How much CO_2 do I emit?

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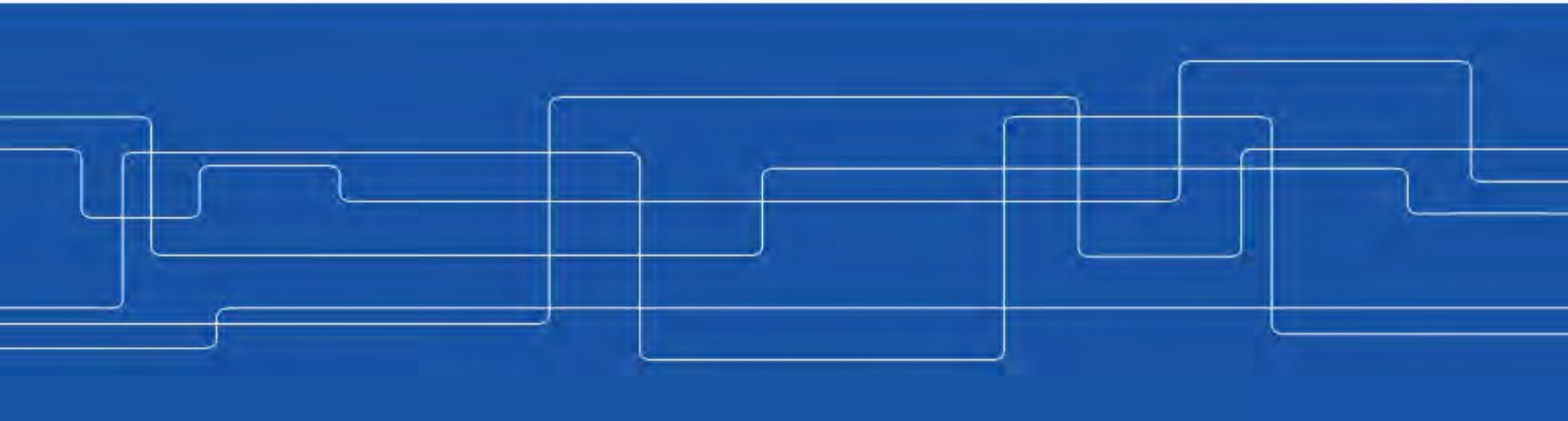
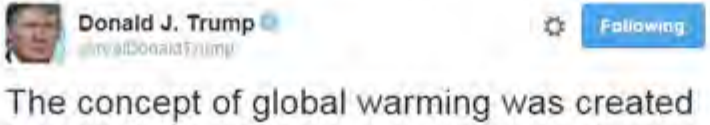
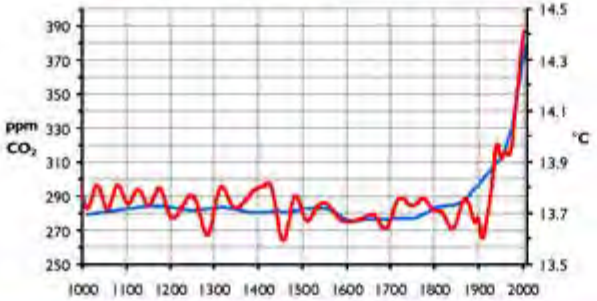
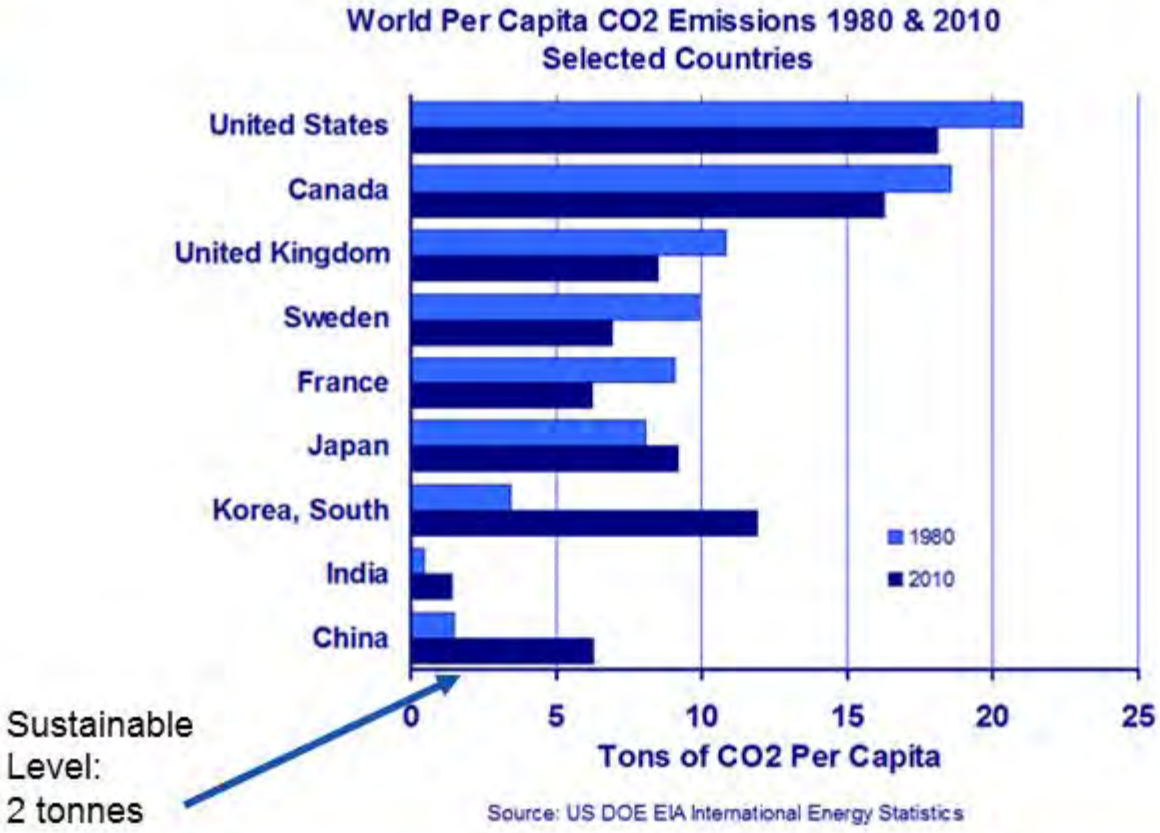


