



Climate reporting year 2021 for The Swedish Internet Foundation

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1 SUMMARY

The carbon footprint of 2021 for The Swedish Internet Foundation has been calculated according to agreed scope and methodology in the European cooperation CENTR (Council of European National Top Level Domain Registries). Additionally, four other areas, as described in chapter 4.8, were calculated, but not included in the footprint for 2021 as a consequence of agreed CENTR methodology.

The carbon footprint 2021 according to CENTR methodology was 126 tonnes CO₂e¹ which is equal to 72 g CO₂e per domain and 1,0 ton CO₂e per full time employee (FTE).

For the four additional areas the footprint was 4,1 tonnes CO₂e, making the total 130 tonnes CO₂e which is equal to 74 g CO₂e per domain and 1,1 ton CO₂e per full time employee (FTE).

Carbon assessments are often made with different scopes and calculation criteria and carbon impacts are therefore difficult to compare between businesses. That is why the methodology has been standardized within CENTR Sustainability Core Team.

Compared to the previous report for 2020, the total carbon footprint calculated in accordance with CENTR methodology has increased by 6 percent, mainly due to increased energy use in offices, increased business travel and increased energy use in name servers (including cloud). Compared to pre-pandemic levels (2018), emissions from business travel have still decreased by more than 90 percent. It should be noted that both 2020 and 2021 were heavily affected by the pandemic which has influenced primarily business travel and commuting between office and home.

Over time the climate impacts of different activities have been addressed and there has been a dramatic decrease in emissions. The reported figures for 2008 must be regarded as uncertain as it was the first year that data was collected and at that point in time, carbon assessment methodology was relatively immature. Comparing to the base year 2010, except for electronic equipment where the base year is 2016, the decrease in carbon impact to date is 72 percent. This despite the scope of the assessment having increased. For the 2021 calculation a new office, MetaSolutions, was included.

Please contact hallbarhet@internetstiftelsen.se for answers to any questions about the content of the report.

¹ Carbon dioxide equivalent

2 BACKGROUND

The Swedish Internet Foundation is an independent public-service organization that acts to ensure positive development of the internet. They are based in Sweden and are responsible for the internet's Swedish top-level domain, .se, and the operation of the .nu top-level domain. Their vision is that everyone in Sweden wants to, dares to and is able to use the internet.

The Swedish Internet Foundation had the following ambition regarding its climate impact for 2021: The Swedish Internet Foundation will reduce its climate impact (the total CO₂e impact) by 10 percent compared to 2020. This was to be achieved, among other things, by choosing online meetings, means of transport with lower climate impact, and by influencing partners and suppliers. However, this target was not met. The result shows an increase by 8 percent compared to the previous year.

The Swedish Internet Foundation measure their total climate impact, but also per employee and domain. They measure their climate impact regularly since 2009 and make a sustainability report according to the GRI Standard (Global Reporting Initiative) every year since 2015.

Since 2009 U&We has supported The Swedish Internet Foundation with carbon calculations by calculating carbon emissions from the year 2008 onwards. Starting from reporting year 2020, The Swedish Internet Foundation has requested the reporting to be made according to agreed scope and methodology in the European cooperation CENTR (Council of European National Top Level Domain Registries). For 2021 we report primarily according to CENTR methodology, and we report per scope and greenhouse gas where sources allow.

U&We's slogan "Catalyst for Good Business" describes our ambition to reconcile good profitability with social responsibility and environmental considerations. We want to be a catalyst and accelerator of change in processes that lead to companies and organizations doing good business. With broad knowledge of sustainability and cutting-edge competence within environmental and climate science, our work focuses on sustainability-driven business development.

3 DESCRIPTION OF SCOPE AND METHODS

The first carbon assessment was performed for 2008. Since then, assessments have been made every other year. The previous one was performed early 2021 for year 2020. The purpose has been to provide The Swedish Internet Foundation with facts on what areas are

most important from a climate perspective and give a basis for making decisions on actions to decrease climate impact.

3.1 Methodology used for year 2021

The methodology that has been followed since the start is the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard².

Impacts are divided on the different greenhouse gases, when sources allow, and on scopes 1, 2 and 3 respectively. The GHG Protocol Corporate Standard classifies a company's GHG emissions into three scopes. Scope 1 emissions are direct emissions from owned or controlled sources. Scope 2 emissions are indirect emissions from the generation of purchased energy. Scope 3 emissions are all indirect emissions (not included in scope 2) that occur in the value chain of the reporting company, including both upstream and downstream emissions.

In addition to activities included in the CENTR method, some additional areas are calculated, and the result included in the sustainability report and the carbon offsets purchased.

3.1.1 Impact categories and units for CENTR comparison

The recommended impact categories and units for CENTR comparison are seen in the table below. These have been used except for refrigerants, where actual figures for release of gases were used (no emissions in 2021).

² <https://ghgprotocol.org/>

Impact category		Unit
Energy	Electricity office	kWh/year
	Electricity data centre	kWh/year
	Heating	kWh/year; litres fuel
Inputs	Paper	kg/year
Waste	Paper	kg/year
Mobility (commuting)	Car	Car km/year, by type of car
	Train	Passenger km/year
	Bus	Passenger km/year
Business travel	Airplane travel (exclude EU-ETS flights from compensation)	km/year, by type of flight (long, medium, short)
	Car	litres fuel
	Train	km/year
Capital goods	Buildings (optional, but required for compensation)	m ² floor surface area
	Parking area (optional, but required for compensation)	m ² parking area
	ICT-hardware	Euro, or number of computers and ICT-equipment
	Company cars	Amount of cars converted in weight kg
Refrigerants	Cooling systems	Cooling power (kW)

Notes: 1. ICT means Information and Communication Technology. 2. European flights are considered for the calculation of the carbon footprint, even as they fall under the European Emission Trading System. The Swedish Internet Foundation carbon offsets all flights, including those under the EU-ETS.

3.1.2 Coordination with CENTR

For future calculations it is recommended that emission factors, methodology and the scope of calculations and report is agreed upon with CENTR Sustainability Core Team, some time before the calculations start.

3.1.3 Additional areas calculated

There are four additional activity areas where calculations have been performed. These are not included in the overall results as a consequence of agreed CENTR methodology but accounted for separately. The reason being that they were not included in the past and have not been agreed with CENTR Sustainability Core Team. They are:

- Energy use at home for employees' computer usage when working from home
- Energy use for Zoom meetings
- Conference The Internet Days
- Hotel nights at business trips

4 INPUT VALUES FOR THE 2021 CALCULATIONS

4.1 General

Number of Full Time Equivalent Employees (FTE)	123
Number of domain names .se	1 493 998
Number of domain names .nu	254 081
Total number of domain names	1 748 079

The FTE number includes 93 employees and 20 long-term consultants at The Swedish Internet Foundation and 10 employees at MetaSolutions.

