



One Tonne Life



Håkan Axelsson
Sustainable Cities Program

Vattenfall Sustainable Cities

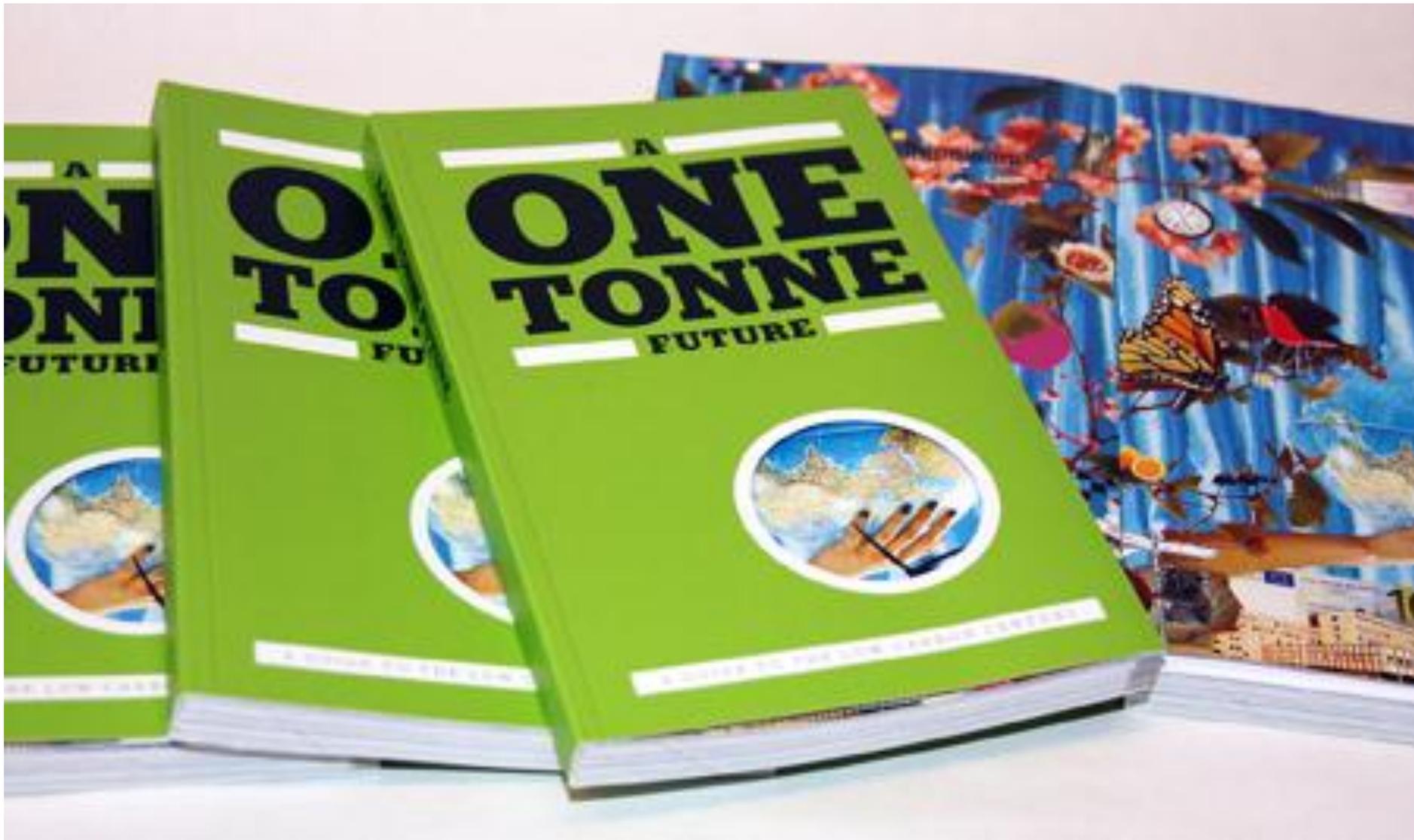
- A strategic program to support cities in their transition to sustainable energy use
- A product portfolio with sustainable energy solutions
- A new coordinated working process internally and externally

City Partnership



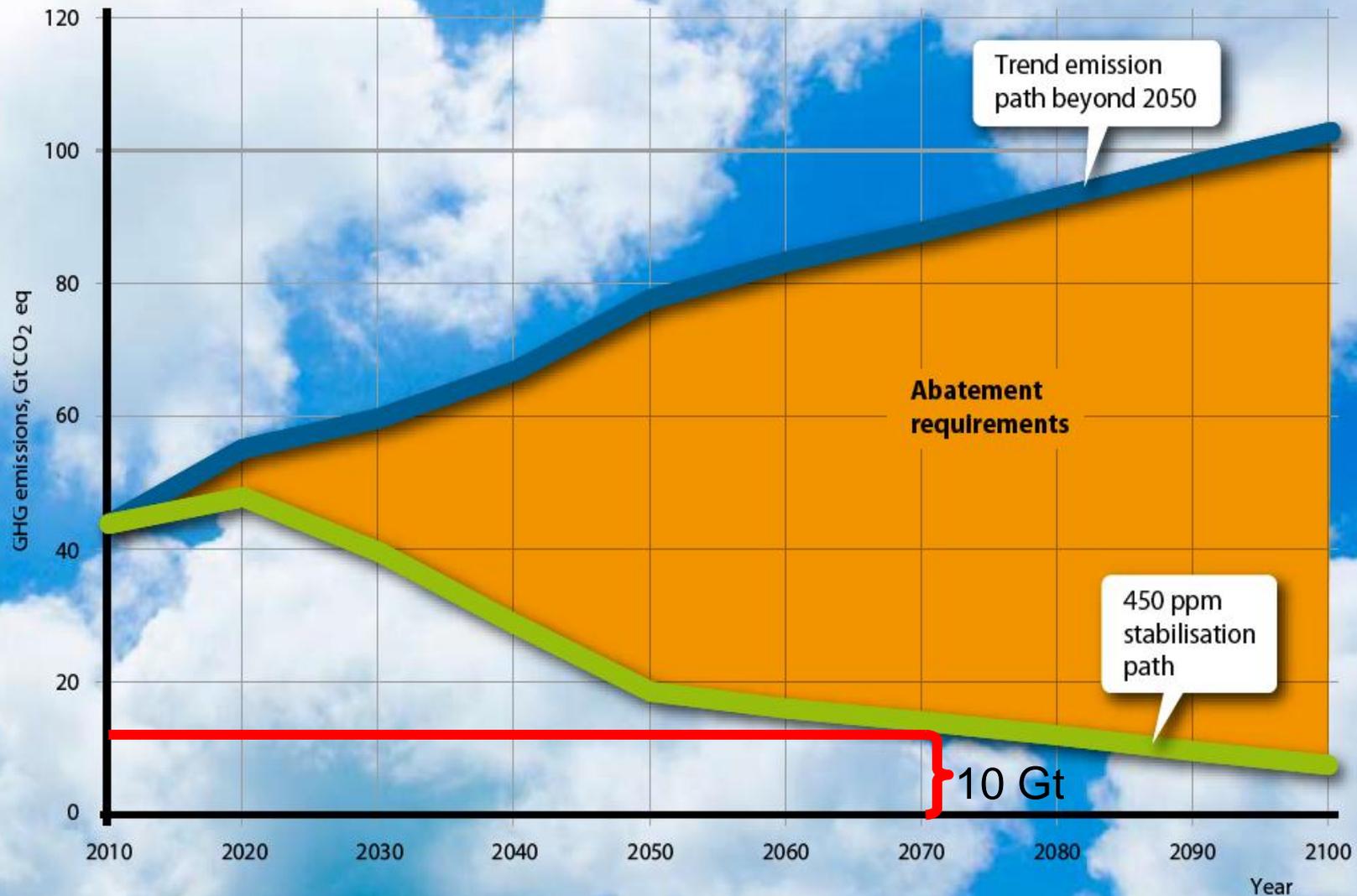
- **Uppsala**
- **Berlin**
- **Hamburg**
- **Amsterdam**

