).

1.6 Selecting and applying a carbon accounting approach

An investment footprinting analysis focuses on the Scope 1 and Scope 2 emissions of investees, as outlined in the GHG Protocol’s Category 15: Investments. Nevertheless, both the Protocol and PCAF guidelines outline that, for Scope 3, the emissions of investees should be considered for companies in which they are deemed material or relevant.

Due to the fact that the liquidity portfolio invests in short-term debt (notes and commercial papers) issued by financial institutions, Scope 3 emissions from the investment activities of companies have not been considered. Instead, the investee’s Scope 3 emissions that have been taken into account stem from “own-operations”, such as business travel, as these account for up to the 50% of the operational carbon footprint.

1.6.1 Investment-specific method

South Pole provided TCX with two overarching methods in order to conduct an investment portfolio footprint across different asset classes. The approach was selected based on the data availability per investment, as illustrated by Figure 3 below.

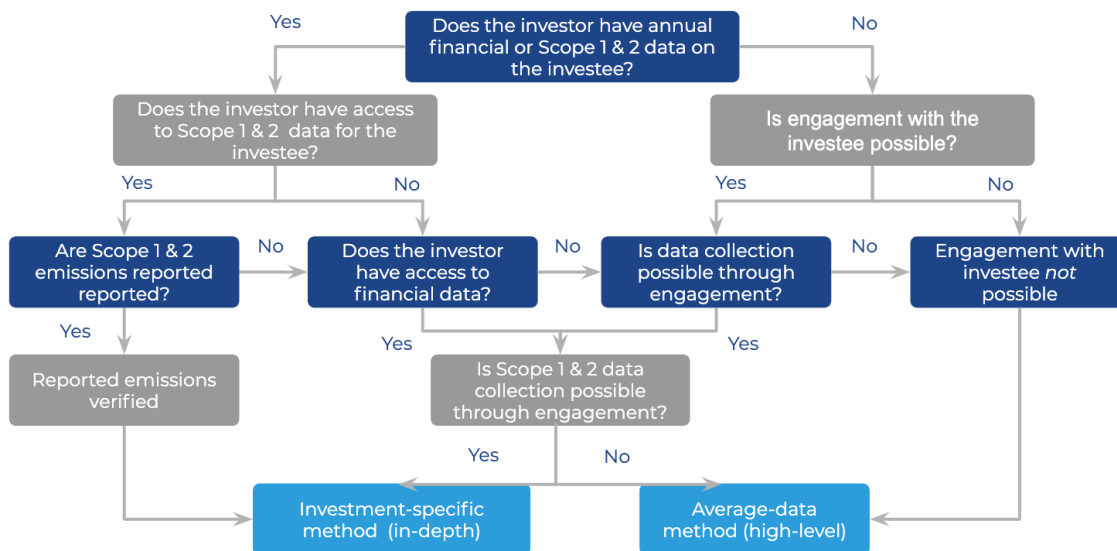


Figure 3: Method selection flowchart

(Source: South Pole 2020)

The investment-specific method collects and uses emissions data from investee companies based on annual reporting data from reports or disclosure mechanisms, such as CDP. The emissions of each portfolio company are then attributed to TCX based on the ownership principle and correspond to the portfolio’s financed emissions.

1.6.2 Average data method

When company-level emissions data is not available, South Pole estimates a company's absolute emissions through the use of country-level industry-specific averaged data or environmentally extended input-output (EIO) tables. When employing the average-data method, company-level financial data, such as annual revenue, is combined with averaged data to estimate investee emissions.

1.6.3 Attribution of financed emissions

In line with the GHG Protocol's "ownership principle", emissions are allocated to those investors who "own" or finance them. Accordingly, the GHG emissions are proportionally allocated "per share" to the investor. For example, if an investor owns 0.1% of a company, 0.1% of the company's GHG emissions are allocated.

However, to set an adequate attribution factor for non-equity investments, PCAF recommends that emissions shall be calculated as a proportion of the company's total capital. To prevent double counting, emissions are attributed proportionally to the exposure, divided by the company's enterprise value. Furthermore, considering that the resultant figure is commonly expressed as financed emissions over a specific period (e.g. annually), the holding period of the investment has to be considered.

TCX shared quarterly snapshots of its portfolio composition and the trade/maturity dates with South Pole, which enabled the development of an attribution factor that encompasses the portfolio's characteristics and accurately attributes financed emissions during the year to the portfolio, as illustrated below.

$$\textit{Attribution factor} = \frac{(\textit{Exposure})_{TCX}}{(\textit{Total debt} + \textit{Equity})_{\textit{Investee}}} * \frac{\textit{Holding days}}{365}$$

1.6.4 Data quality

The quality of investment and emissions data is an important element of investment footprinting. The data quality hierarchy illustrated in Figure 4 (below), developed by PCAF, serves as an indicator of the accuracy of the data used to carry out the carbon accounting exercise. Given the strong data availability for the portfolio companies and industries, South Pole's assessment used data ranked Score 1 to Score 3.