4.2 Energy use - offices

Electricity - Stockholm	150 447	kWh
Electricity - Malmö	18 856	kWh
Electricity - MetaSolutions	6 050	kWh
District heating - Stockholm	141 134	kWh
District heating - Malmö	56 268	kWh
District heating - MetaSolutions	33 606	kWh
District cooling - Stockholm	29 486	kWh

No district cooling is used at the Malmö site or at MetaSolutions. The energy use for district heating, district cooling and electricity has been provided by the property owner. Only renewable energy is used for electricity. District heating impacts are determined according to respective company's energy mix.

4.3 Energy use - servers and data traffic

The Swedish Internet Foundation use servers to send, receive and store data. They have own co-located server capacity on outsourced premises and use secondary name data servers and cloud servers. No datacentres are owned by The Swedish Internet Foundation. The energy use for own servers co-located in external datacentres has been provided by the respective property owners.

4.3.1 Own co-located servers

Two different locations with a total energy usage of 100 362 kWh have been reported. Both locations use renewable electricity.

Site 1	52 610	kWh
Site 2	47 752	kWh
Total	100 362	kWh

4.3.2 Secondary name servers and cloud services

The data provided for secondary name servers and Amazon Web Services (AWS) cloud servers was the gigabyte (GB) usage. The number of kWh have been calculated³. The data for Bredbandskollen⁴ and Federations were provided in kWh from data centre suppliers.

	kWh	GB
Secondary name servers .se	0,30	1,30
Secondary name servers .nu	0,028	0,125
AWS data traffic	263	79 097
AWS data storage	17 495	784 532
Bredbandskollen	18 234	
Federations	6 696	
Total	42 689	

4.4 Paper use

A total weight of 76 kg paper was reported. Weight is based on reported usage of paper, mainly printer paper. Information, reports and internet guides are digital. Soft copies can occasionally be printed on demand by customers but are not included in the carbon footprint as they are deemed to be out of scope. Invoicing is done almost entirely digitally.

4.5 Mobility - Employee commuting

The employee commuting data is based on an employee survey where respondents have provided the average percentage of transport means and the distance. The figures have

³ Lorenzo Posania, Alessio Pacciab, Marco Moschettini 2019, The carbon footprint of a distributed cloud storage.

⁴ Bredbandskollen is an easy way for you to measure your internet speed and to get help to improve it. <http://www.bredbandskollen.se/en/>

been adjusted for the number of days working from home in 2021 and extrapolated to cover the commuting of those that did not respond to the survey (66 persons, 54 percent). 57 persons out of 123 (employees and long-term consultants) responded to the survey, 46 percent. MetaSolutions chose not to participate in the survey. Employees have been working to a large extent from home due to the pandemic. The category "other" was assumed to be motor bike.

Small fossil car	9 166	km
Medium fossil car	19 522	km
Large fossil car	3 797	km
Electric car	21 085	km
Train/subway	37 503	km
Bus	11 075	km
Bike	16 547	km
Walking/running	11 537	km
Boat	4 316	km
Other	6 683	km
Total	141 231	km

4.6 Mobility - Business travel

Air travel is reported by the travel agency Egencia, and rail travel from SJ, the main Swedish train company. Car use figures are based on reported employee expenses provided by the accounting department. Business travel has decreased substantially due to the pandemic but increased some compared to 2020. Information about MetaSolutions business travel comes from their CEO.

Air (short)	-	passengerkm
Air (medium)	25 793	passengerkm
Air (long)	-	passengerkm
Train	43 520	passengerkm
Fossil car	15 039	passengerkm

4.7 Capital goods

4.7.1 Office and parking spaces

Depreciation time used is 40 years⁵. Two parking spaces were rented for a small part of the year, but for the large part only one parking space (i.e. 1,2 spaces for the year).

MetaSolutions did not rent any parking spaces.

Office Stockholm	3 313	m2
Office Malmö	408	m2
Office MetaSolutions	226	m2
Parking - 1,2 spaces	14	m2

4.7.2 Cars

Neither The Swedish Internet Foundation nor MetaSolutions have any company cars.

4.7.3 Inventories/Electronic equipment

	Total	2021	2019-2021
Cars	0	0	0
Computers/Laptops	247	47	102
Smartphones	146	18	23
Screens	148	0	89
Servers	61	0	25
Printer/Copying machines	3	0	2

Figures are based on inventory lists. Values in columns 2021 and 2019-2021 are the numbers purchased per period. The number of screens for 2021 and 2019-2021 are estimated as well as the number for servers and printers/copying machines for 2019-2021. Depreciation time 3-5 years.

4.8 Additional areas calculated but not included in carbon footprint

There are four additional areas where calculations have been performed. These are not included in the overall results as a consequence of agreed CENTR methodology but

⁵ The carbon footprint from construction is depreciated over time.

accounted for separately. The reason being that they were not included in the past and have not been agreed within CENTR Sustainability Core Team.

4.8.1 Energy use at home for employee computer usage

Based on the number of days the employees and long-term consultants at The Swedish Internet Foundation were working from home, the energy use for computer usage was estimated to a total of 7 300 kWh. Approximately half of the employees have reported to be using renewable electricity while the other half do not know or report that they do not have renewable electricity at home.

4.8.2 Zoom usage

Zoom has been used for meetings extensively due to the pandemic Covid-19 while working from home. The data provided for the Zoom at The Swedish Internet Foundation usage was an estimated 1 600 000 minutes (6 000 meetings and 35 000 participants). The data traffic has been calculated to 67 Terabytes (TB).

4.8.3 Conference The Internet Days

The annual conference called The Internet Days⁶ was held digitally for two days during 2021. No visitors attended on site in Stockholm, and keynote speakers did not need to fly to Sweden from abroad. The carbon footprint has been calculated separately by another party. The carbon footprint decreased from approximately 103 tonnes CO₂e 2019 to less than 2 tonnes CO₂e in 2020 and 2021.

4.8.4 Hotel nights

49 hotel nights at business trips were reported for year 2021: 47 for The Swedish Internet Foundation and 2 for MetaSolutions. Hotel nights are reported by the travel agency Egencia. Information about the number of hotel nights for MetaSolutions comes from their CEO.

