

# LECTURE 3: THE BUSINESS CASE FOR GREEN AND GREEN IT

(First – How are our Carbon Instincts getting on?)

Then into the main stuff of the day:

- Ways of looking at the business agenda
- Case studies from different industries
- Green IT?



DIRTY WASHING

# WATER

1 pint tap water: 0.14 g CO<sub>2</sub>e



500ml bottled water

*Locally sourced:* 110 g CO<sub>2</sub>e

*Average:* 160 g CO<sub>2</sub>e

*600 miles by road:* 215 g CO<sub>2</sub>e



# TROUSERS

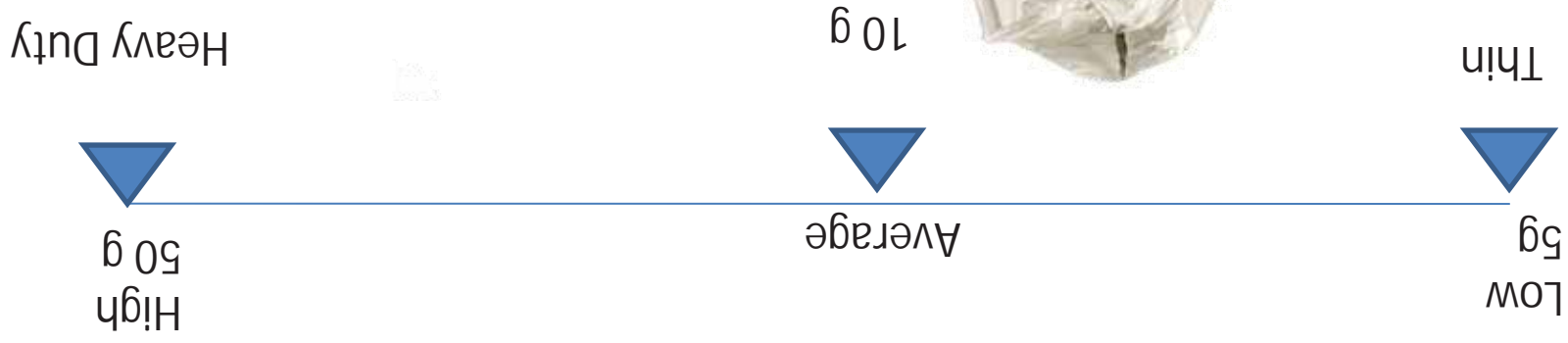
Nylon: 3 kg CO<sub>2</sub>e



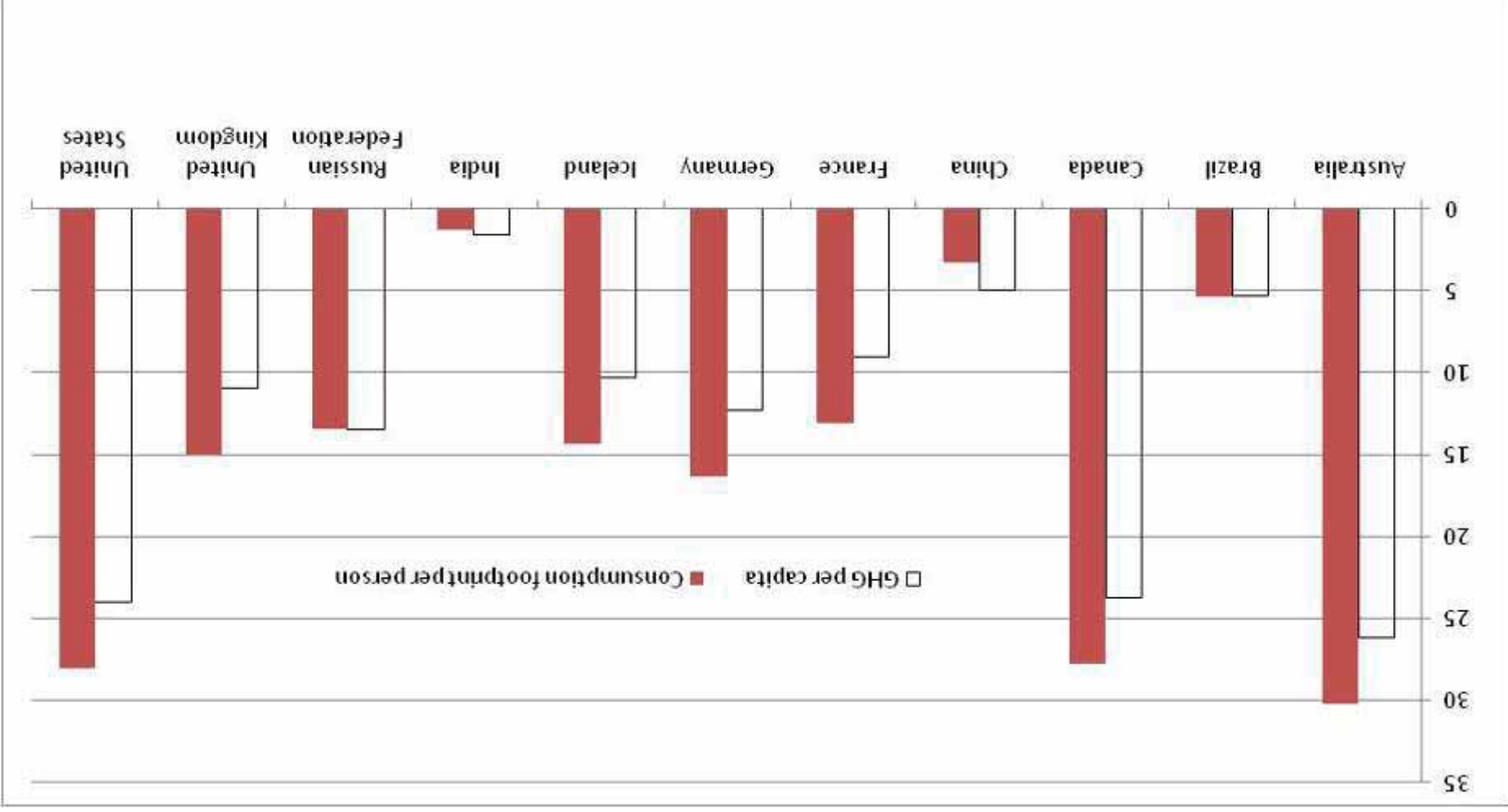
Cotton: 6 kg CO<sub>2</sub>e



# PLASTIC CARRIER BAG: 10G



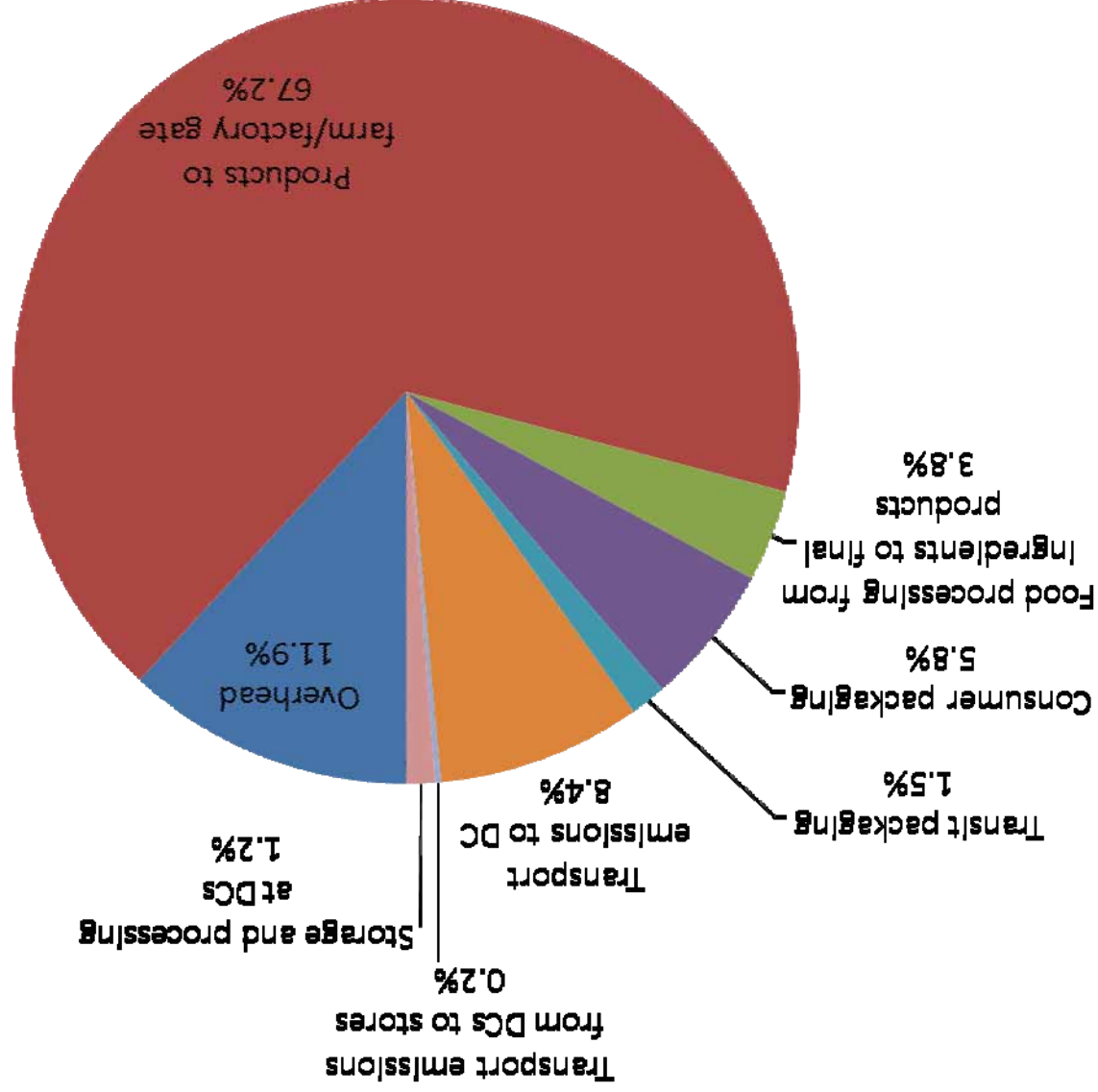