Vattenfall 100 years anniversary



A widening gap

The graph shows the difference between current trends and what must be done to stabilise greenhouse gas concentrations.



The challenge

How much is one tonne of carbon dioxide with today's technology?

To combat global warming we need to cut annual emission of greenhouse gases to one tonne of carbon dioxide per person in 2109. Today the global average is close to seven tonnes.

**CO2
BUDGET
FOR ONE
DAY**



STAY HOME
Heating the house every fifth day (Northern Europe)

or



EAT
2 meals a day of 150g meat, 100g fries and tap water

or



TRAVEL
10-20 km car ride

or



SHOP
1 new T-shirt (walk or bike to the shop)

Starting point



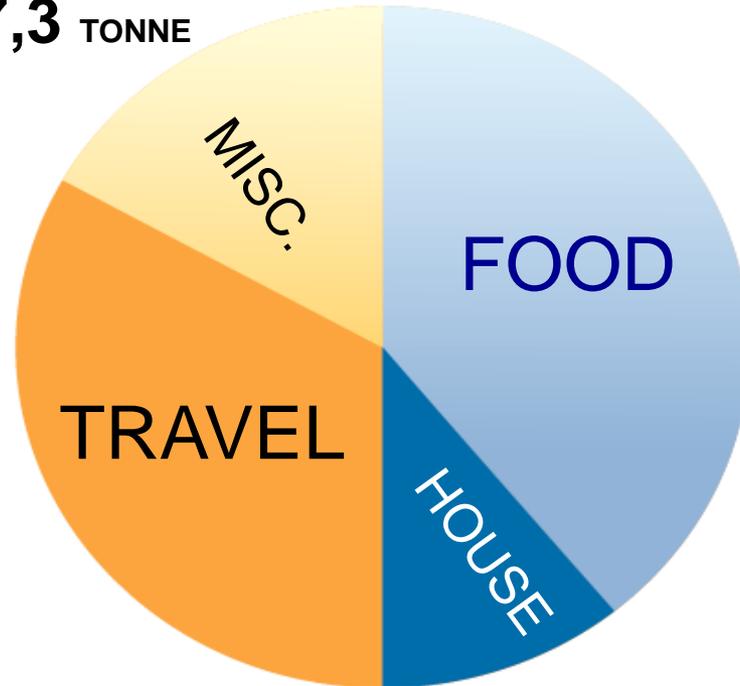
One Tonne Life



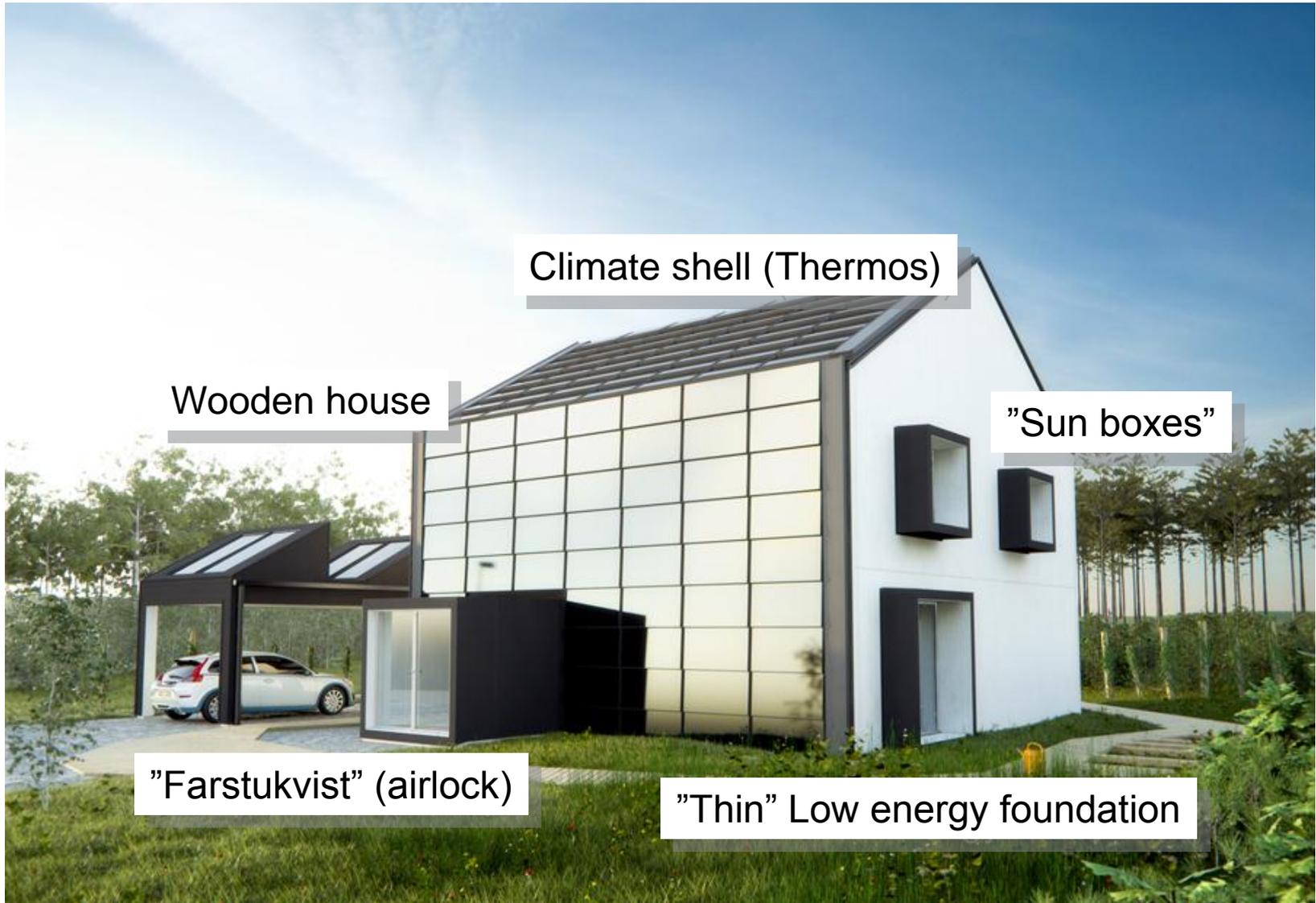
The family - Lindells



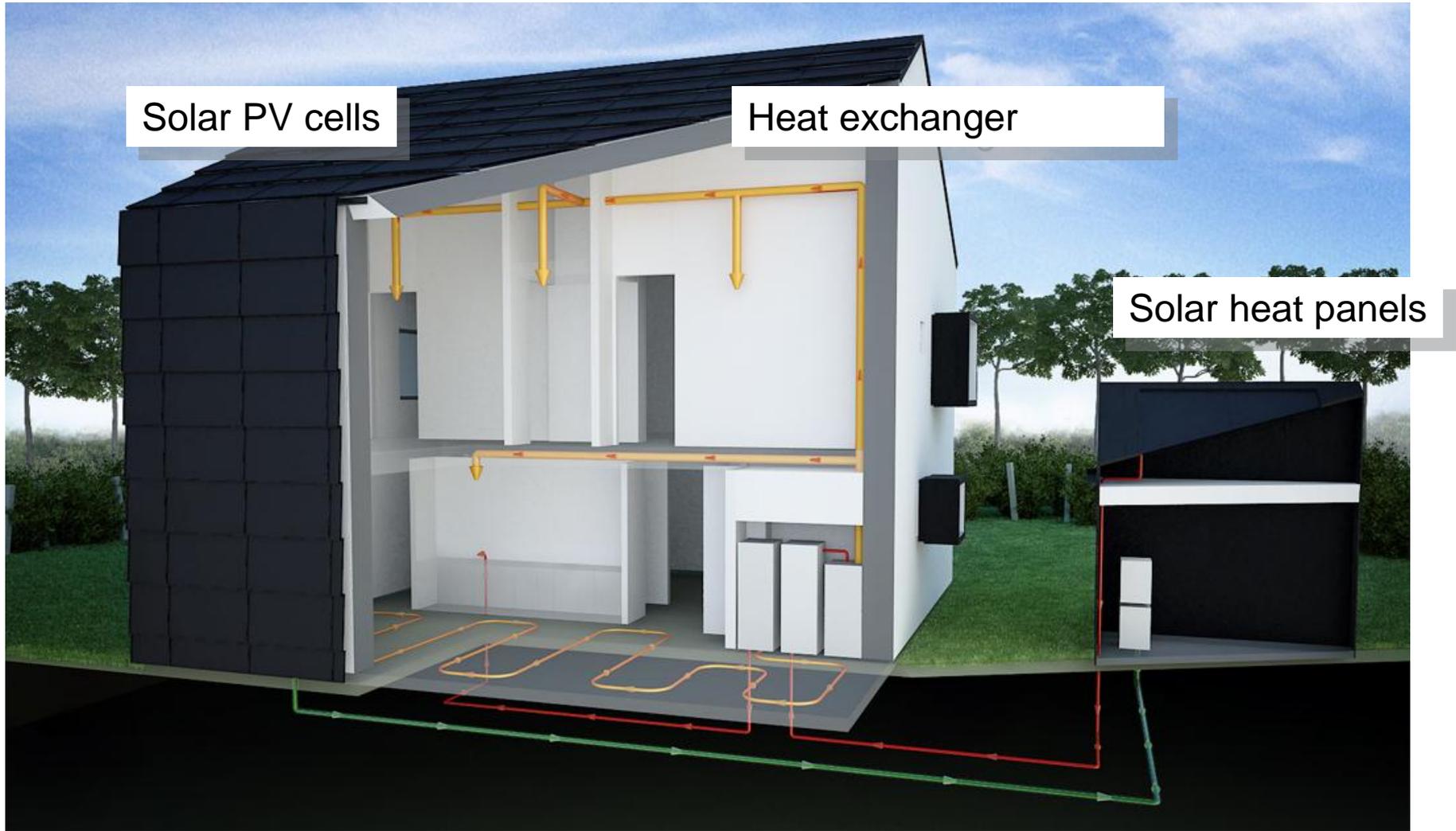
7,3 TONNE



The House – designed by Gert Wingårdh



The Energy System



The Car - Volvo C30 Electric

Zero carbon emission when charged with renewable electricity

Lithium-ion batteries

Size: 24 kWh

Weight: 2x140 kg

Charged in 6-10 hours



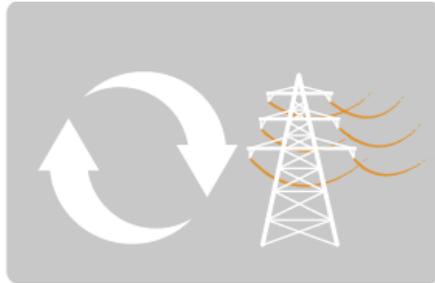
Power: 111 hp.