⁶ <https://internetdagarna.se/english/>

5 CLIMATE REPORT FOR YEAR 2021 ACCORDING TO CENTR METHODOLOGY

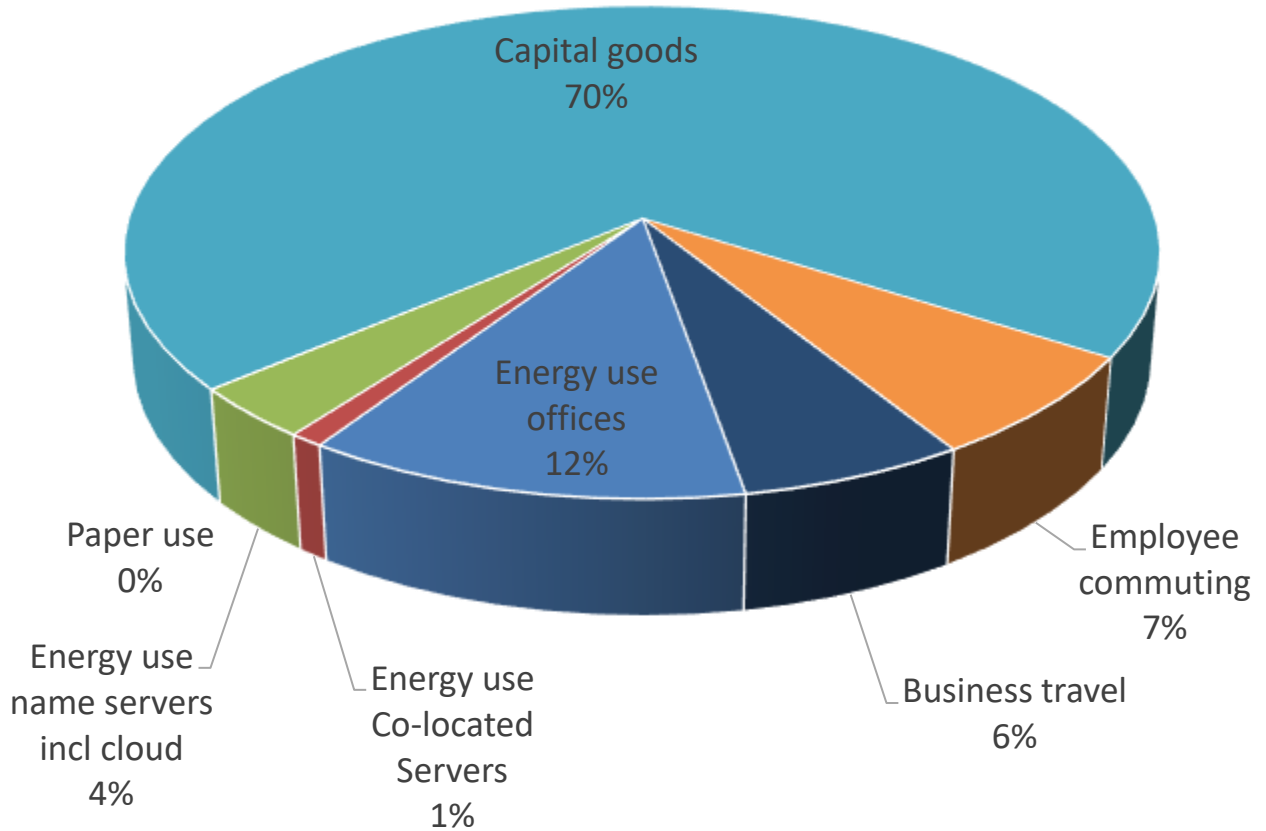
To achieve comparability between the different registries in CENTR, we calculate the carbon footprint for 2021 in accordance with what has been agreed within the CENTR Sustainability Core Team. The methodology and emission factors were coordinated for 2020 with the representatives for the Belgium Registry to get required additional information. Offices and parking spaces are included in the footprint calculation based on square meters. They are part of the area capital goods, together with car(s) and purchases of electronic equipment. For each type of capital goods, a certain depreciation time is applied as described in chapter 4.

5.1 Results for year 2021

Climate Report 2021 - tonnes CO₂e			
	Total	.se	.nu
Energy use offices	15,3	13,1	2,2
Energy use co-located servers	1,2	1,0	0,2
Energy use name servers incl cloud	4,4	3,8	0,6
Paper use	0,03	0,03	0,01
Capital goods	88,2	75,3	12,8
Employee commuting	8,8	7,6	1,3
Business travel	7,8	6,7	1,1
Total	125,7	107,5	18,3
Per domain name (g CO ₂ e)	72		
Per FTE (tonnes CO ₂ e)	1,0		

Sums in the table can show differences due to rounding.

The division between .se and .nu is based upon number of domain names. The footprint per domain name and Full Time Employee (FTE) is the same for both domains as well as for the total.



In capital goods we include buildings, parking spaces and electronic equipment. Since there are no company cars, no cars are included.

Most emission factor sources do not provide factors divided by greenhouse gas. However, when available, we have calculated impact per greenhouse gas. Impacts have also been attributed to the relevant scope 1, 2 or 3 according to the Greenhouse Gas Protocol.

In the table below emissions are presented by gas (as kg CO₂e) and scope.

Emissions per scope and gas	2021						
	CO ₂ , fossil	CO ₂ , biogenic	Methane CH ₄ (as CO ₂ e)	N ₂ O, (as CO ₂ e)	Other gases (as CO ₂ e)	CO ₂ e, unspecified	TOTAL, kg CO ₂ e
Scope 1	0	0	0	0	0	0	0
Scope 2	17	0	2	0	0	12 166	12 186
Scope 3	7 011	0	399	38	18	105 951	113 417
Out-of-scope		127					127
TOTAL, kg CO₂e	7 028	127	401	38	18	118 118	125 730

5.2 Comparison with year 2020

Compared to the previous report for 2020, the total carbon footprint calculated in accordance with CENTR methodology has increased by 6 percent, contrary to ambitions. This is mainly due to increased energy use in offices, increased business travel and increased energy use in name servers (including cloud). Compared to pre-pandemic levels (2018), emissions from business travel have still decreased by more than 90 percent. The increase in office energy use has primarily occurred in Malmö and the newly added MetaSolutions office. Also, the emissions factor for district heating in Malmö has been updated. It should be noted that both 2020 and 2021 were heavily affected by the pandemic which has influenced primarily business travel and commuting.