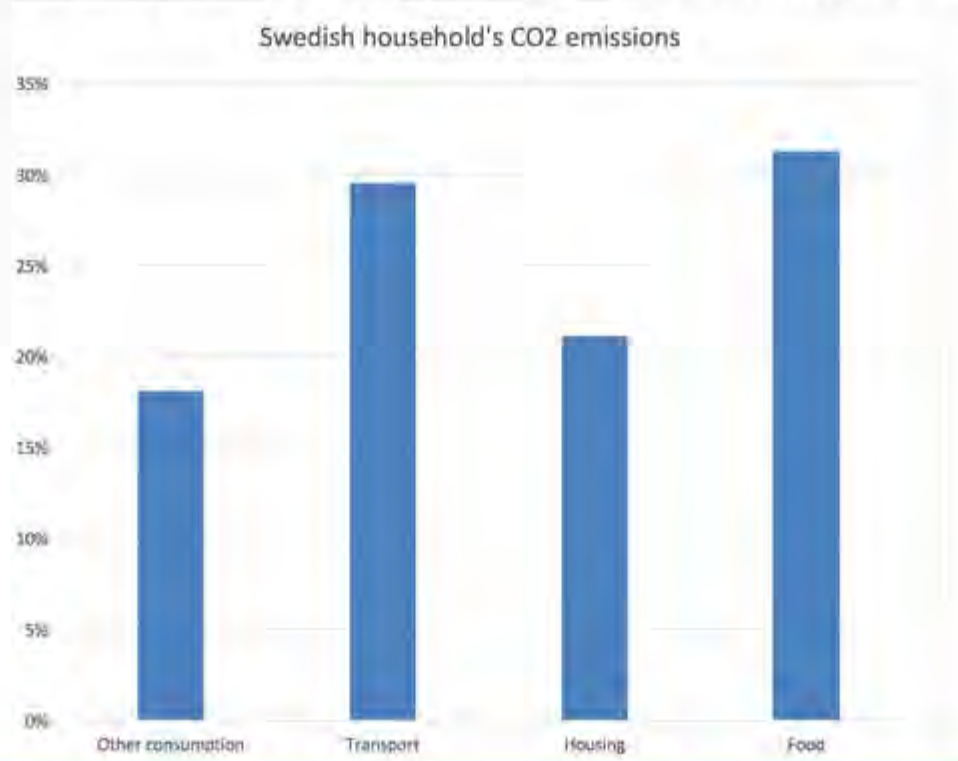
Introduction – climate change and CO_2 emissions (carbon footprint)






World Per Capita CO2 Emissions 1980 & 2010
Selected Countries
United States
Canada
United Kingdom
Sweden
France
Japan
Korea, South
India
China
1980
2010
0
5
10
15
20
25
Tons of CO2 Per Capita
Source: US DOE EIA International Energy Statistics
Sustainable
Level:
2 tonnes