Speed: 130 km/h

Range: up to 150 km

Vattenfalls contribution to One Tonne Life

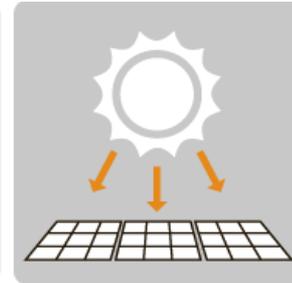
Recycling of surplus electricity



Low carbon electricity



Energy from the sun



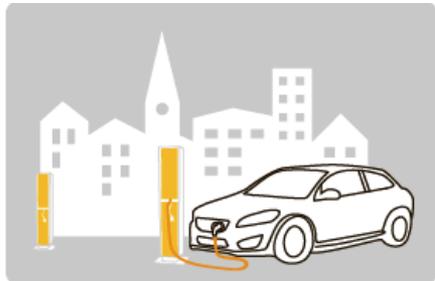
Visualization



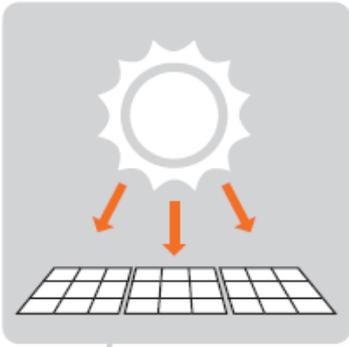
Energy coach



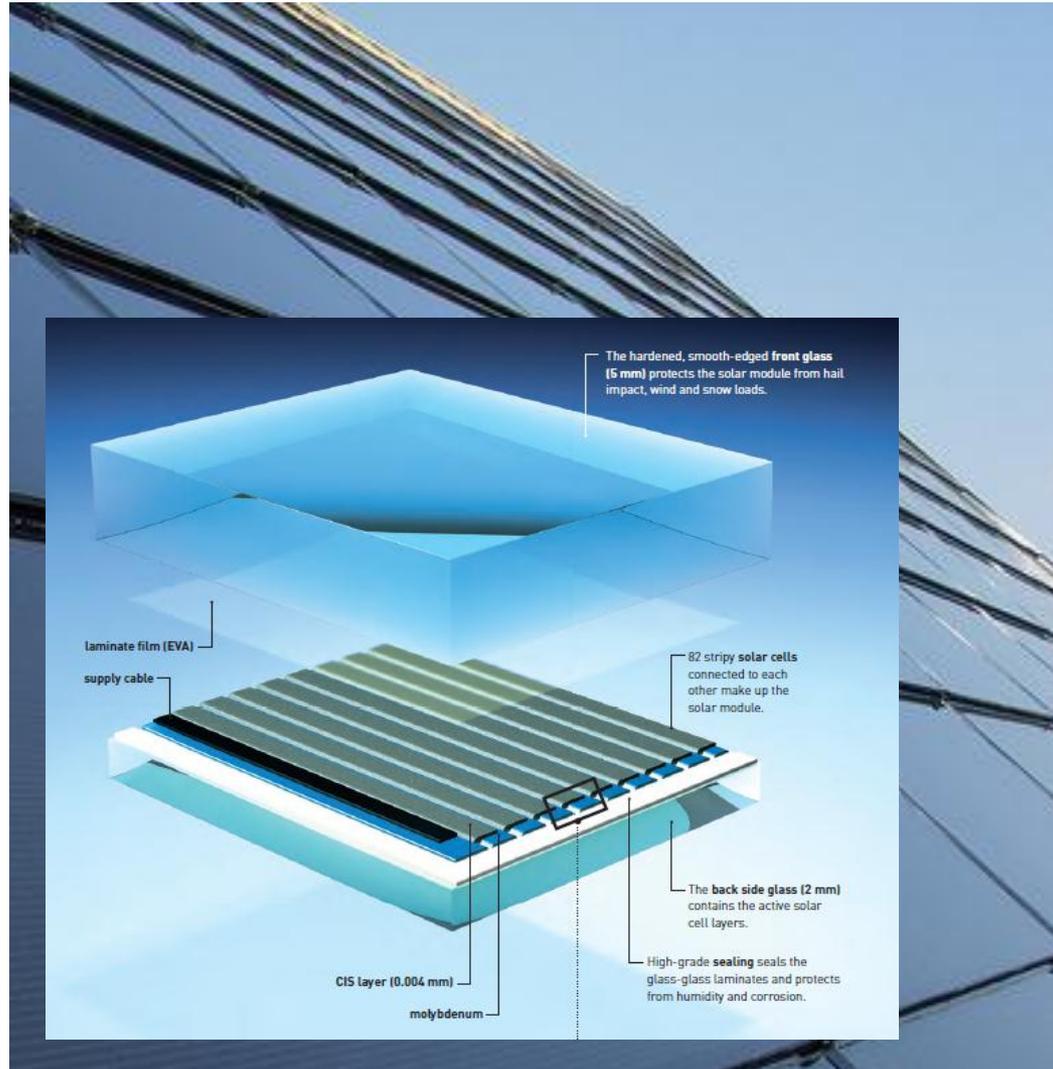
Electricity in the tank



Energy from the sun



- CIGS Thin-film technology
- Building integrated



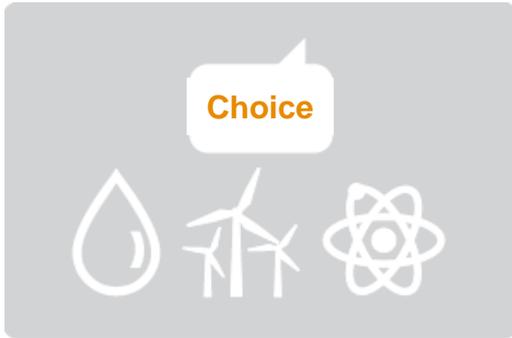
Recycling of surplus electricity



- Buyback contract
- Market price linked to Nordpool spotmarket



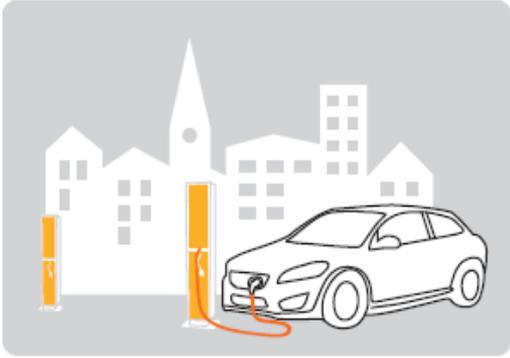
Low carbon electricity



- Certificate of origin
- Vind
- Water
- Nuclear



Electricity in the tank



- Home Wall box
- Public charging stations



Metering & Visualization



- EnergyWatch



Carbon footprint coaching



- Energy
- Food
- Travel
- Shopping

Klimatcoacher
Kan små förändringar i vardagen ge stora utslag på CO₂ avtrycket? Våra klimatcoacher hjälpte familjen med expertkunskaper, gav råd, stöd och bjöd på utmaningar.