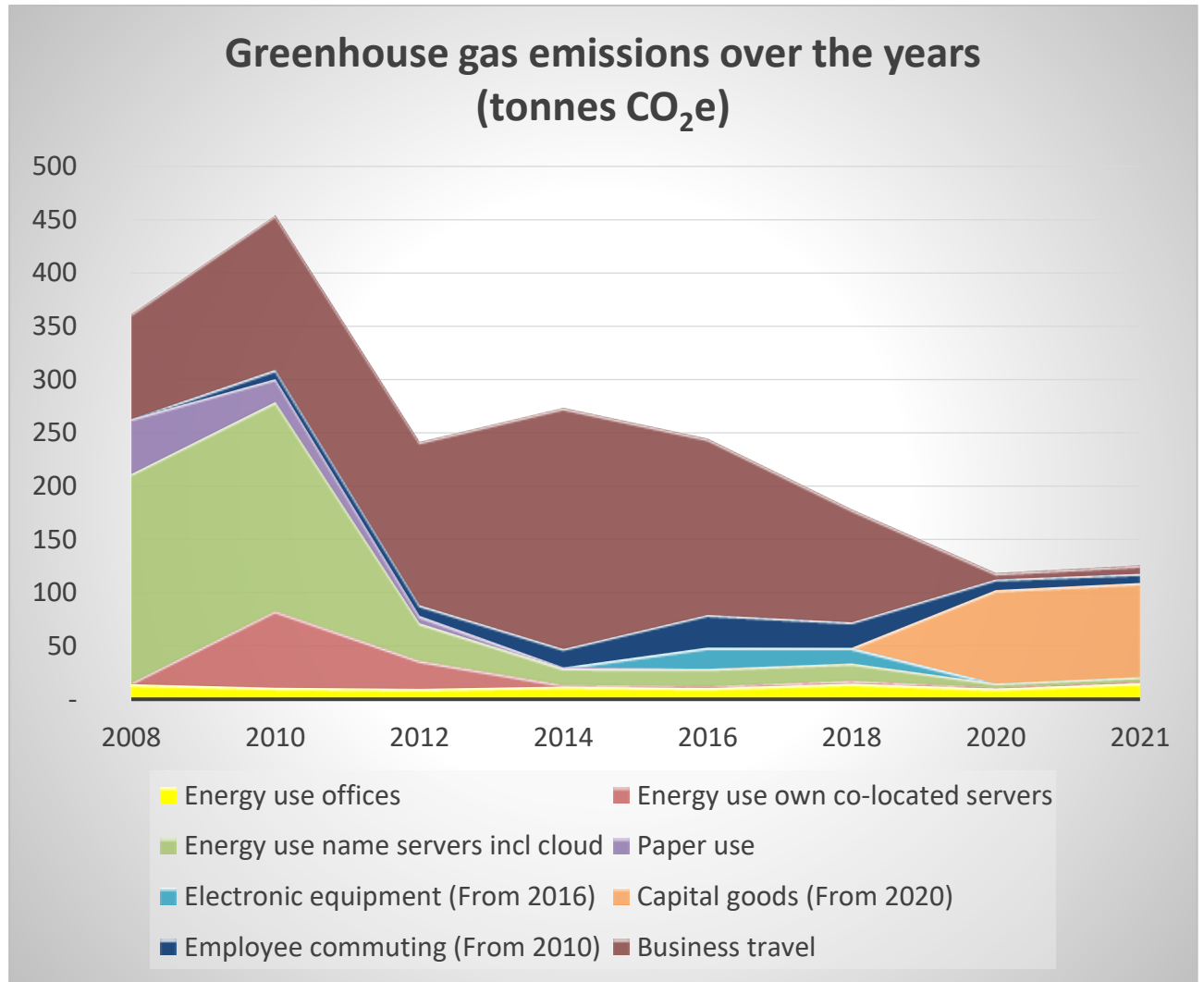
Emissions per domain name have increased as well, by 12 percent. Emissions per FTE have decreased however, by 25 percent, due to increased number of employees.

	2021	2020
Energy use offices	15,3	9,93
Energy use co-located servers	1,2	1,20
Energy use name servers incl cloud	4,4	3,78
Paper use	0,03	0,06
Capital goods	88,2	87,41
Employee commuting	8,8	10,01
Business travel	7,8	6,32
Total	125,7	118,71
Per domain name (g CO ₂ e)	72	64,05
Per FTE (tonnes CO ₂ e)	1,0	1,36

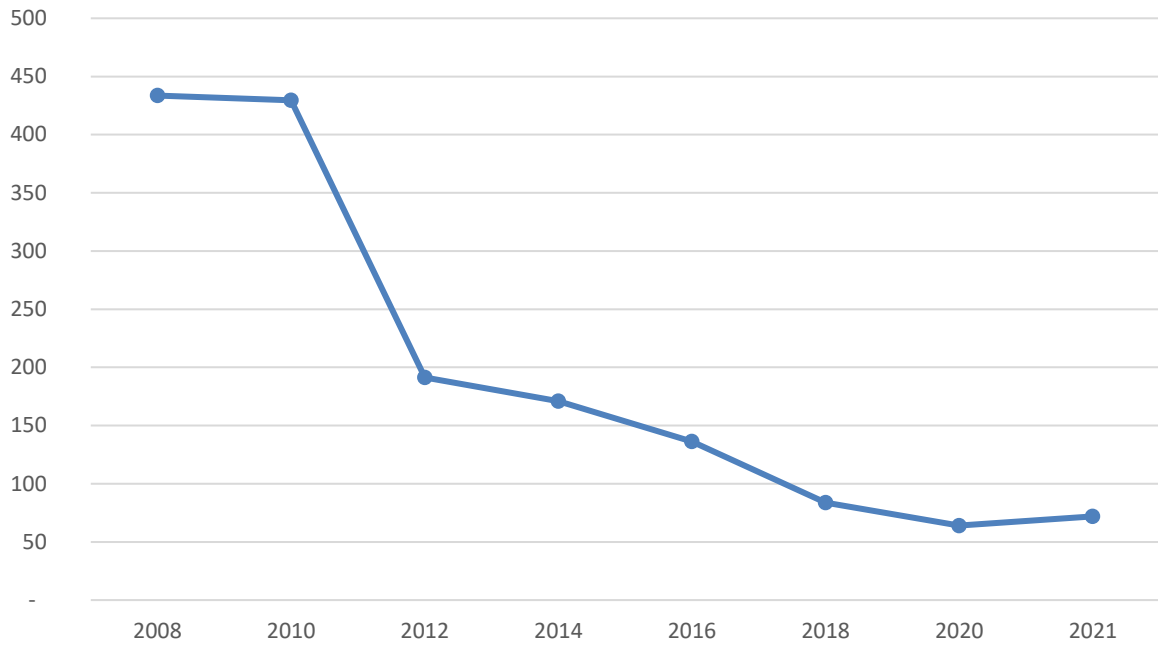
Sums in the table can show differences due to rounding.