Big 4 of household emissions: Transport, Housing/electricity, Food, Consumption

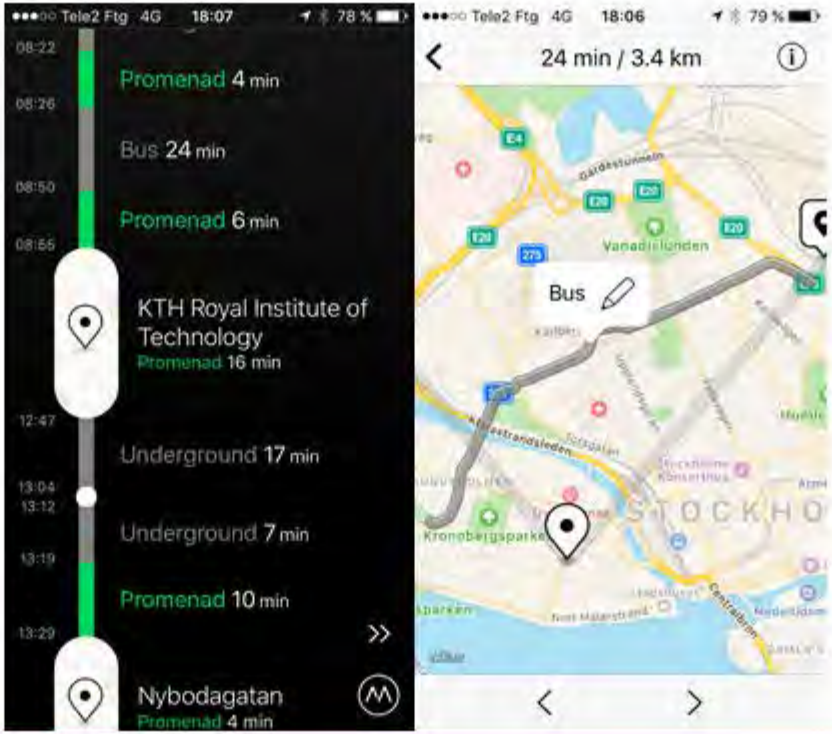


What did I do? Log my own transportation, meals, heating and electricity use, and consumption