# EMISSIONS PER PERSON



# FOOD IN PERSPECTIVE

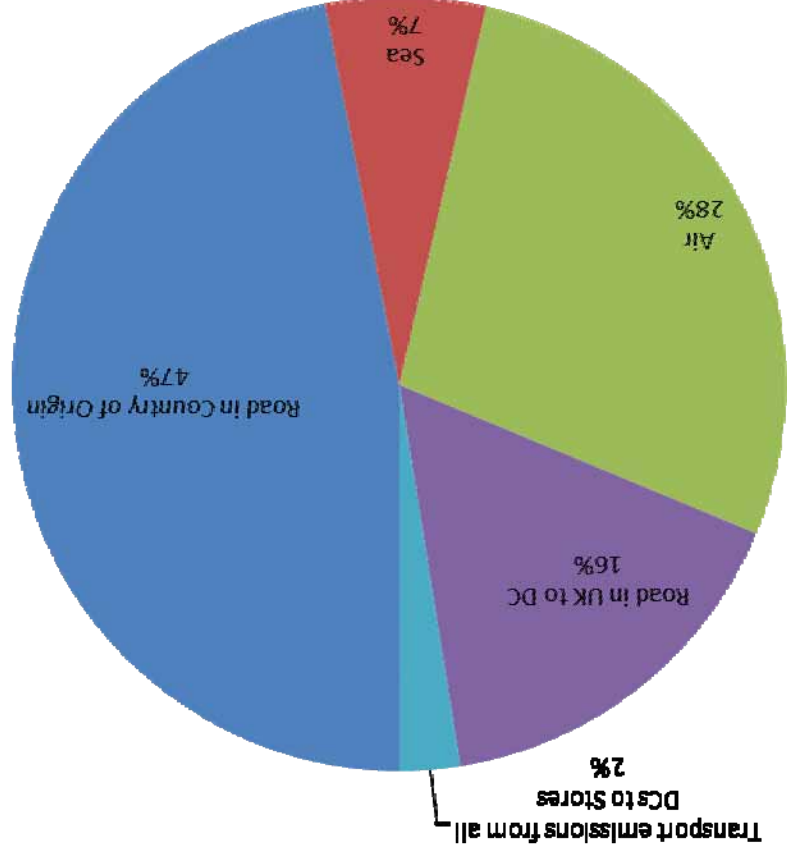
- GHG footprint of UK food = 160 mtCO<sub>2</sub>e (HM Gov: 'Food 2030')
- UK food = 20% of UK consumption footprint (excluding changes in Land Use)
- 30% (including changes in land use) ('WWF How Low Can We Go?' 2010)
- *We have to eat*