5.3 Comparison with previous years

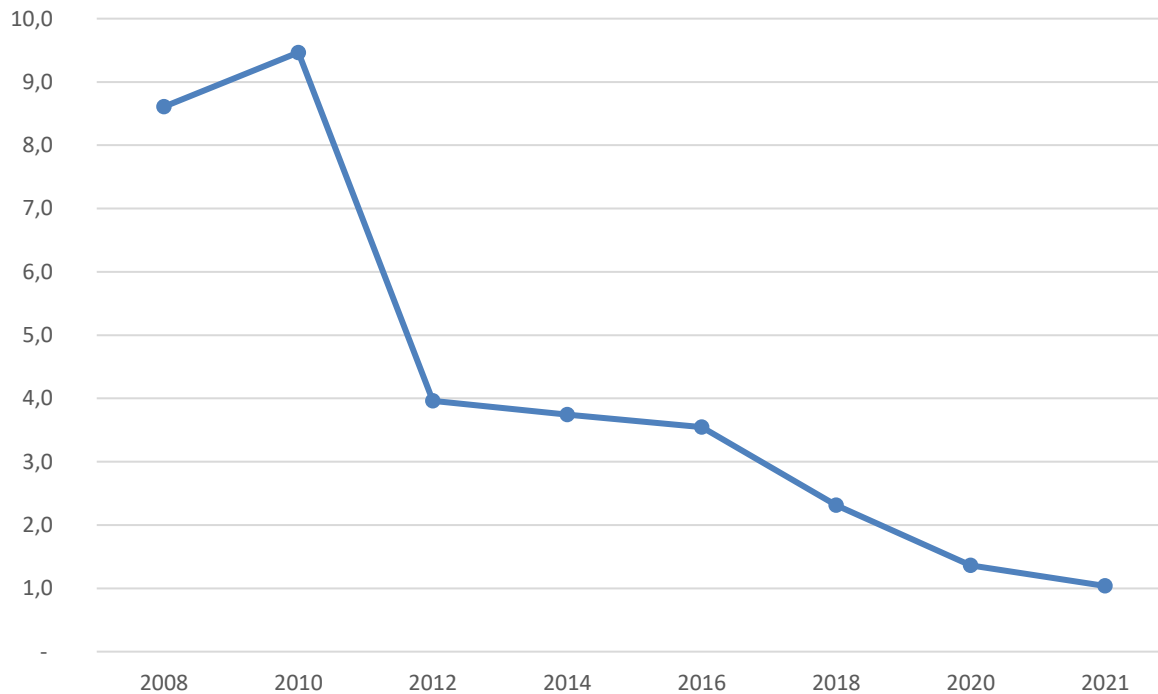
When comparing with previous years it should be noted that the methodology changed from 2020 when reporting according to CENTR methodology started.



Per Domain Name (72 g CO2e 2021)



Per FTE (1,0 ton CO2e)



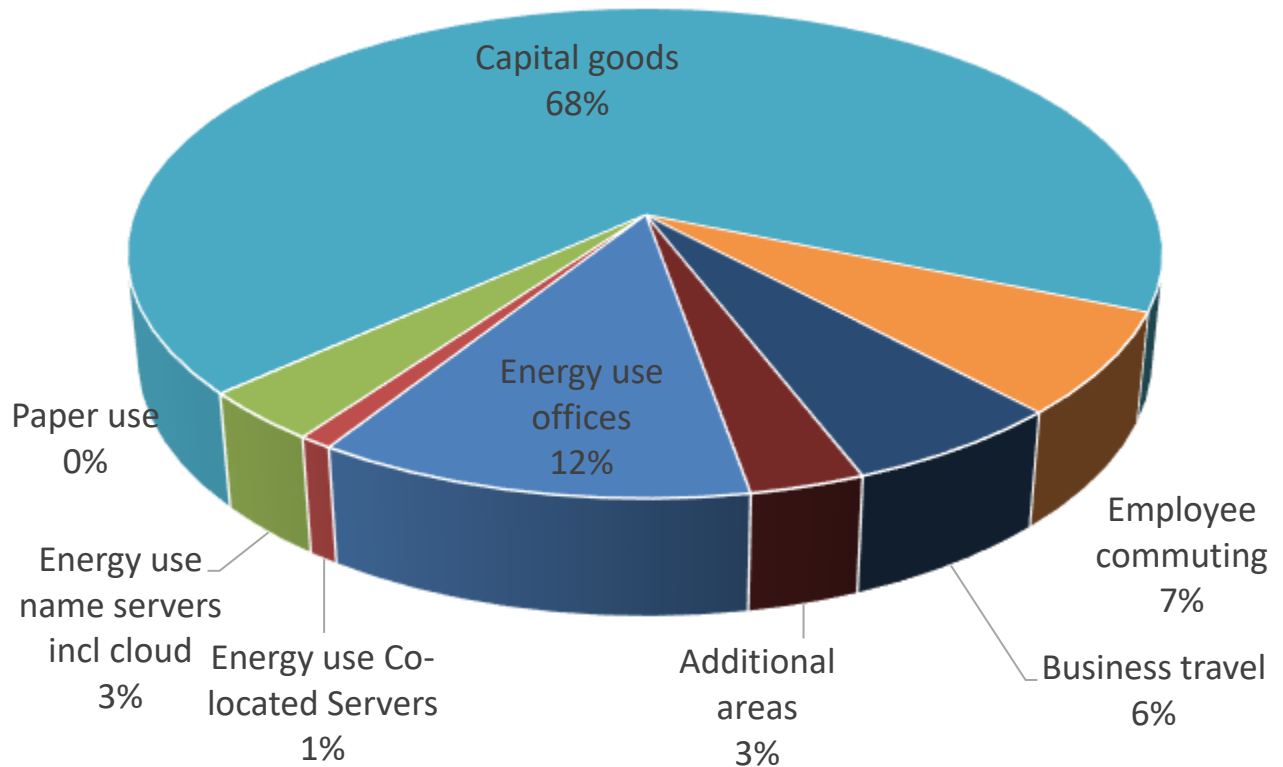
6 CLIMATE REPORT FOR YEAR 2021 WITH ADDITIONAL AREAS CALCULATED

There are four additional areas where calculations have been performed. These are not included in the overall results in chapter 5 but accounted for separately. The reason being that they were not included in the past and have not been agreed within CENTR Sustainability Core Team. However, since the total calculated result is relevant for the sustainability report, they are added in this chapter. A total of 130 tonnes CO₂e was calculated for 2021, including the four additional areas.