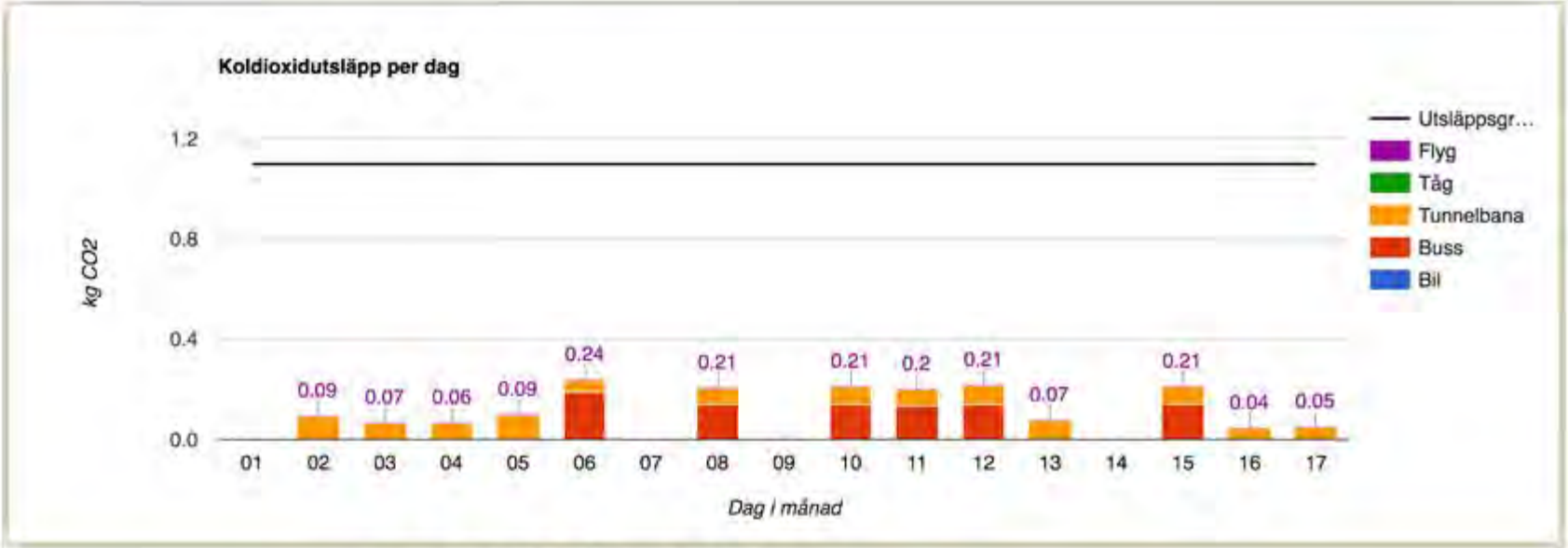
Transportation - intro

Average Swede: About 30% or 3000 kg CO_2 per year

Log my traveling with the Moves app

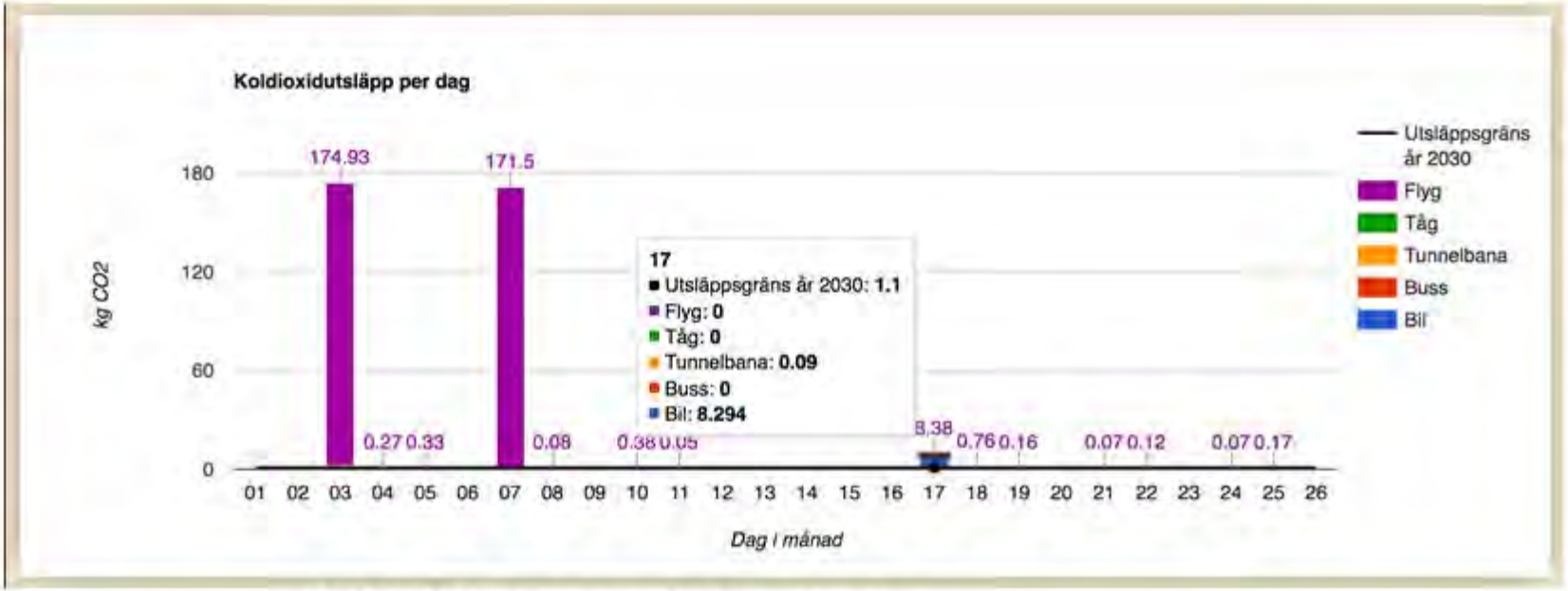


Daily emissions in may



… or a total of 1.56kg in 17 days
Which would mean 33kg/year compared to
The average Swede with 3000kg/year

But daily emissions in April



355 kg CO2 after one trip to Amsterdam
Which would mean 4300kg/year compared to
The average Swede with 3000kg/year

Other yearly travel routines

Daily travel to/from work = 33 kg

3 ferry trips to Finland = 600 kg

About 2500 km by car (cottage + holidays, 4 people) = 87 kg

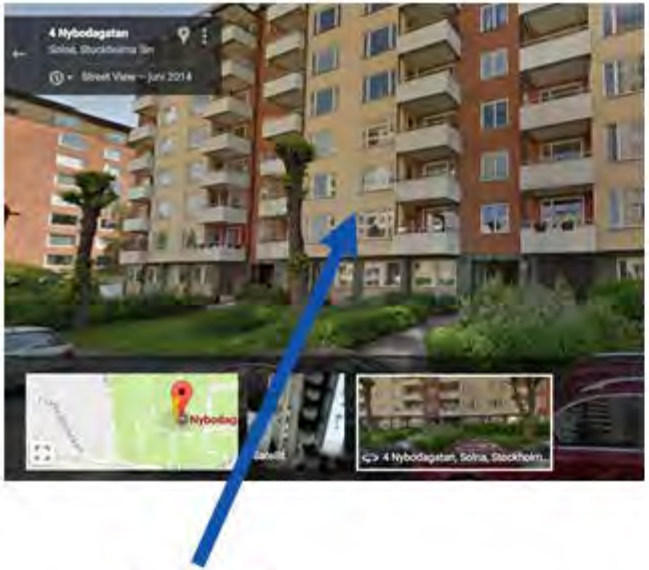
4 conference trips in Europe by plane = 1400 kg

A grand total of about 2120 kg CO_2/year

Compared to average Swede 3000 kg CO_2/year

Heating and electricity - intro

My cottage



My home

Average Swede: About 21% or 2100 kg CO_2 per year

Heating at home – district heating

17.400kWh
6 g/kWh
=
104 kg CO2

4 people
=
26kg/year

My electricity bills.
Home + cottage
Total about 8500 kWh/year

Skellefteå Kraft

Förbrukningsrapport

	År 2010	År 2011	År 2012	År 2013	År 2014
Januari		965	714	818	868
Februari		871	710	615	451
Mars		571	392	909	411
April		473	332	333	410
Maj	301	322	335	361	305
Juni	278	182	263	179	318
Juli	186	248	220	278	315
Augusti	222	257	187	235	36
September	250	228	164	302	191
Oktober	435	220	348	329	282
November	542	300	396	342	301
December	1 412	490	782	421	853
Summa	3 626	5 127	4 843	5 122	4 741

CO_2 emissions for electricity depends on energy mix in your country

Country	% fossile	g CO2/kWh
Estonia	95%	1419
Poland	86%	731
US/Germany	45-60%	375
Sweden	3%	41

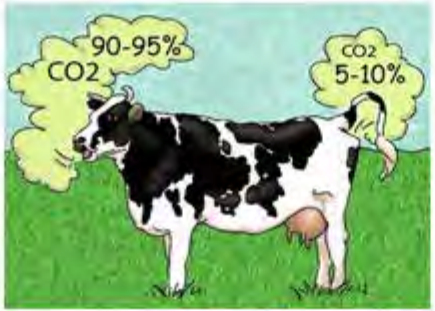
For me with 8500 kWh this would mean

Country	% fossile	g CO2/kWh	Total emissions (tonnes CO2) for 8500kWh
Estonia	95%	1419	12,06
Poland	86%	731	6,21
US/Germany/Italy	45-60%	375	3,19
Sweden	3%	41	0,35