# BOOTH'S GHG FOOTPRINT

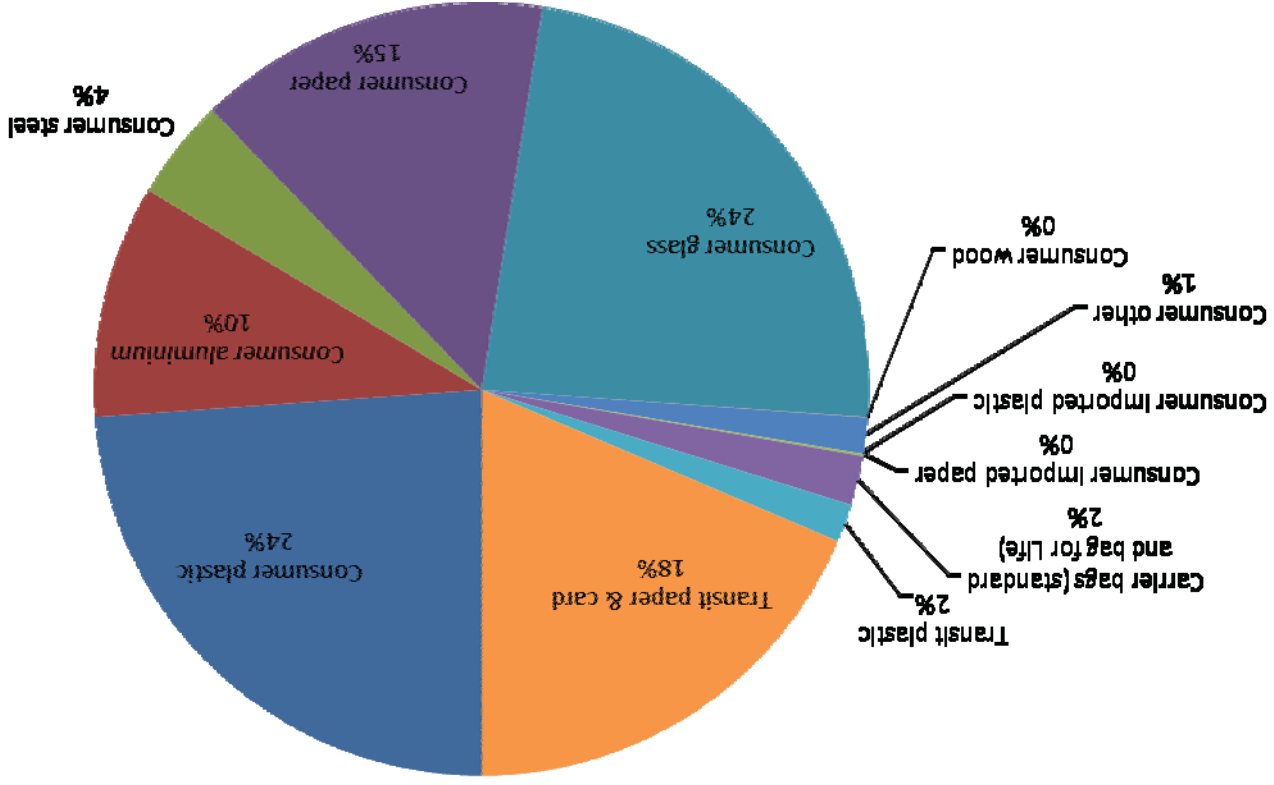




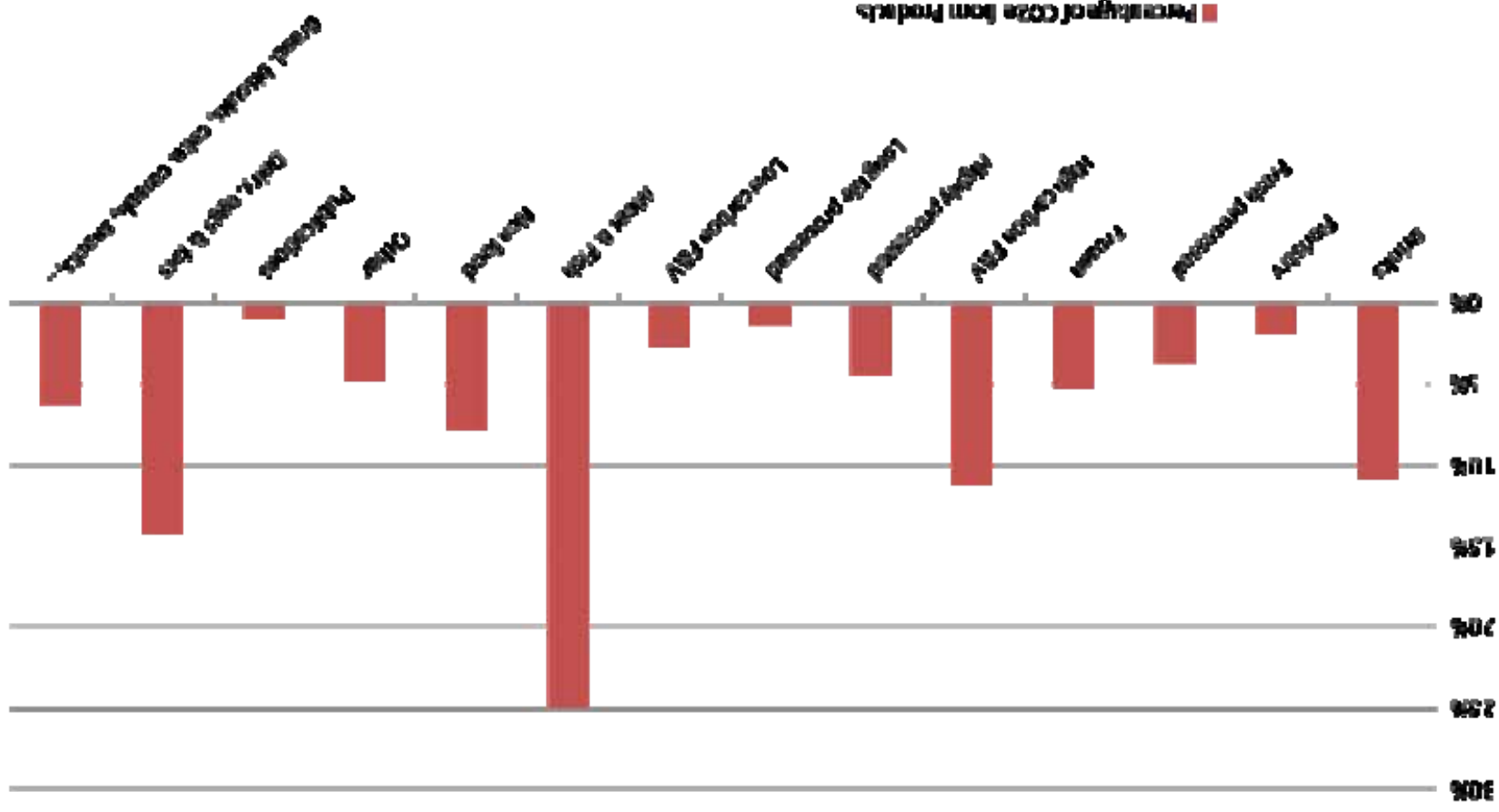