 Lars Ejeklint Energi & boende ↳ Läs mer och se inlägg VATTENFALL	 Christian Axelsson Energieffektivt byggande ↳ Läs mer och se inlägg Bjhus	 Johan Konnberg Volvo C30 Electric ↳ Läs mer och se inlägg Volvo	 Kerstin Lindvall Mat & Klimat ↳ Läs mer och se inlägg ICA
 Gert Wingårdh Arkitektur ↳ Läs mer och se inlägg Bjhus	 Leif Grönlund Klimatsmart matlagning ↳ Läs mer och se inlägg ICA	 David Weiner Hållbar personttransport ↳ Läs mer och se inlägg Volvo	 Christina Karlsson Klimatsmart diet ↳ Läs mer och se inlägg ICA
 Hans Söderberg Energisnåla vitvaror ↳ Läs mer och se inlägg SIEMENS	 Fredrik Hedenus Växthusgasberäkning ↳ Läs mer och se inlägg CHALMERS	 Christian Azar Klimatforskning ↳ Läs mer och se inlägg CHALMERS	 Johanna Stål Kläder & innsitt ↳ Läs mer och se inlägg ICA

Väntar på http://onetonnelif.se/expertpanelen/...

The CO2 Scale



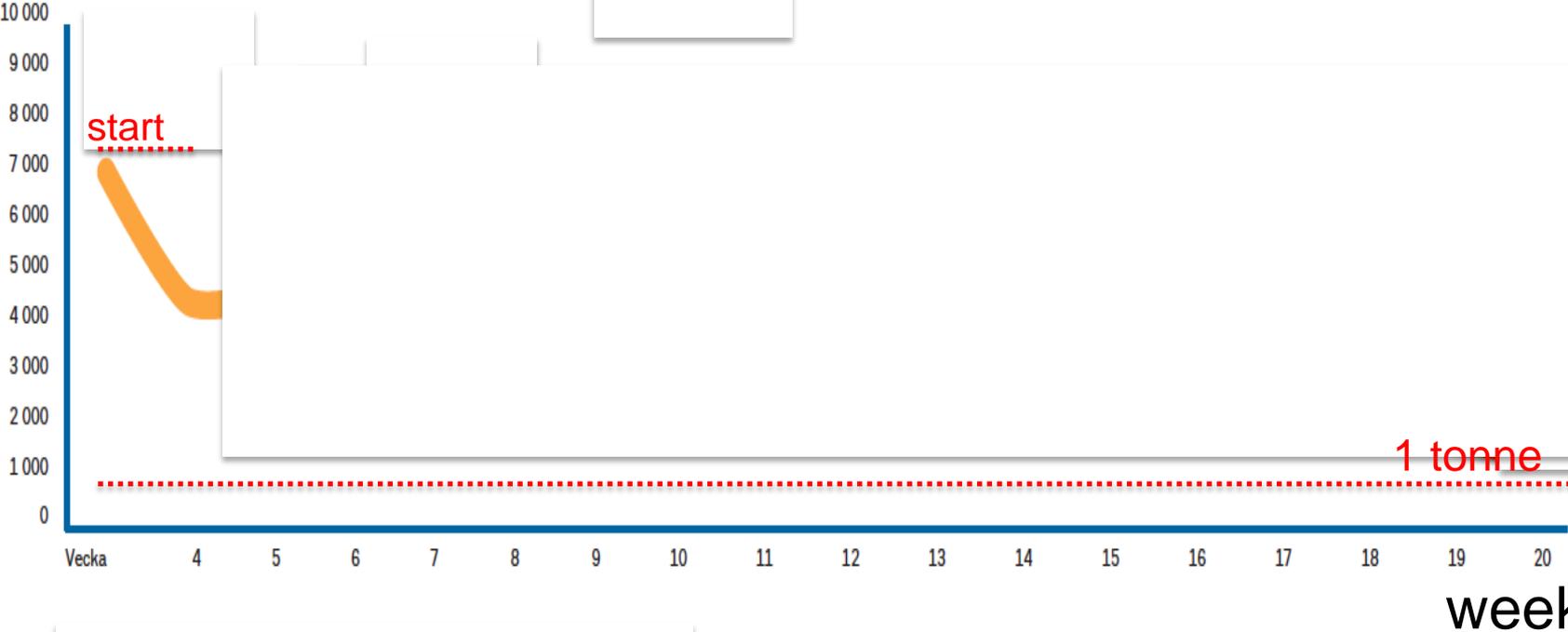


One Tonne Life





CO₂ footprint

















All is pretty.