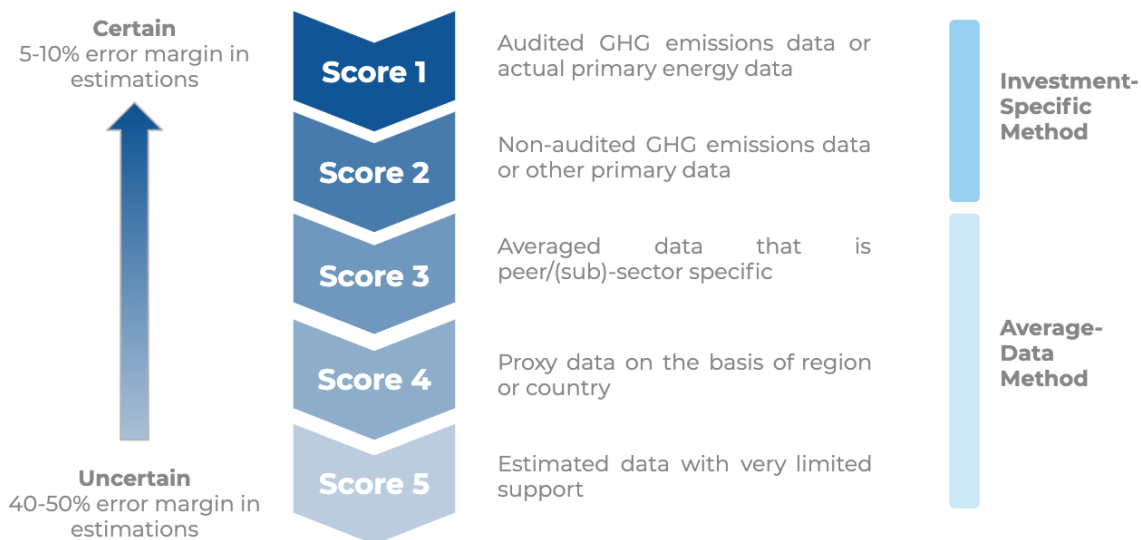


Figure 4: Data quality score

It is worth noting that, due to the fact that approximately 70% of investees report Scope 1 and 2 emissions, as well as Scope 3 emissions stemming from business travel, an investment-specific approach was used for these companies. An average-data method was used to estimate the emissions for approximately 30% of the portfolio, where country-level and industry-specific averaged data was employed.

2 Results

2.1 Corporate GHG accounting

Based on the information provided by TCX, the total GHG emissions for 2019 are 386 tCO_{2e}.

Table 9 below illustrates the key figures in terms of GHG emissions (in CO_{2e}) and energy intensity (in gigajoules (GJ)) relevant to corporate sustainability reporting in accordance with the GHG Protocol.

'Total emissions' in this report refers to the emissions sources covered, as described in Section **Error! Reference source not found.** Please note that, due to rounding of numbers, the figures may not add up exactly to the total provided.

Table 9: Key figures according to the Global Reporting Initiative (GRI)

GRI G4	GRI Standards	Topic	Quantity	Unit
G4-EN3	302-1	Direct energy consumption by primary source	42	GJ
		Carbon-neutral natural gas	42	GJ
G4-EN3	302-1	Indirect energy consumption by primary source	277	GJ
		Renewable electricity	277	GJ
		Grid electricity	0	GJ
G4-EN15	305-1	Direct GHG emissions (Scope 1)	0	tCO _{2e}
G4-EN16	305-2	Energy indirect GHG emissions (Scope 2)	0	tCO _{2e}
G4-EN17	305-3	Other indirect GHG emissions (Scope 3)	386	tCO _{2e}
G4-EN18	305-4	GHG emission per employee	15.4	tCO _{2e} per employee

Table 10 and Figure 5 below present the breakdown of the GHG emissions by scope and by source, respectively. Figure 6 displays the breakdown of GHG emissions from business travel, with more detail on air travel provided in Figure 7.

The Royal Tropical Institute, from which TCX leases its office, purchased 2,015 tCO_{2e} to offset its 2019 emissions. The offset credits covered the building's emissions from natural gas, electricity, paper, air travel and commuter travel. Of these, natural gas and electricity consumptions are relevant for TCX, hence the zero emissions in Scope 1 and 2. The building did not offset its fuel- and energy-related activities fully (Scope 3). The summary of avoided emissions is presented on Table 11. In total, TCX avoided emitting 52 tCO_{2e} in 2019.