Divided by 4 people in the household gives

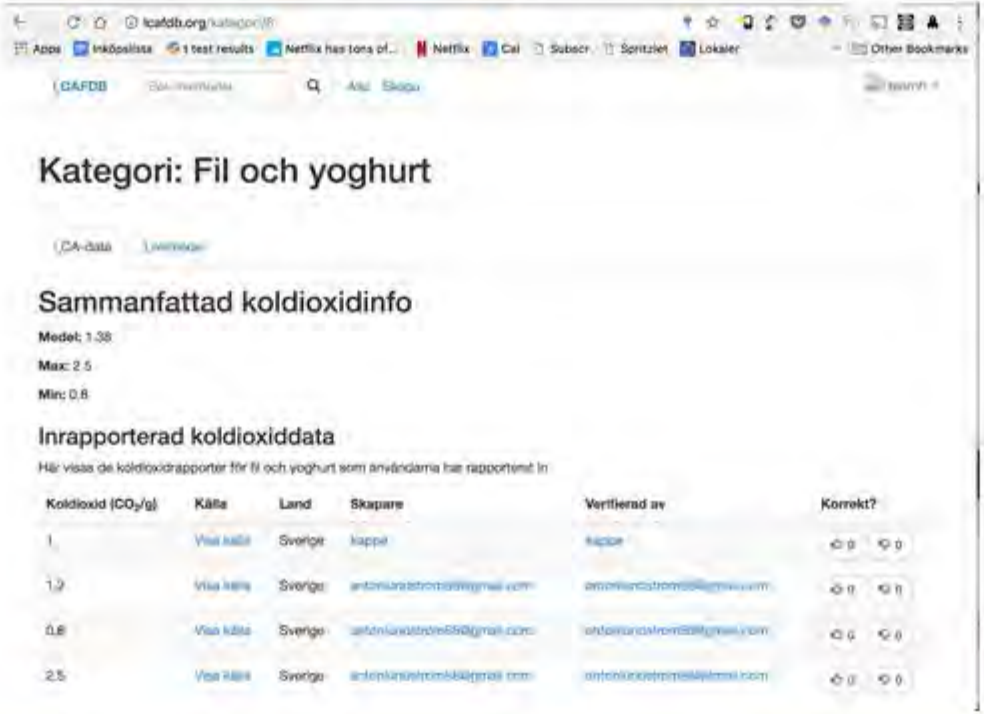
87 kg CO_2/year emissions

Food – introduction

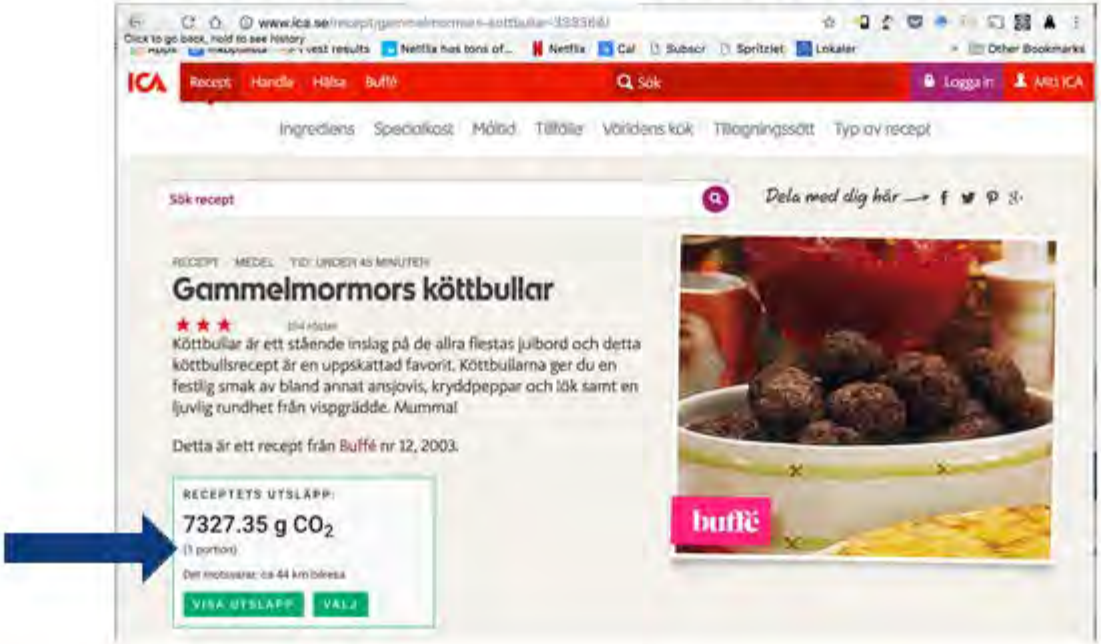


Average Swede: About 31% or 3100 kg CO_2 per year

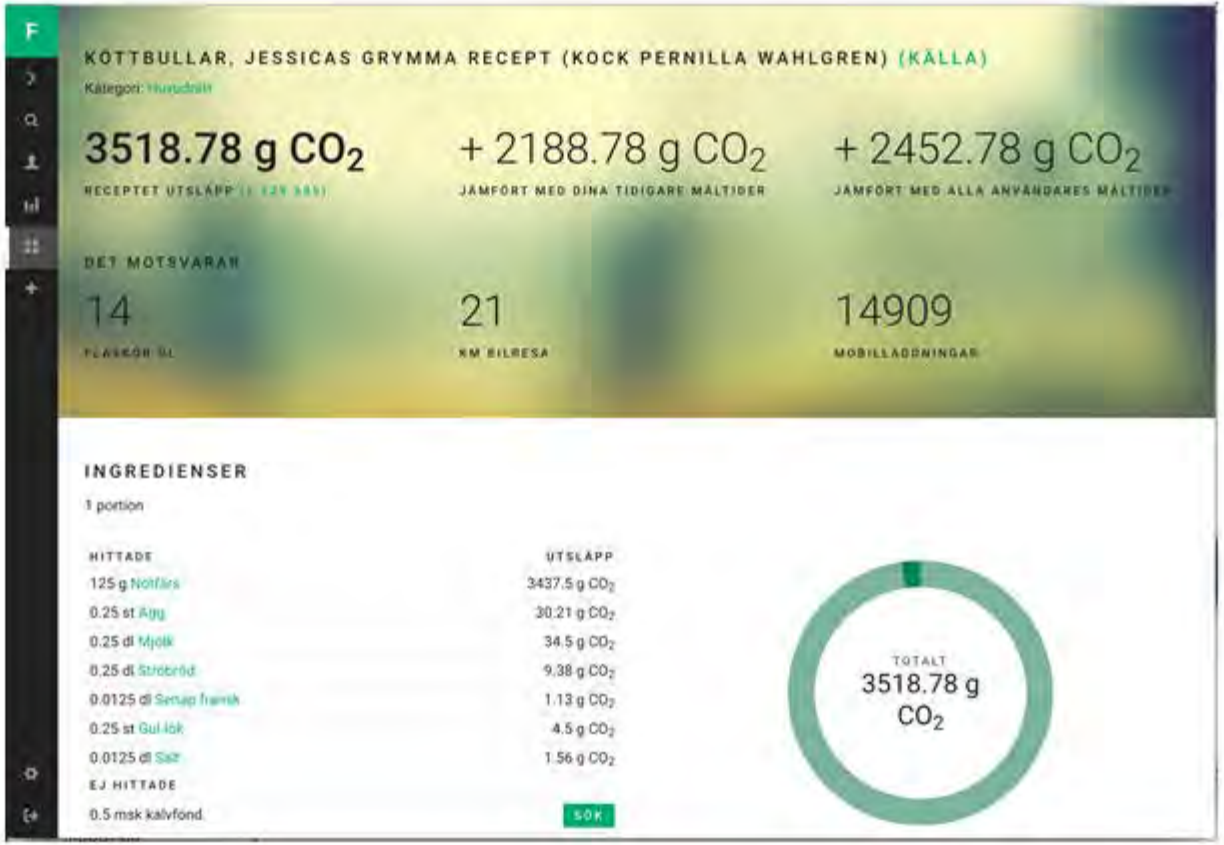