Climate Report 2021 CENTR and additional areas - tonnes CO₂e			
	Total	.se	.nu
Energy use offices	15,3	13,1	2,2
Energy use co-located servers	1,2	1,0	0,2
Energy use name servers incl cloud	4,4	3,8	0,6
Paper use	0,03	0,03	0,01
Capital goods	88,2	75,3	12,8
Employee commuting	8,8	7,6	1,3
Business travel	7,8	6,7	1,1
Additional areas	4,1	3,5	0,6
Total	129,8	110,9	18,9
Per domain name (g CO ₂ e)	74		
Per FTE (tonnes CO ₂ e)	1,1		

Sums in the table can show differences due to rounding.

The division between .se and .nu is based upon number of domain names. The footprint per domain name and Full Time Employee (FTE) is the same for both domains as well as for the total.



6.1.1 Energy use at home for employee computer usage

An estimated carbon footprint of 1,3 tonnes CO₂e was calculated for the energy use for computer usage when working from home. See section 4.8.1 for basis for calculations.

6.1.2 Zoom usage

An estimated carbon footprint of 0,3 tonnes CO₂e was calculated for Zoom usage in digital meetings. See section 4.8.2 for basis for calculations.

6.1.3 Conference The Internet Days

An estimated carbon footprint of 1,8 tonnes CO₂e was calculated by an external party, for the conference The Internet Days 2021. See section 4.8.3 for basis for calculations.

6.1.4 Hotel nights

An estimated carbon footprint of 0,7 tonnes CO₂e was calculated for the hotel nights reported. See section 4.8.4 for basis for calculations.

7 EMISSION FACTORS USED IN THE CALCULATIONS

In climate reporting CO₂e, or carbon dioxide equivalents, is a standard unit for measuring carbon footprints. Emission factors are generally expressed in kilos or grams CO₂e per measured component. In the table below, the emission factors used for the 2021 assessment are listed.

Emission factors 2021	Value	Unit	Reference
Energy use			
District heating Stockholm	44	g CO ₂ e/kWh	Stockholm Exergi, key environmental data 2021
District heating Malmö	98	g CO ₂ e/kWh	https://www.eon.se/content/dam/eon-se/swe-documents/swe-fjarrvarmenatspecifica-miljovarden.pdf
District cooling Stockholm	1,70	g CO ₂ e/kWh	Stockholm Exergi, key environmental data 2021
Electricity use offices	11,8	g CO ₂ e/kWh	All have renewable electricity. Using value from GodEl. https://godel.se/app/uploads/2021/06/godel-klimateanalys-2020.pdf
Electricity use - Own name servers	11,8	g CO ₂ e/kWh	All have renewable electricity. Using value from GodEl. https://godel.se/app/uploads/2021/06/godel-klimateanalys-2020.pdf
Electricity use - Work from home, renewable	11,8	g CO ₂ e/kWh	Using value from GodEl. https://godel.se/app/uploads/2021/06/godel-klimateanalys-2020.pdf
Electricity use - Work from home, non-renewable (residual)	365	g CO ₂ e/kWh	https://www.ei.se/bransch/ursprungsmarkning-av-el/residualmix
Electricity use, EU average	231	g CO ₂ e/kWh	Data 2020, https://www.eea.europa.eu/data-and-maps/daviz/co2-emission-intensity-9#tab-googlechartid_googlechartid_googlechartid_chart_11111
Electricity use, global average	475	g CO ₂ e/kWh	Data for year 2018, https://www.iea.org/reports/global-energy-co2-status-report-2019/emissions
Zoom usage	4	g CO ₂ e/GB	Aslan, J., Mayers, K., Kooimey, J.G. and France, C. (2018), Electricity Intensity of Internet Data Transmission: Untangling the Estimates. Journal of Industrial Ecology, 22: 785-798.
Paper			
Paper use - printer paper	0,46	kg CO ₂ e/kg	CENTR, figure for recycled paper
Capital goods/Electronic equipment			
Buildings	16	kg CO ₂ e/m ²	CENTR, 650 per m2 Depreciation time 40 years
Parking space	14	kg CO ₂ e/m ²	CENTR, 557 per m2 Depreciation time 40 years
Average fossil car, capital per year	605	kg CO ₂ e/piece	CENTR, 1,1 ton physical weight per car x 5,5 ton CO ₂ /ton physical weight = 6,05 ton CO ₂ /car (source: Documentation Base Carbone 11.5.0 (2016), p21). Depreciation time 10 years
Electric car, capital per year	910	kg CO ₂ e/piece	CENTR, Current and Future Lifecycle Emissions of Key Low Carbon Technologies and Alternatives", Ricardo-AEA (2013) p140, Depreciation time 10 years
Weighed fossil/electric car per year	758	kg CO ₂ e/piece	CENTR
Laptop	83	kg CO ₂ e/piece	CENTR, 250 kg/3 years
Thin client/Mobile phone	33	kg CO ₂ e/piece	CENTR, 100 kg/3 years
Screen	167	kg CO ₂ e/piece	CENTR, 500 kg/3 years
Server	133	kg CO ₂ e/piece	CENTR, 450 kg/3 years
Printer/Photocopier	588	kg CO ₂ e/piece	CENTR, 2940 kg/5 years
Business travel			
Hotel stays Sweden	15	kg CO ₂ e/night	Derived from UN 2021, IPCC 2006 & CIBSE 2012
Hotel stays Av. SE/DK/NL/UK	21	kg CO ₂ e/night	Derived from UN 2021, IPCC 2006 & CIBSE 2012
Business travel - Air (short)	286	g CO ₂ e/personkm	BEIS, 2021 Dataset
Business travel - Air (medium)	175	g CO ₂ e/personkm	BEIS, 2021 Dataset
Business travel - Air (long)	172	g CO ₂ e/personkm	BEIS, 2021 Dataset
Business travel - Train	3,19	g CO ₂ e/personkm	http://www.transportmeasures.org (NTM)
Business travel - Unknown car type	210	g CO ₂ e/km	Genomsnitt för stad och landsbygd 2020 https://bransch.trafikverket.se/for-dig-i-branschen/miljo--for-dig-i-branschen/Luft/Dokument-och-lankar-om-luft/handbok-for-vagtrafikens-luftforeningar/
Business travel - Electric car	47	g CO ₂ e/km	Using value from Miljöfordon.se: https://www.miljofordon.se/ekonomi/drivmedelskalkyl/?petrol=&diesel=&e85=&gas=&electric=1000&hvo=
Commuting			
Commuting - Average fossil car	210	g CO ₂ e/km	Genomsnitt för stad och landsbygd 2020 https://bransch.trafikverket.se/for-dig-i-branschen/miljo--for-dig-i-branschen/Luft/Dokument-och-lankar-om-luft/handbok-for-vagtrafikens-luftforeningar/
Commuting - Fossil car small	120	g CO ₂ e/km	Values as agreed within CENTR Sustainability Core Team
Commuting - Fossil car medium	150	g CO ₂ e/km	Values as agreed within CENTR Sustainability Core Team
Commuting - Fossil car large	180	g CO ₂ e/km	Values as agreed within CENTR Sustainability Core Team
Commuting - Electric car	47	g CO ₂ e/km	Using value from Miljöfordon.se: https://www.miljofordon.se/ekonomi/drivmedelskalkyl/?petrol=&diesel=&e85=&gas=&electric=1000&hvo=
Commuting - Train/Subway	3,2	g CO ₂ e/personkm	http://www.transportmeasures.org (NTM)
Commuting - Bus	46	g CO ₂ e/personkm	En hållbar vardag. Trafikförvaltningens hållbarhetsredovisning 2021. Region Stockholm, januari 2022.
Commuting - Bike	0	g CO ₂ e/km	
Commuting - Walking/Running	0	g CO ₂ e/km	
Commuting - Boat	425	g CO ₂ e/personkm	En hållbar vardag. Trafikförvaltningens hållbarhetsredovisning 2021. Region Stockholm, januari 2022.
Commuting - Other	100	g CO ₂ e/km	Assuming motor bike with usage approx 0,4 l/km petrol