# FOOD TRANSPORT 9% OF TOTAL

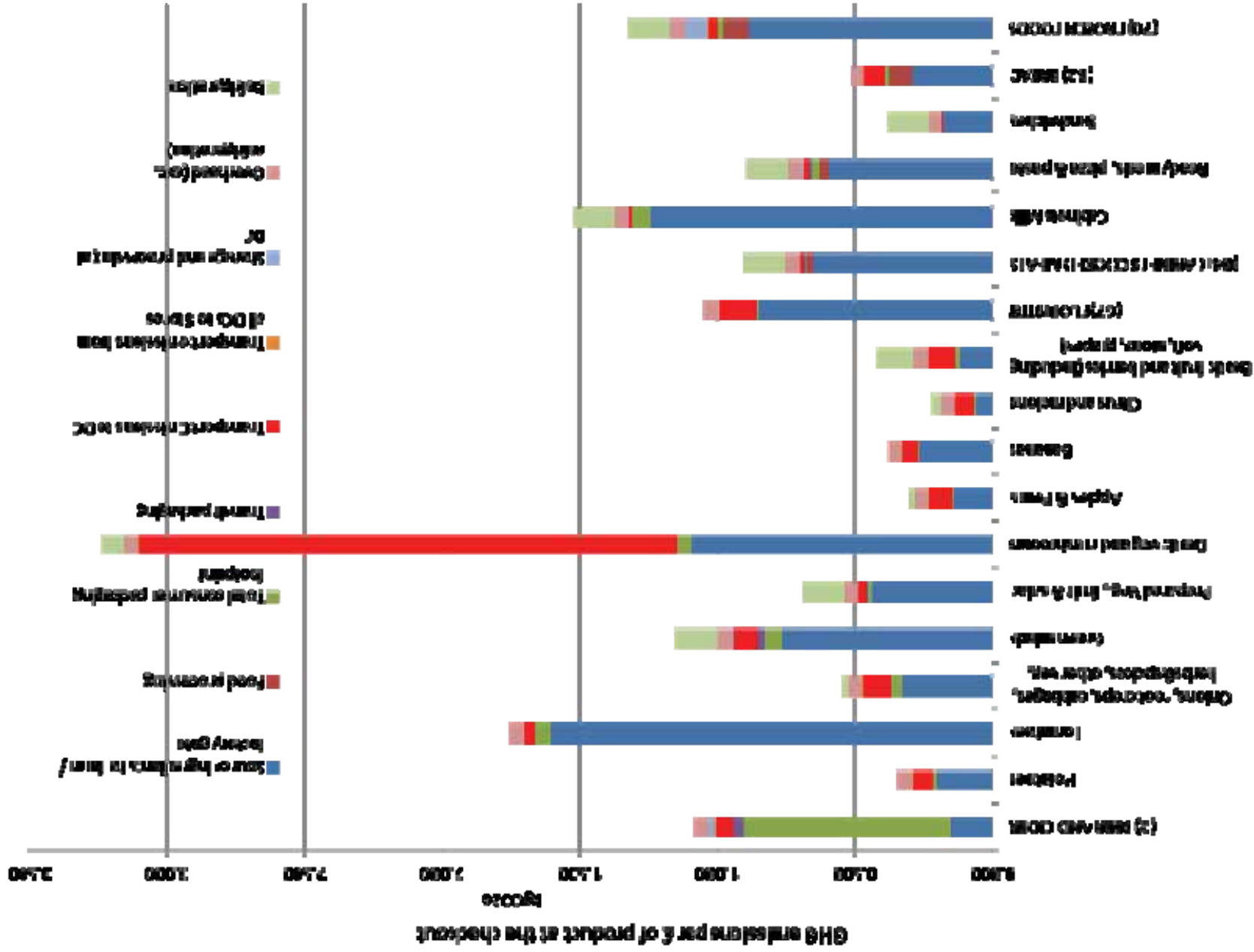


# PACKAGING – 7% OF TOTAL