Total emissions for foodstuffs calculated using LCA – Life Cycle Assessment



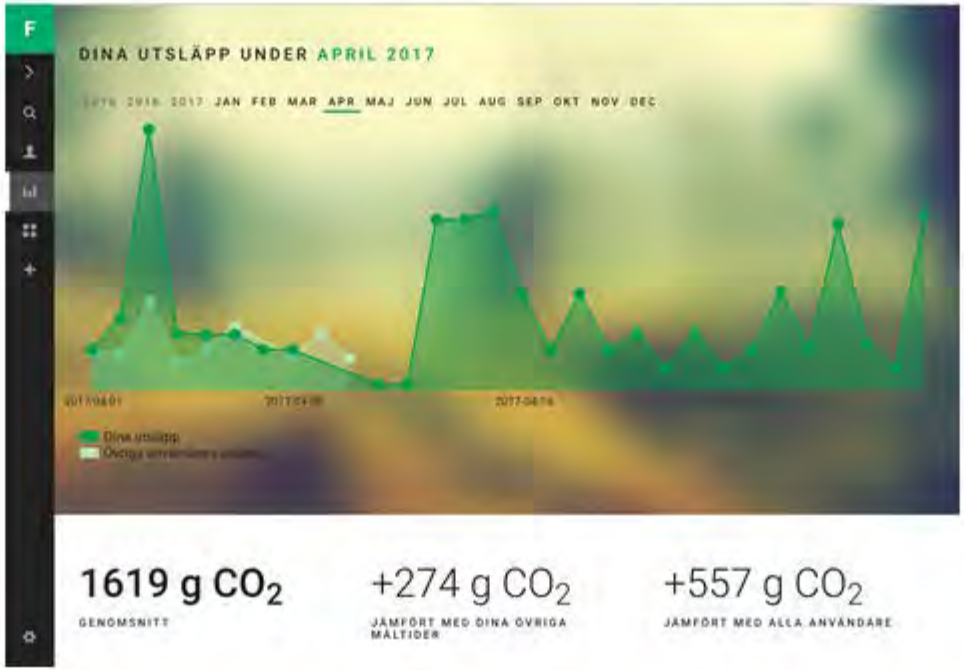
Tracking what I eat – developed chrome plugin that calculates CO2 emissions from recipes on the web – www.foodprint.nu