8 APPENDIX – NOTES TO CALCULATIONS

The structure and content of the report is based on the results from the report: "Towards a CENTR model for sustainability metrics: methodological recommendations and benchmark of carbon footprint approaches of CENTR members DNS Belgium, EURid, Afnic and The Swedish Internet Foundation. September 2020".

8.1 Energy use offices and own servers

Specification of the impact from energy use in offices and for own servers, in kg CO₂e.

	2021
Energy use offices	15 304
Electricity Stockholm	1 775
Electricity Malmö	223
Electricity MetaSolutions	71
Heating Stockholm	6 182
Heating Malmö	5 531
Heating MetaSolutions	1 472
Cooling Stockholm	50
Energy use own servers	1 184
Site 1	621
Site 2	563

Sums in the table can show differences due to rounding.

8.2 Secondary name servers and cloud services

Specification of the impact from energy use by secondary name servers and cloud service. Below impact in kg CO₂e.

For calculation of kWh from data usage the following source was used: Lorenzo Posania, Alessio Pacciab, Marco Moschettini 2019, The carbon footprint of a distributed cloud storage.

	2021
Secondary name servers	0,15
.se	0,14
.nu	0,01
AWS cloud service	4 097
Data traffic	61
Data storage	4 036
Other cloud services	294
Bredbandskollen	215
Federations	79

8.3 Capital goods

Specification of the climate impact from capital goods. Below impact in kg CO₂e.

	2021
Capital goods	88 163
Buildings	64 139
Carparks	198
Cars	0
ICT hardware including:	23 826
Computers/laptops	3 915
Smartphones	599
Screens	14 803
Servers	3 333
Printer/copying machines	1 176

Sums in the table can show differences due to rounding.

8.4 Business travel

Specification of the climate impact from business travel. Below impact in kg CO₂e.

Flights as reported by travel agency Egencia. The climate impact from train is very low, due to the trains running on renewable electricity. Below impact in kg CO₂e.

	2021
Business travel	7 819
Air (short)	0
Air (medium)	4 522
Air (long)	0
Train	139
Fossil car	3 158

Sums in the table can show differences due to rounding.

8.5 Employee commuting

In the CENTR methodology we differentiate between cars of different sizes. Regarding "Other", this was assumed to be motor bike. Below impact in kg CO_{2e}.

	2021
Commuting	8 834
Small car	1 100
Medium car	2 928
Large car	683
Electric car	991
Train/subway	119
Bus	509
Bike	0
Walking/running	0
Boat	1 834
Other	668

Sums in the table can show differences due to rounding.

9 APPENDIX - CLIMATE REPORT ACCORDING TO ORIGINAL METHODOLOGY, PERIOD 2008 TO 2020

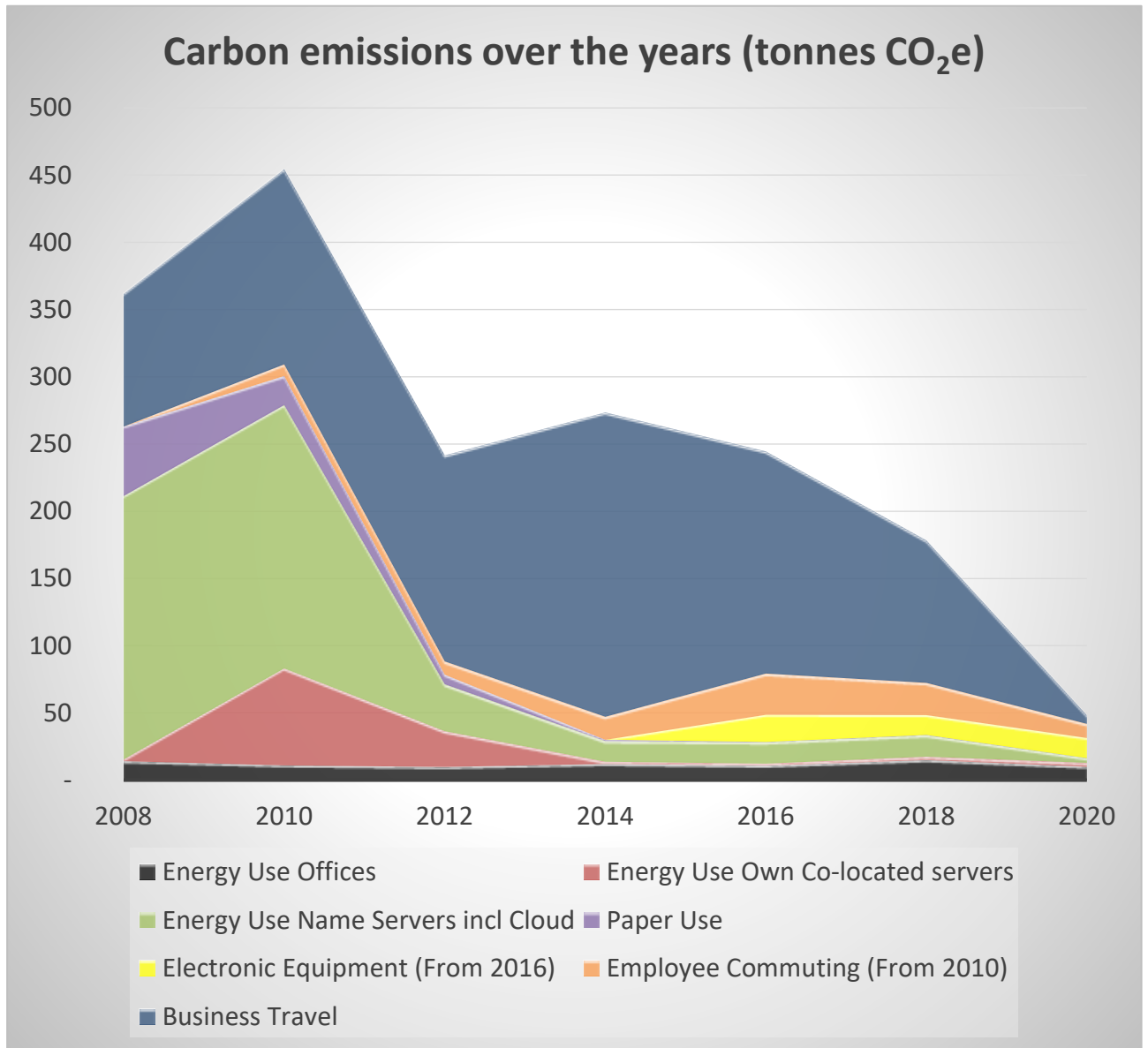
Since year 2021 we are no longer reporting according to the old methodology used for the period 2008 to 2020. For reference the results for those years are included in this chapter.