Table 10: GHG emissions by scope and activity for 2019

Activity	Consumption	Unit	Emissions (tCO _{2e})	Percentage of total (%)
Scope 1: direct GHG emissions			0	0.0%
Stationary combustion	1,179	m ³	0	0.0%

Greenhouse gas (GHG) accounting report

Activity	Consumption	Unit	Emissions (tCO ₂ e)	Percentage of total (%)
Natural gas ³	1,179	m ³	0	0.0%
Scope 2: indirect GHG emissions from purchased electricity, heating, and cooling			0	0.0%
Electricity	77	MWh	0	0.0%
Renewable ³	77	MWh	0	0.0%
Grid	0	MWh	0	0.0%
Scope 3: other indirect GHG emissions			386	100.0%
Business travel			270	70.0%
Flights	686,613	pkm	253	65.5%
< 463 km	43,345	pkm	13	3.3%
463–3,700 km	167,177	pkm	35	9.2%
> 3,700 km	476,090	pkm	205	53.0%
Taxi	22,496	km	6	1.6%
Train	26,155	pkm	<1	<0.1%
Accommodation	301	guest-nights	11	2.9%
Purchased goods and services			15	4.0%
Water	60	m ³	<1	<0.1%
Supply	60	m ³	<1	<0.1%
Treatment	60	m ³	<1	<0.1%
Food and beverages	49,098	EUR	15	4.0%
Capital goods			4	1.0%
IT equipment	23	No. of devices	4	1.0%
Laptop	10	No. of devices	3	0.7%
Mobile phone	10	No. of devices	1	0.2%
Tablet	1	No. of devices	< 1	< 0.1%
UPS	2	No. of devices	1	0.2%
Employee commuting			5	1.3%
Bicycle	20,528	pkm	0	0.0%

³ The Royal Tropical Institute, from which TCX leases its office, purchased 2,015 tCO₂e to offset its 2019 emissions. The offset credits covered the building's emissions from natural gas, electricity, printed materials, paper, and commuter travels. Of these, natural gas and electricity consumptions are relevant for TCX.

Greenhouse gas (GHG) accounting report

Activity	Consumption	Unit	Emissions (tCO ₂ e)	Percentage of total (%)
Walking	2,298	pkm	0	0.0%
Tram	3,402	pkm	< 1	< 0.1%
Subway	573	pkm	< 1	< 0.1%
Train	164,553	pkm	0	0.0%
Car	17,993	pkm	4	1.1%
Motorcycle	5,071	pkm	1	0.2%
Waste generated in operations	13	t	< 1	0.1%
Waste generated	13	t	< 1	0.1%
Fuel and energy-related activities			2	0.5%
Well-to-tank			2	0.5%
Natural gas	1,179	m ³	<1	0.1%
Electricity	77	MWh	2	0.4%
Transmission and distribution			< 1	< 0.1%
Electricity	77	MWh	< 1	< 0.1%
Investment	1.6	Billion USD	89	23.1%
Investment	1.6	Billion USD	89	23.1%
Total GHG emissions			386	100.0%

(Source: South Pole, 2020)

Table 11: Avoided GHG emissions in 2019

Activity	Consumption	Unit	Emissions (tCO ₂ e)	Percentage of total (%)
Scope 1: direct GHG emissions			2	4.6%
Stationary combustion	1,179	m ³	2	4.6%
Natural gas ³	1,179	m ³	2	4.6%
Scope 2: indirect GHG emissions from purchased electricity, heating, and cooling			44	84.8%
Electricity	77	MWh	44	84.8%
Renewable electricity ³	77	MWh	44	84.8%
Scope 3: other indirect GHG emissions			6	10.6%
Fuel and energy-related activities			6	10.6%

Greenhouse gas (GHG) accounting report

Activity	Consumption	Unit	Emissions (tCO ₂ e)	Percentage of total (%)
Renewable electricity ³	77	MWh	6	10.6%
Total Avoided GHG emissions			52	