Andy Warhol

Mod
Sto
10



BATTERIER/
LAMPOR

PI

ME

T



FÖRVARING







SISTER

10 Super

Amex

MILJÖ

TEKNIK

BATTERIER/
LAMPOR

PLAST



METALL

FÖRVARING

TIDNINGAR

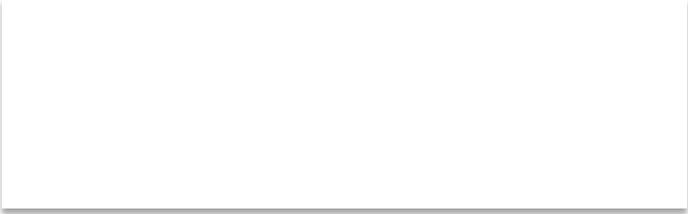
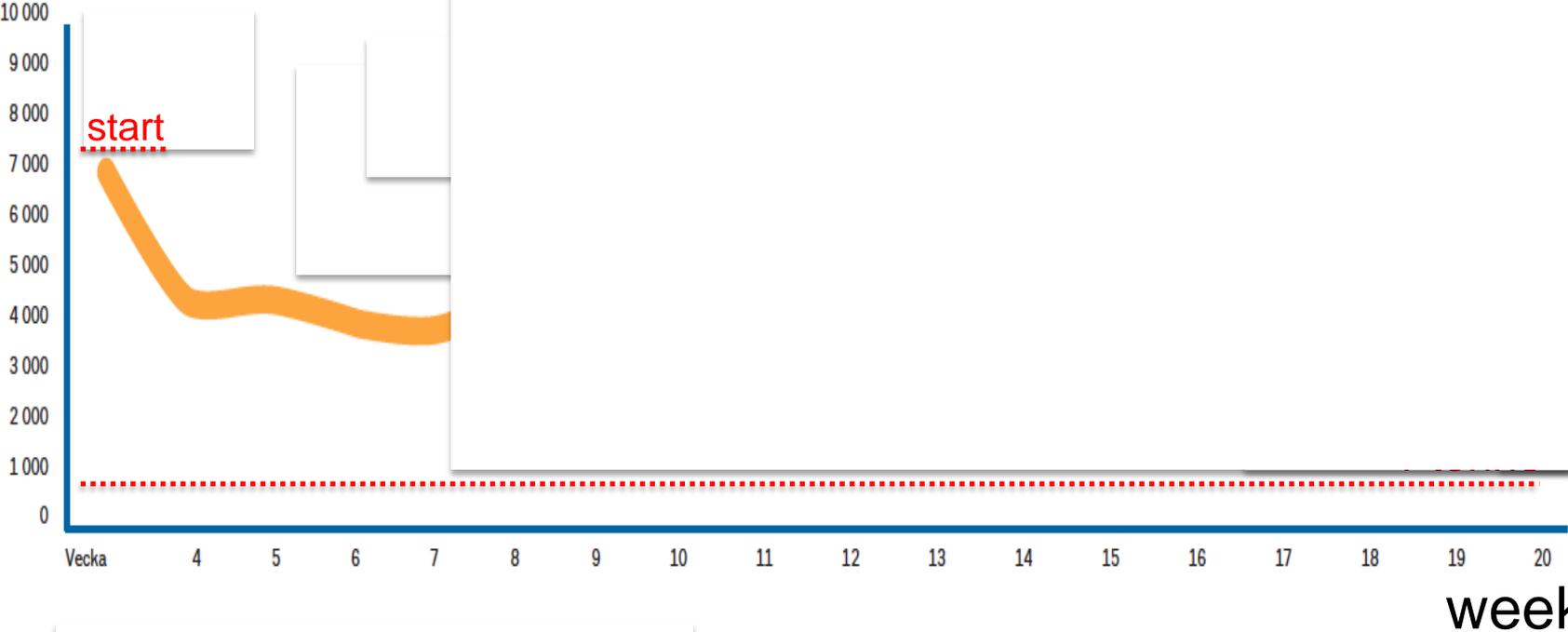
PAPP

PANT

GLAS (OFÄRGAT)

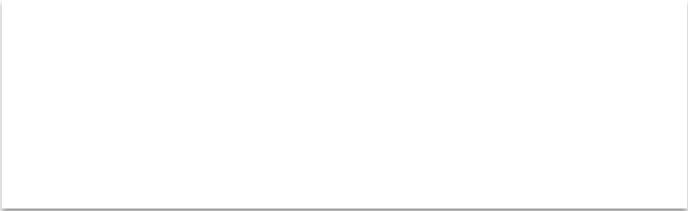
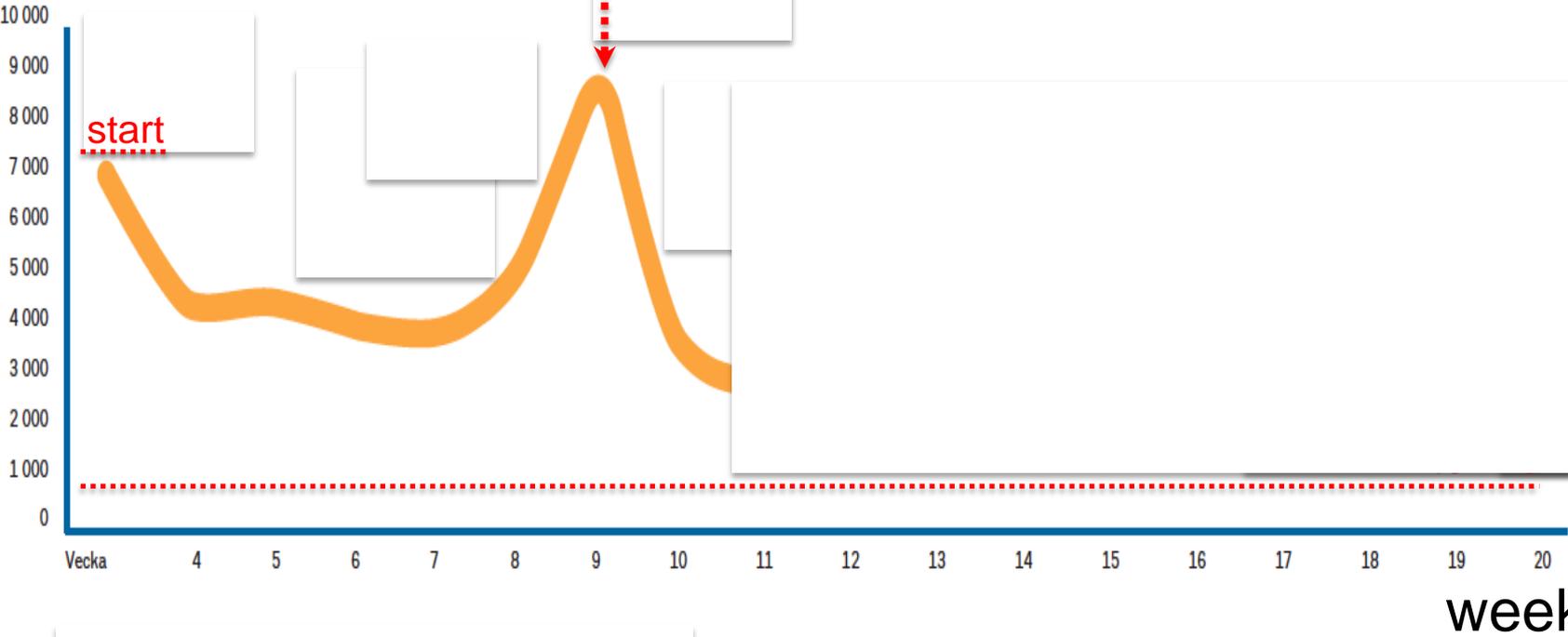
GLAS (FÄRGAT)