9.1 Methodology used between 2008 and 2020

The methodology that has been followed since the start is the Greenhouse Gas Protocol. The areas included were initially energy use, paper use, business travel, employee commuting and secondary name server usage. For the 2016 measurement of purchased electronics was also included. The different scopes (1, 2 and 3) in the GHG Protocol have not been reported apart since it has not been important for The Swedish Internet Foundation considering the intention behind the measurements, namely identifying actions to decrease the climate impact. However, the only scope 1 emissions included, is (was) the use of one car, and scope 2 includes only the energy related emissions in premises leased by The Swedish Internet Foundation. The rest, which is the majority, is scope 3. In scope 3 the following areas have been included:

- Energy use for co-located servers, secondary name servers and cloud services
- Paper use
- Electronic equipment
- Employee commuting
- Business travel

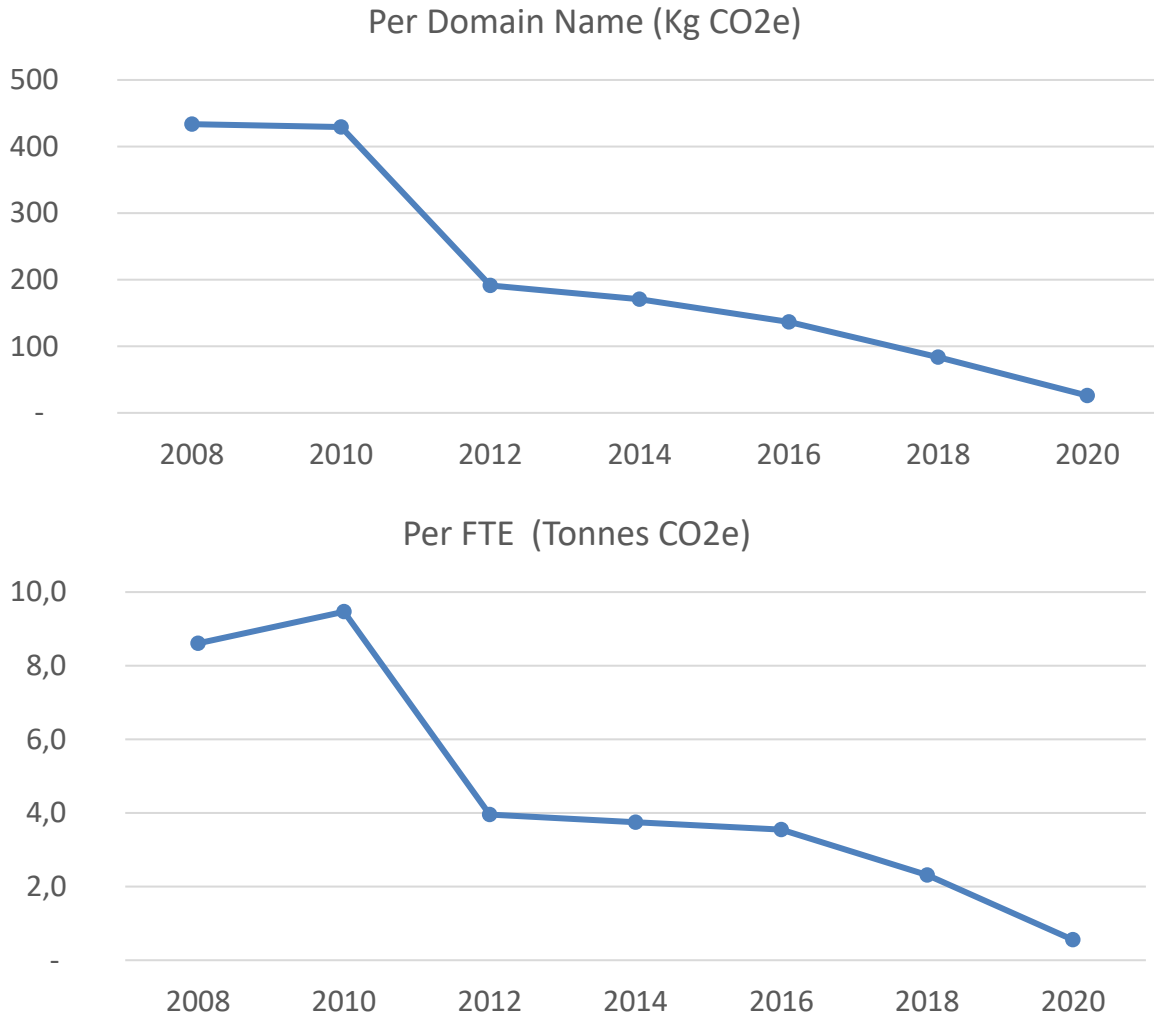
9.2 Total emissions over time



The reported figures for 2008 must be regarded as uncertain as it was the first year data was collected and at that point in time carbon measurements were in relatively immature stage. Comparing with 2010 as the base year, except for electronic equipment where the base year is 2016, the decrease of carbon footprint as a total is almost 90 percent.

9.3 Emissions per domain and FTE over time

Looking at the figures per domain name and Full Time Employee (FTE), they have both decreased substantially with 94 percent respectively as compared with the base years as per above.



In climate reporting CO₂e, or carbon dioxide equivalent, is a standard unit for measuring carbon footprints. The footprint per domain name and Full Time Employee (FTE) is the same for both domains as well as for the total.