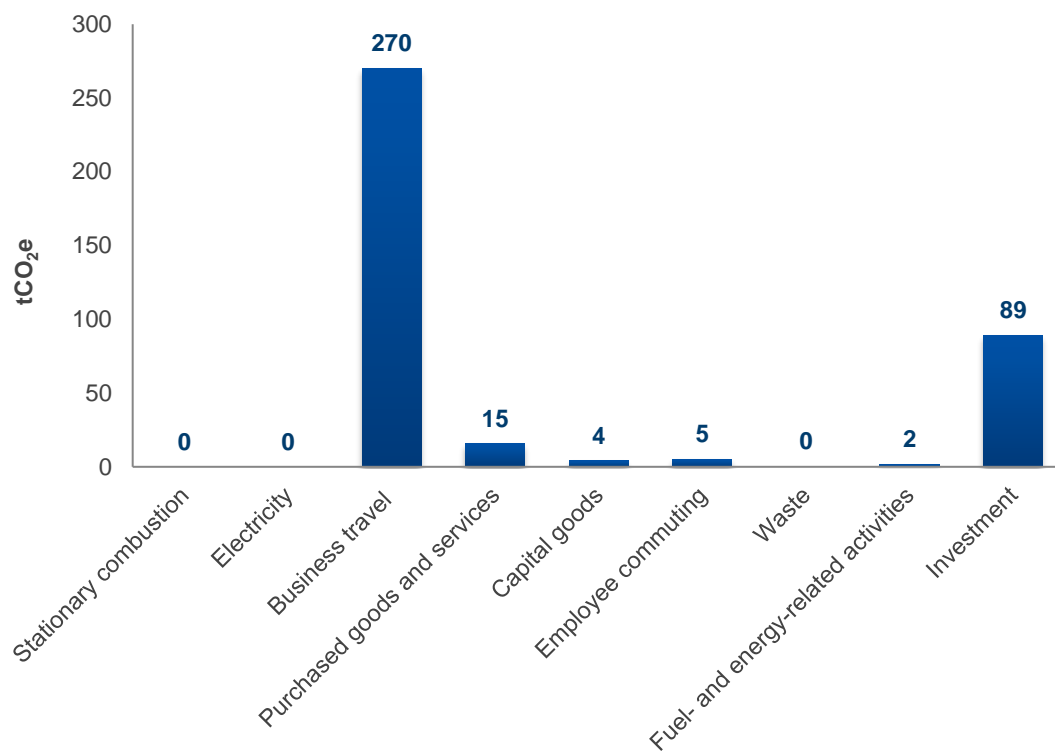
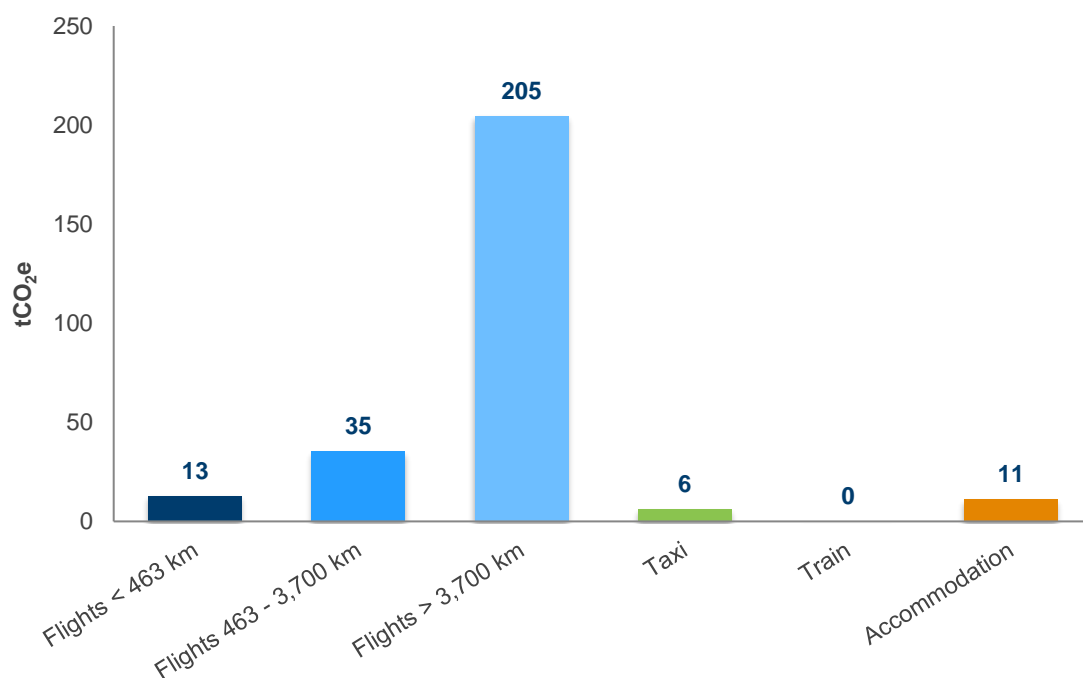


Figure 5: GHG emissions for 2019, by source

(Source: South Pole, 2020)



(Source: South Pole, 2020)