CO₂ footprint





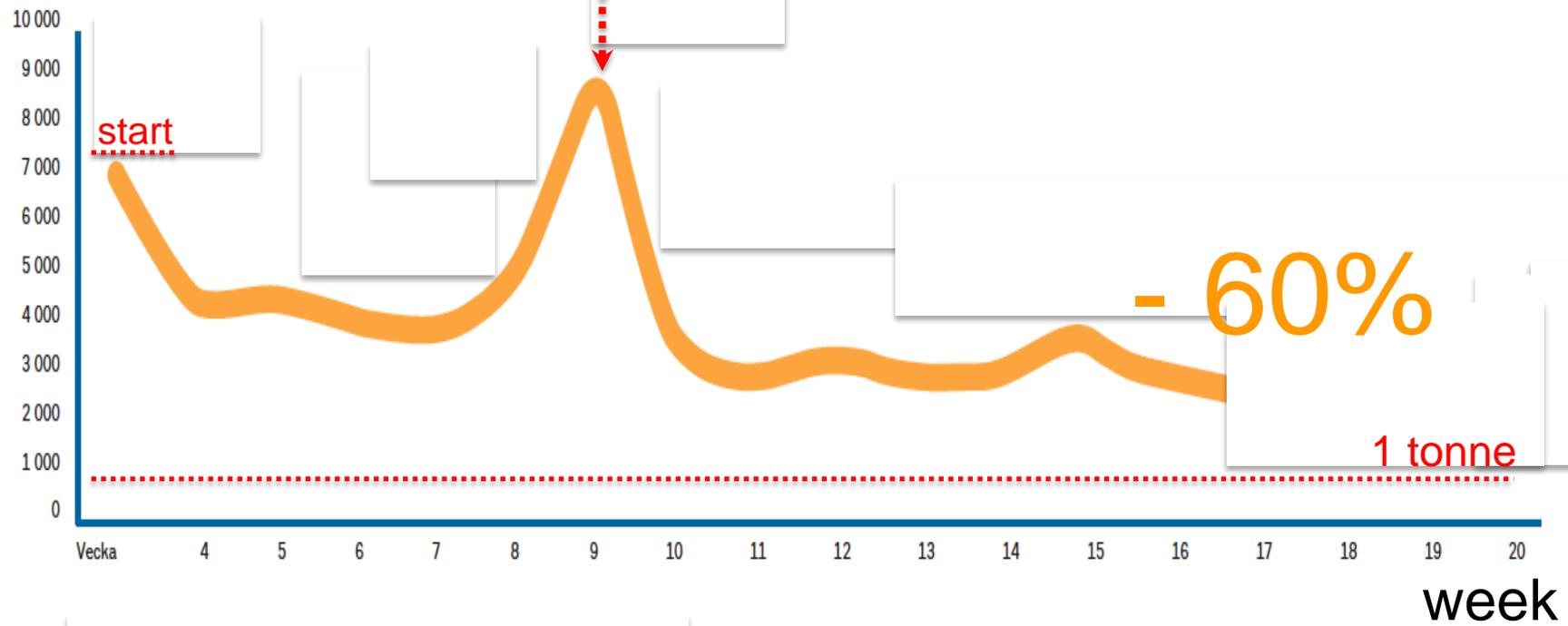
CO₂ footprint







CO₂ footprint



Climate Monastery

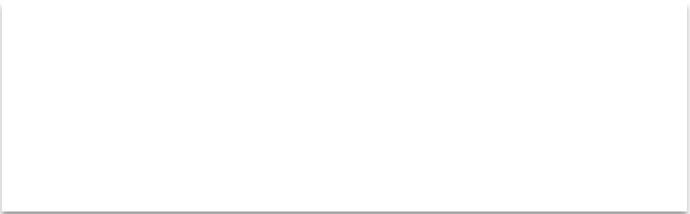
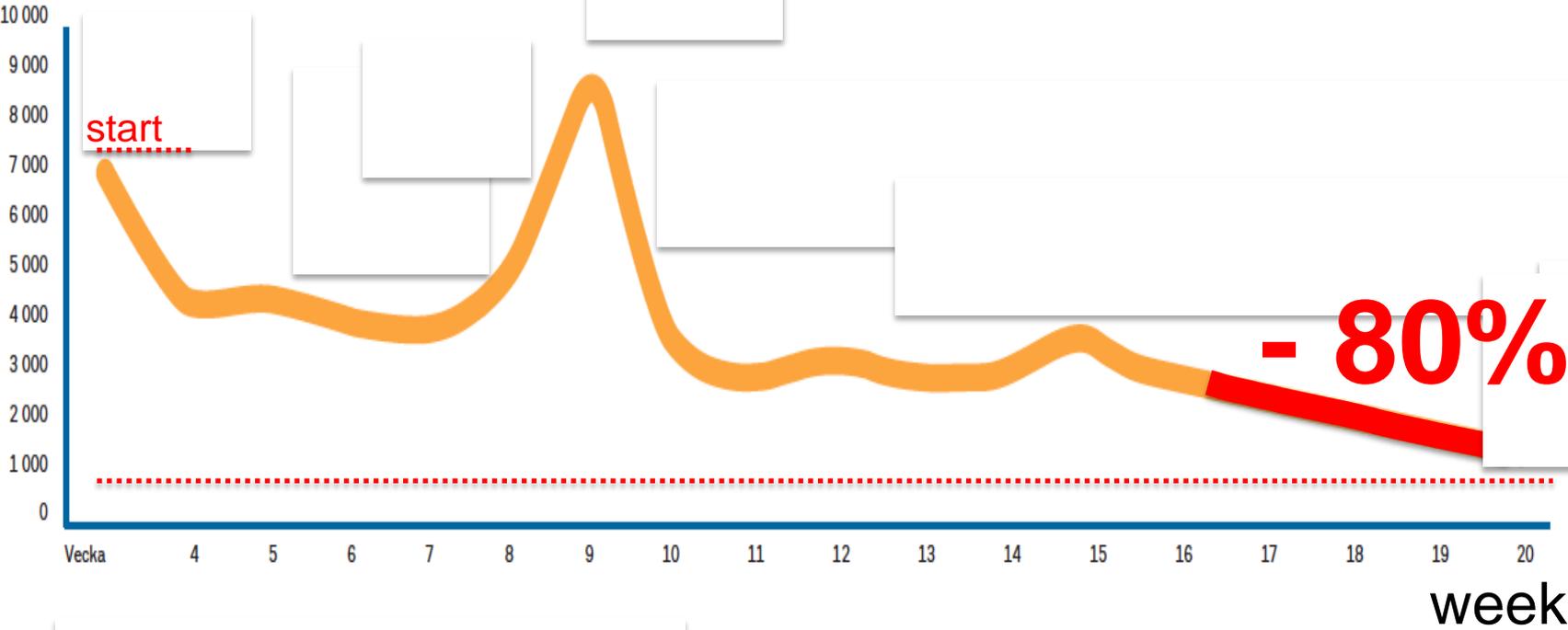