Swedish meatballs



Foodprint – my results



Sum of emissions from ingredients over one month

Yearly CO_2 footprint from food

1600g lunch + 1600 g dinner + 300 g breakfast = 3500g/day
3500 g/day * 365 days = 1300 kg per year

Adding food waste (average 25% in Sweden) the total is

1700 kg/year

Average Swede = 3100 kg/year

Consumption – intro

Average Swede: About 18% or 1800 kg CO_2 per year

Download my last 200 purchases from my bank

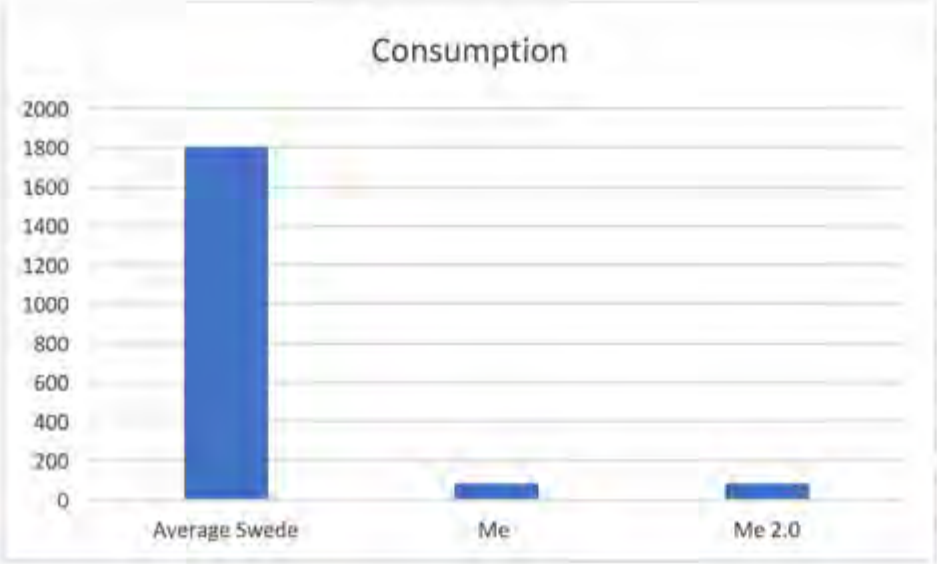
Date	Store	Amount	
2017-06-01	HALLON.SE, STOCKHOLM	145,8	Electronic sales
2017-06-01	HALLON.SE, STOCKHOLM	89	Electronic sales
2017-05-31	ICA KVANTUM AKERSBERGA, AKERSBERGA	71,8	Grocery Stores and Supermarkets
2017-05-31	PRESSBYRÅN 4205608, ÅKERSBERGA	25	Grocery Stores and Supermarkets
2017-05-30	ICA SUPERMARKET VASTERMAL, STOCKHOLM	196,77	Grocery Stores and Supermarkets
2017-05-30	PRESSBYRÅN 4308164, STOCKHOLM	70	Grocery Stores and Supermarkets
2017-05-29	PAYPAL *BANGGOOD, 4029357733	270,03	Electronic sales
2017-05-29	BUTIKKNR 309 KITCHN SOLNA, SOLNA	249	Hardware Stores
2017-05-29	ZTORY, KARLSTAD	99	Electronic sales
2017-05-29	HEMKÖP SOLNA C, SOLNA	47,75	Grocery Stores and Supermarkets
2017-05-29	HEMKÖP BIRGER JARL, STOCKHOLM	67,81	Grocery Stores and Supermarkets
2017-05-29	RUSTA SOLNA, SOLNA	99,9	Hardware Stores
2017-05-28	AKERSBERGA VEXTFORSELJ, TEBY	61	Florist
2017-05-27	ICA TREVEHALLEN, AKERSBERGA	182,7	Grocery Stores and Supermarkets
2017-05-26	NYBADDAT HOME, AKERSBERGA	299	Grocery Stores and Supermarkets
2017-05-26	H M 117 AKERSBERGA, AKERSBERGA	398	Clothing
2017-05-26	SUBWAY AKERSBERGA, AKERSBERGA	146	Restaurants
2017-05-26	REST GULD PANDA, ÅKERSBERGA	500	Restaurants
2017-05-26	801 TEKNIKMAGASINET, ÅKERSBERGA	319,99	Electronic sales
2017-05-26	ICA KVANTUM AKERSBERGA, AKERSBERGA	38,6	Grocery Stores and Supermarkets
2017-05-26	ICA TREVEHALLEN, AKERSBERGA	54,5	Grocery Stores and Supermarkets
2017-05-26	DJURMAGAZINET AKERSBER, AKERSBERGA	29	Pet shops, pet foods and supplies
2017-05-25	ICA SUPERMARKET STOP TABY, TABY	527,63	Grocery Stores and Supermarkets
2017-05-25	ITUNES.COM/BILL, ITUNES.COM	85	Electronic sales

Map to Åland index (CO_2/Euro/category)