Figure 6: Sources of GHG emissions business travel

(Source: South Pole, 2020)

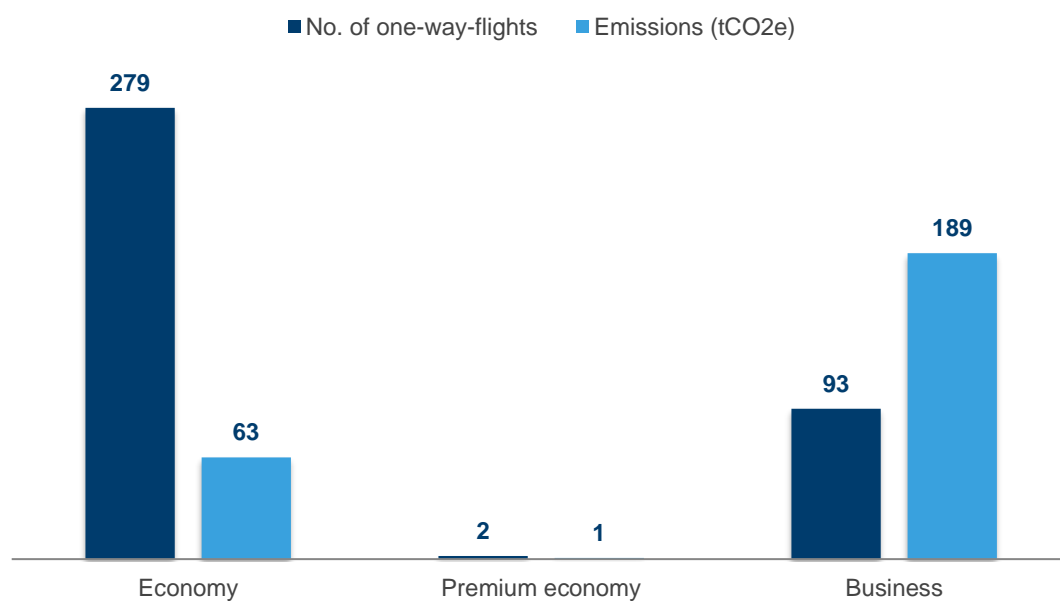


Figure 7: Breakdown of air business travel by seating class

(Source: South Pole, 2020)

2.2 Description of the investment portfolio

South Pole carried out an analysis looking at the carbon footprint of the liquidity portfolio, which includes direct investments in 27 financial institutions.

Investments were made through notes and commercial papers, with a total value of USD 1.6 billion. It was found that 90% of the portfolio's investment weight was allocated to transactions that either matured in or were acquired during 2019. The remaining 10% corresponds to investments that were held throughout all of 2019 and beyond. Only emissions financed during the assessment period (2019) were counted under this assessment.

The financial and environmental data used in the analysis was sourced from company disclosures, CDP data and South Pole's calibrated industry-specific averaged data.

2.3 Key reporting metrics and results

Table 12 below highlights the key indicators and aggregated results for the portfolio. The total value of the portfolio, as well as the weights shown below, do not represent a quarterly snapshot of the portfolio but rather the aggregation of all the active investments during 2019.

Table 12: Portfolio-level results

TCX Liquidity Portfolio	
Total portfolio value (USD)	1,602,273,700
Total financed emissions (tCO ₂ e/year)	88.6
Carbon intensity * (tCO ₂ e/USD millions of investment)	0.0552
Weighted average carbon intensity ** (tCO ₂ e/USD millions of investment)	0.1215

* Emissions during the holding period

** Emissions during the entire year

As illustrated in Table 12, the portfolio finances approximately 89 tCO₂e on an annual basis. It is worth noting that this accounts for operational emissions, which stem from Scope 1, 2 & 3 (business travel) emissions.

Furthermore, the portfolio's carbon intensity, which represents the carbon emissions per million USD of investment in the portfolio is 0.055. The weighted average carbon intensity of the portfolio in terms of emissions per million USD of debt provided by portfolio weight illustrates the portfolio's exposure to high-emitting companies.

Table 13 and Table 14 below compare the top 10 holdings by investment weight and their corresponding contribution to the portfolio's financed emissions, as well as the top 10 contributors of financed portfolio emissions.