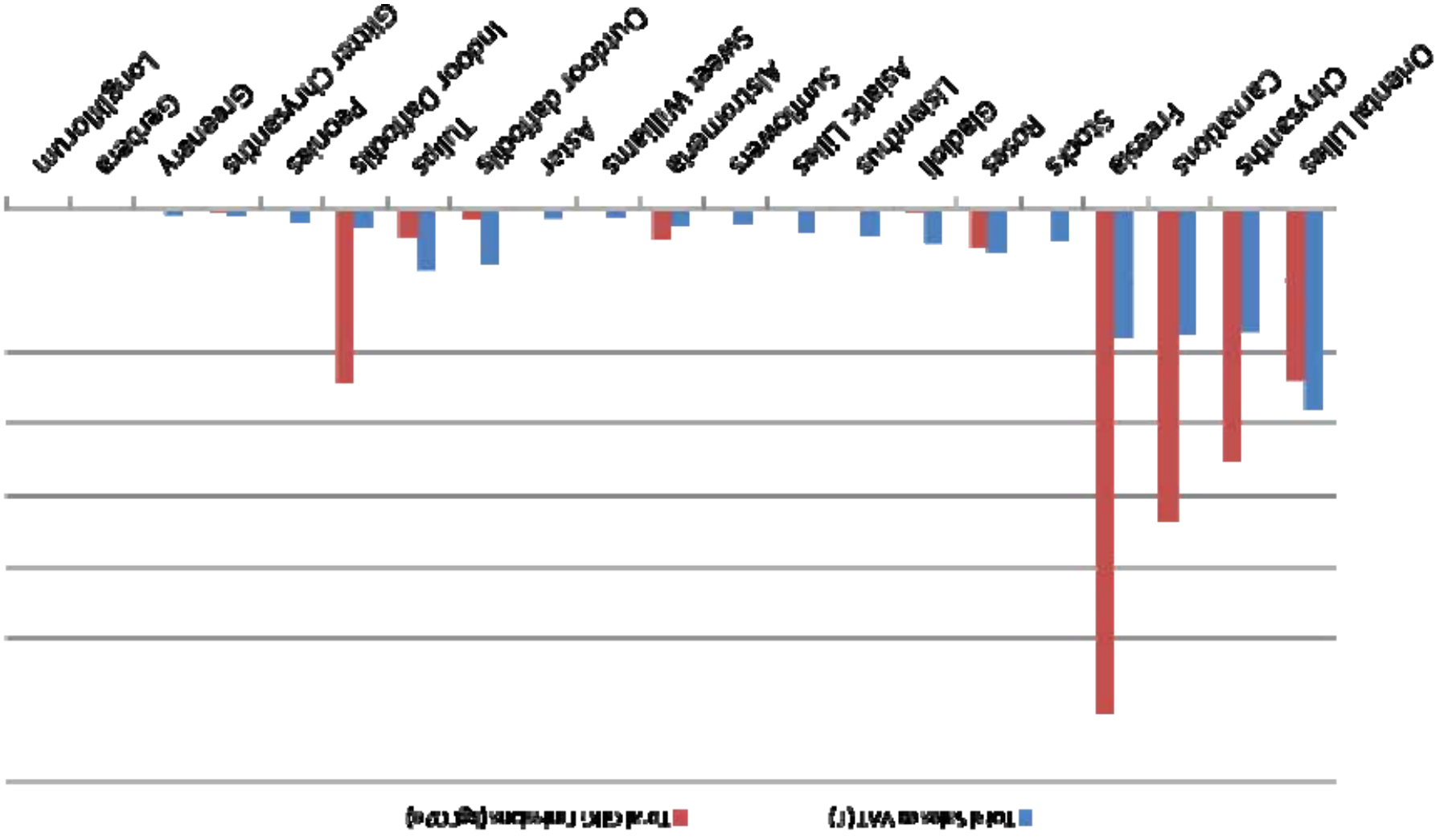


# GHGS FROM BOOTHS SALES





# Flowers



# PHOTOVOLTAIC PANELS