Result: **82 kg CO_2 per year**

Average Swede = 1800 kg

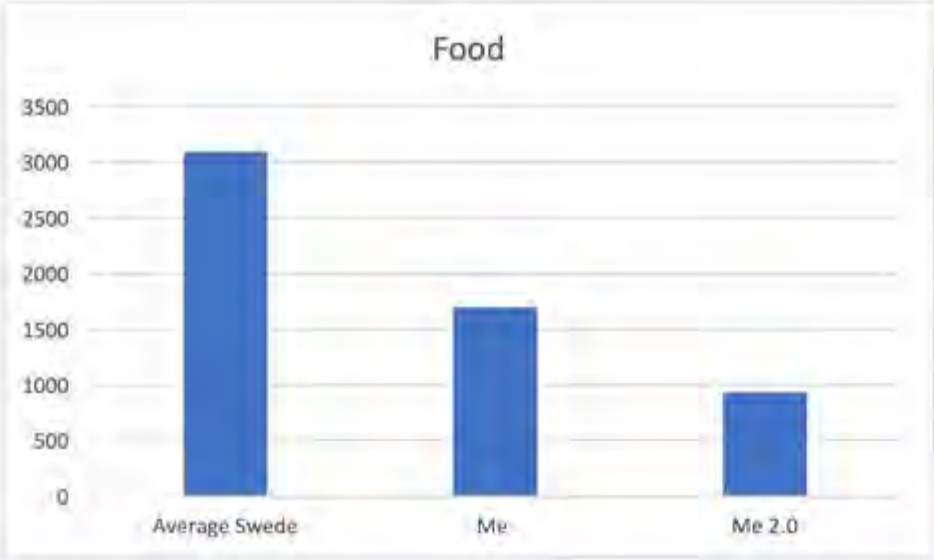
Wrapping up: What did I learn?
Consumption



Average Swede	1800
Me	82
Me 2.0	82

Very low scores, not much I can change

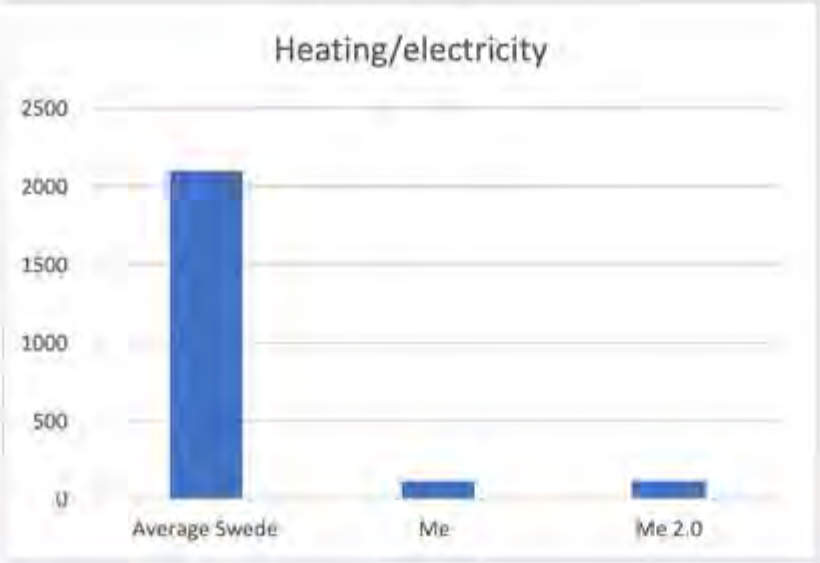
Wrapping up: What did I learn?
Food



Average Swede	3100
Me	1700
Me 2.0	930

Change minced meat to soy based version lowers footprint for food by 40%

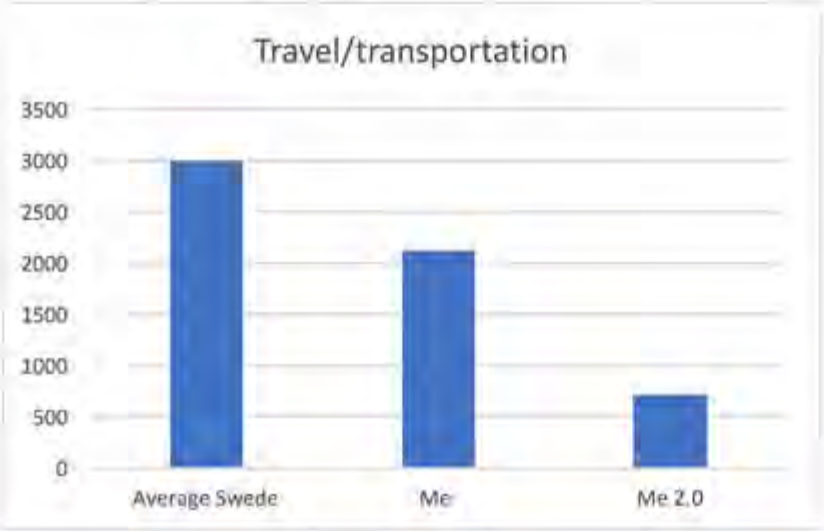
Wrapping up: What did I learn? Heating/electricity



Average Swede	2100
Me	113
Me 2.0	113

Not much I can do

Wrapping up: What did I learn?
Travel



Average Swede	3000
Me	2120
Me 2.0	720

Stop going to conferences reduces CO2 by 76%

So: Do I live at a sustainable level: No
Can I live at a sustainable level: YES!

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