Table 13: Top 10 counterparties by portfolio weight and their equivalent contribution to financed emissions

Counterparty	Portfolio weight	% of total emissions	Financed emissions (tCO ₂ e/year)	Data quality score
KfW	8.84%	1.64%	1.46	1
NWB Bank	8.64%	0.08%	0.08	1
FMS Wertmanagement	8.43%	3.64%	3.24	3

Greenhouse gas (GHG) accounting report

Counterparty	Portfolio weight	% of total emissions	Financed emissions (tCO ₂ e/year)	Data quality score
Kommuninvest	6.46%	0.34%	0.31	1
BNG Bank	6.14%	0.11%	0.10	1
L-Bank	5.99%	0.52%	0.47	1
AA1 – Erste Abwicklungs Anstalt	4.78%	7.61%	6.77	3
CAIDEP	4.72%	10.0%	8.90	3
European Investment Bank	4.51%	1.70%	1.51	1
Korea Development Bank	4.38%	5.78%	5.15	3

Table 14: Top 10 contributors to the portfolio's financed emissions

Counterparty	Portfolio weight	% of total emissions	Financed emissions (tCO ₂ e/year)	Data quality score
FMO – Entrepreneurial Development Bank	1.98%	21.2%	18.89	1
EBRD	3.37%	11.1%	9.85	1
CAIDEP	4.72%	10.0%	8.90	3
AA1 – Erste Abwicklungs Anstalt	4.78%	7.60%	6.77	3
Australia & New Zealand Banking Group	1.21%	6.90%	6.15	1
Korea Development Bank	4.38%	5.78%	5.15	3
National Australia Bank	1.25%	4.59%	4.09	1
IFFIM	0.37%	4.05%	3.61	3
Inter-American Investment Corporation	1.37%	4.01%	3.57	1
FMS - Wertmanagement	8.43%	3.64%	3.24	3

Table 15 lists the carbon intensity of each of the portfolio companies. The carbon intensity shown represents annual tonnes of CO₂e emissions financed per million USD of investment. It is worth noting that these only take into account operational emissions.

Table 15: Counterparties and their investment carbon intensity

Counterparty	Country of domicile	Portfolio weight	Carbon intensity of investment (tCO ₂ e/MUSD)	Data quality score
IFFIM	United Kingdom	0.37%	0.7199	3
CAIDEP	France	4.72%	0.5977	3

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Counterparty	Country of domicile	Portfolio weight	Carbon intensity of investment (tCO ₂ e/MUSD)	Data quality score
FMO – Entrepreneurial Development Bank	Netherlands	1.98%	0.5941	1
Australia & New Zealand Banking Group	Australia	1.21%	0.4069	1
Korea Exim Bank	South Korea	1.87%	0.3489	3
National Australia Bank	Australia	1.25%	0.3095	1
Korea Development Bank	South Korea	4.38%	0.2803	3
Commonwealth Bank	Australia	1.15%	0.2800	1
IADB	United States	0.62%	0.2446	1
IIC	United States	1.37%	0.2446	1
AA1 – Erste Abwicklungs Anstalt	Germany	4.78%	0.1883	3
EBRD	United Kingdom	3.37%	0.1824	1
New Development Bank	China	3.12%	0.1521	3
Rentenbank	Germany	4.00%	0.1110	3
Munifin	Finland	3.34%	0.0916	3
FMS – Wertmanagement	Germany	8.43%	0.0629	3
Asia Development Bank	Philippines	1.87%	0.0486	1
Banque et Caisse d'Epargne	Luxembourg	3.27%	0.0451	1
EIB	Luxembourg	4.51%	0.0445	1
OeKB	Austria	4.06%	0.0374	1
KfW	Germany	8.84%	0.0306	1
L-Bank	Germany	5.99%	0.0138	1
NRW Bank	Germany	0.62%	0.0100	1
Kommuninvest	Sweden	6.46%	0.0071	1
KBN – Kommbanken AS	Norway	3.62%	0.0049	1
BNG Bank	Netherlands	6.14%	0.0023	1
NWB Bank	Netherlands	8.64%	0.0019	1

Table 16 outlines the aggregated results based on investment region. The regions encompass the following countries (in which the portfolio companies are based): DACH (Austria and Germany), Benelux (Luxembourg and Netherlands), Nordics (Finland, Norway and Sweden),

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Rest of Western Europe (France and United Kingdom), Asia (China, South Korea and the Philippines). The United States and Australia were considered separately.

The table is also intended to serve as a reference to understand carbon intensities at a higher level, as the results listed below are aggregated figures for companies in the respective regions.

Table 16: Regionalised results

Region	Portfolio weight	% of total emissions	Carbon intensity of investment (tCO ₂ e/MUSD)
DACH	36.71%	18.07%	0.0650
Benelux	24.56%	23.92%	0.0634
Nordics	13.42%	4.04%	0.0276
Asia	11.24%	9.04%	0.2176
Rest of Western Europe	8.47%	25.24%	0.4378
Australia	3.61%	12.75%	0.3326
United States	2.00%	6.95%	0.2446

2.4 Corporate transparency

The first step for a company to understand its own climate impact, risks and opportunities is to conduct a carbon footprint at the company level. In most cases, the result of such an exercise is published in the public domain and subsequently collected by South Pole. Refraining from executing or publishing such results is usually an indicator of the absence of a climate strategy, which, from an investor's point of view, constitutes a risk.