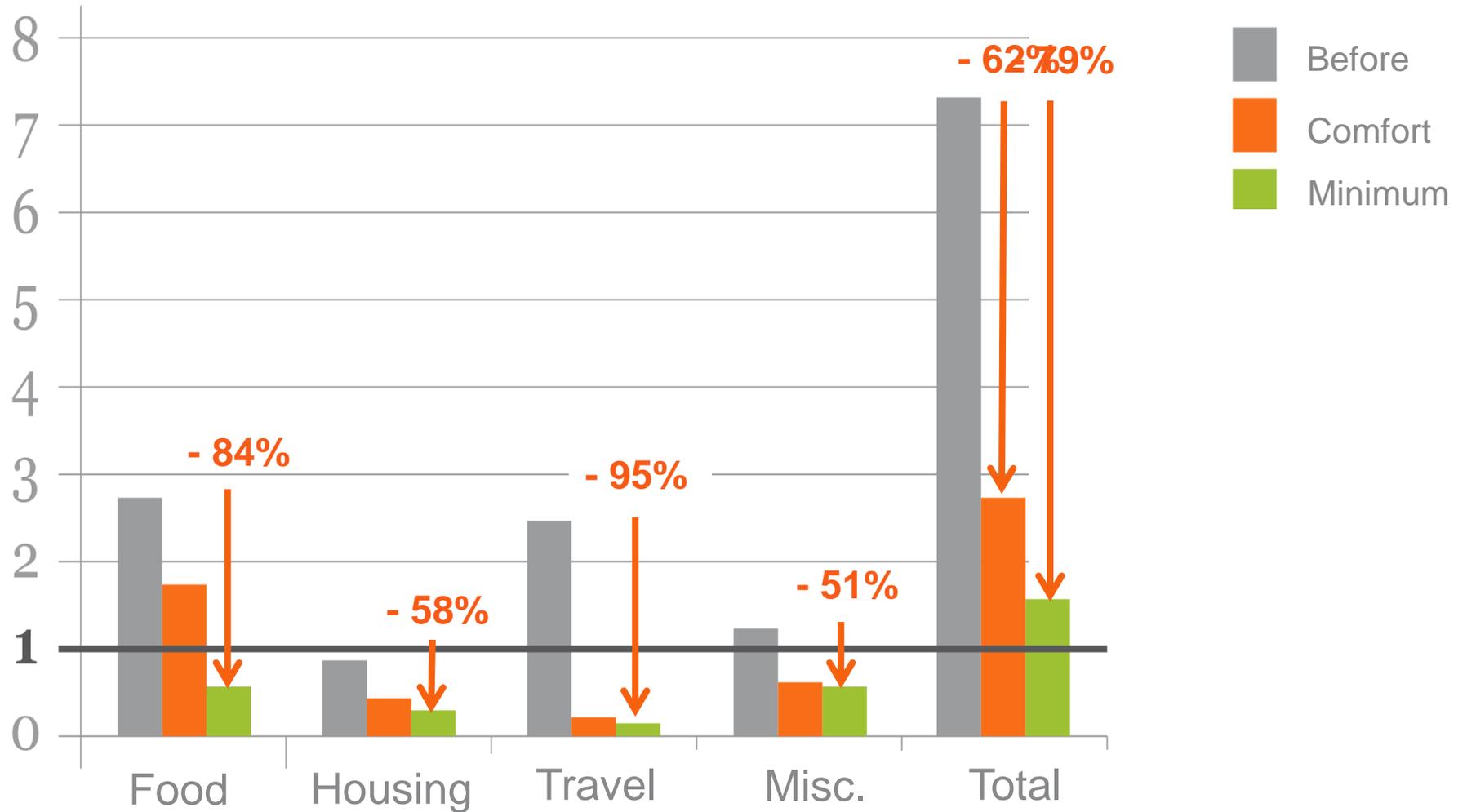




CO₂ footprint



Ton CO₂



- 60%

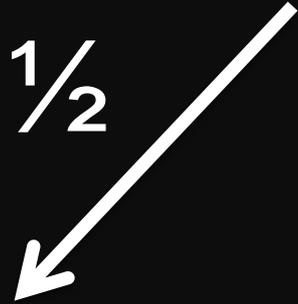
~~give up money?~~ No!

~~give up comfort?~~ No!

~~give up health?~~ No!

feel good? Yes!

it's about



technology



people

The Finnish Energy Family Contest



The screenshot shows the website for the 'Energia Perhe' contest. At the top left is the logo 'ENERGIA PERHE' with a stylized sun icon. Navigation links include 'ETUSIVU', 'ENERGIAPERHE 2012', 'KILPAILUT', and 'PERHEET'. Under 'PERHEET', the names 'KYRÖ', 'WESTERLUND', and 'TAMMI' are listed. The main image features a family (a woman, a child, and a man) in a technical setting, with a green text box overlaid. The text box contains the text: 'Musikin monitoiminainen Heidi Kyrö antaa kovan vastuksen kilpakumppaneilleen Energiaperhe 2012 -kisassa.' Below the image, there are navigation links: 'Kilpailussa mukana', 'KAIKKI / AIRI / ERKKA WESTERLUND / HEIDI KYRÖ / JUKKA TAMMI', and 'Kilpailutilanne'.

- **Heidi Kyrö**, an artist, a singer and a singing teacher
- **Jukka Tammi**, a legendary hockey goalie, at the moment a businessman
- **Erkka Westerlund**, a famous hockey coach and the rector of the Finnish sports academy (Vierumäki)

Status of the contest after two and a half month

Kilpailutilanne

■ Tämänhetkinen säästöprosentti
— Säästötavoite (10 %)



- Great savings $> 20\%$
- Target = 10%

HUMAN POWER





**More learning's?
Have a peak !**

www.onetonnelife.com

www.energiaperhe.fi