In the assessed portfolio, 70.9% of holdings, accounting for 68.1% of the portfolio's investment weight, reported their annual CO₂e emissions. For the remaining companies, accounting for 31.9% of investment weight, approximations were carried out based on the average-data method, as outlined in Figure 8 below.

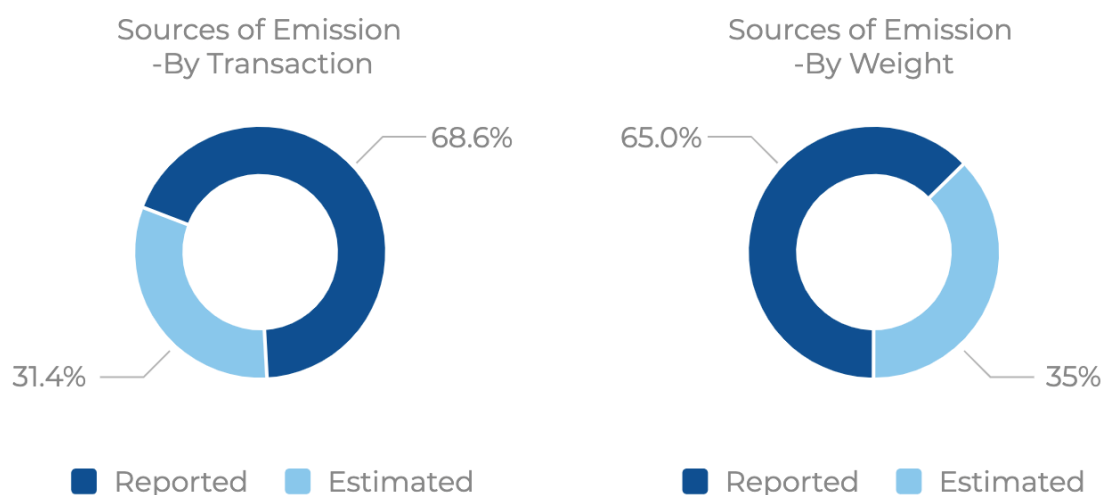


Figure 8: Portfolio's GHG disclosure

(Source: South Pole, 2020)

3 Conclusions and recommendations

3.1 Corporate GHG accounting recommendations

Considering business travel makes up 70% of total emissions, of which business class flights represent 75% of total flight emissions, we recommend setting up an internal travel policy that limits business class flights. Switching to premium economy or economy class flights has the largest potential in terms of reducing emissions from a corporate GHG accounting perspective.

3.2 Portfolio assessment conclusions

Every year, increasing numbers of financial institutions disclose their carbon footprint. For the purpose of this exercise, only 31% of the emissions required estimation, which provides an accurate result and illustrates a high level of climate strategy already present across portfolio companies.

The results of the analysis show that TCX's liquidity portfolio finances a negative carbon impact of 89 tCO_{2e} per year. The figure stands out for being low when the size of the portfolio is taken into account.

There are three key reasons to explain this result:

- The first and perhaps most important reason is the nature of the activities financed. Since the portfolio invests only in short-term debt instruments (notes and papers), which often finance the liquidity needs of companies rather than projecting financing activities, the analysis only considered the operational footprint of investees and did not attribute emissions from the entities' project financing or lending activities (Scope 3). This vastly lowers both the absolute and intensity figures for the portfolio in comparison to a portfolio invested in equity or fixed income.
- The second is the holding period. The average holding period for the transactions was 157 days, which indicates that TCX can only have a claim on a portion of the annual operational emissions of investees.
- The third is the proportion of enterprise value that TCX's investments represent. On average, TCX's investments account only for 0.15% of a company's enterprise value for the year.

3.3 Recommendations for the investments footprint.

Based on the results, South Pole recommends taking the following steps to further understand the portfolio's risk exposure and create a science-based path towards portfolio decarbonisation.

3.3.1 Understand the portfolio's climate alignment

One of the next steps that can be taken, which is crucial to meeting the objectives of the Paris Agreement globally, is for investors to understand their portfolio's current alignment with a global temperature increase target. As part of its services, South Pole provides alignment screening that enable an assessment of portfolio companies based on their industry alignment, as well as across industries and geographies and benchmarked against indices.

The results from a portfolio alignment screening provide insights into each portfolio company's level of alignment, as well as the portfolio's overall level of alignment.

Table 17 below outlines some of the key benefits of South Pole's portfolio alignment screening. This screening enables comparison based on methodologies with scientific consensus. It is also aligned with the key reporting frameworks for financial entities and global objectives to mitigate climate change to within 2°C.

Table 17: Characteristics of South Pole's portfolio alignment screening

Coincides with other methodologies	Basis for low-carbon allocation strategies	Aligned with Task Force on Climate-related Financial Disclosure (TCFD) reporting
<ul style="list-style-type: none"> • Sectoral Decarbonisation Approach (SDA) by the Science Based Targets initiative (SBTi). • Draft methodology for financial institutions, currently under development by the SBTi. 	<ul style="list-style-type: none"> • In line with meeting the central aim of the Paris Agreement of pursuing efforts to limit the temperature increase to 1.5 °C above pre-industrial levels. 	<ul style="list-style-type: none"> • According to the TCFD, scenario analysis is one of the key recommended disclosures.

3.3.2 Setting a Science Based Target (SBT)

Over 800 companies are embedding climate goals within their business strategy by adopting SBTs. These aim to reduce GHG emissions consistent with a 1.5–2 °C decarbonisation pathway, in line with the goals of the Paris Agreement.

SBTs reduce regulatory risk, improve competitiveness, satisfy investors and meet TCX's needs. In line with these developments, South Pole has developed a range of comprehensive SBT services to assist investors in understanding, developing and setting SBTs. Our services include the following:

- data collation support and formal SBT setting;
- collation of SBTi-compliant GHG emissions inventory, SBT submission and validation;
- entire SBT-cycle support, including implementation framework, monitoring systems and SBTi submission.

Annex I

Emission factors

Table 18: Emissions factors

Activity	Emission factor reference ⁴
Stationary combustion and fuel-related activities	BEIS, 2019
Electricity and electricity-related activities	International Energy Agency, 2019; co2emissiefactoren, 2017
Business travel	BEIS, 2019
Commuter travel	BEIS, 2019; co2emissiefactoren, 2019
Accommodation	Cornell Hotel Sustainability Benchmarking, 2018, 2019
Food and beverages	UK Department for Environment, Food & Rural Affairs, UK Footprint Results (1990–2017), 2020
IT equipment	Apple, 2012, 2013, 2016; Dell, 2010, 2011, 2013, 2014, 2016, 2017; LCA, 2017; IBM, 2016
Waste	BEIS, 2019
Water supply and treatment	BEIS, 2019

⁴ South Pole derives its emission factors from reliable and credible sources. South Pole is not responsible for inaccuracies in emission factors provided by third parties.

Annex II

Data assumptions and extrapolations

The data inventory, emission factors and assumptions follow the principles of the 'GHG Protocol'. Where activity data of the 2019 inventory was lacking, extrapolations and estimations were made. The choice of assumptions and emission factors followed a conservative approach.

Stationary combustion, electricity, and water

The natural gas, electricity, and water consumption in TCX's office was based on the annual consumption of the building from which TCX leased its office in 2019. TCX's consumptions were extrapolated based on the proportion of the floor area of the building that was occupied by TCX (2.61%). The Royal Tropical Institute, from which TCX leases its office, purchased 2,015 tCO₂e to offset its 2019 emissions. The offset credits covered the building's emissions from natural gas, electricity, paper, air travels and commuter travels. Of these, natural gas and electricity consumptions are relevant for TCX; therefore, there are zero emissions for natural gas (Scope 1) and electricity (Scope 2). The building did not offset its fuel- and energy-related activities (Scope 3).

Business travel

TCX provided actual data on flights, trains and accommodation records in 2019. The activity data for taxi travel was based on the data for flights, trains and accommodation. Two taxi rides were assumed for each trip to/from airports or train stations and for each day of business trips. Petrol was assumed as the fuel for taxi travel as it is the most common fuel for passenger vehicles.

Commuter travel

TCX conducted a commuter travel survey in May 2020. This was completed by 14 employees out of 25 TCX employees at the time (56%). The emissions from the survey have been extrapolated to account for the total number of employees in 2019. The extrapolation assumed five working days in a week and 46 working weeks in 2019.

Food and beverage

TCX provided its grocery receipts for one of its weekly office gatherings in 2019, which were used to extrapolate its annual grocery consumption. Forty-five weekly office gatherings were assumed to be held in 2019.

Waste

The amount of waste generated in TCX's office was extrapolated from the average waste per employee in financial sector offices (Waste Watch, 2004). The average waste composition in Europe (World Bank, 2018) was applied, while the percentage of waste treatment was based on The Netherland's waste treatment average (EU, 2018).