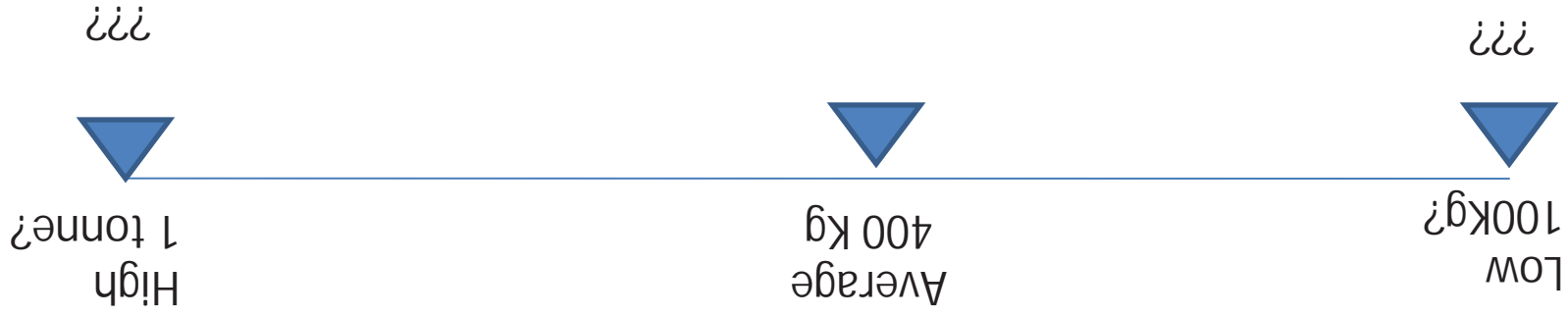
To produce 1800 kWh electricity per year...

Manufacture:  
3.5 tonnes CO<sub>2</sub>e

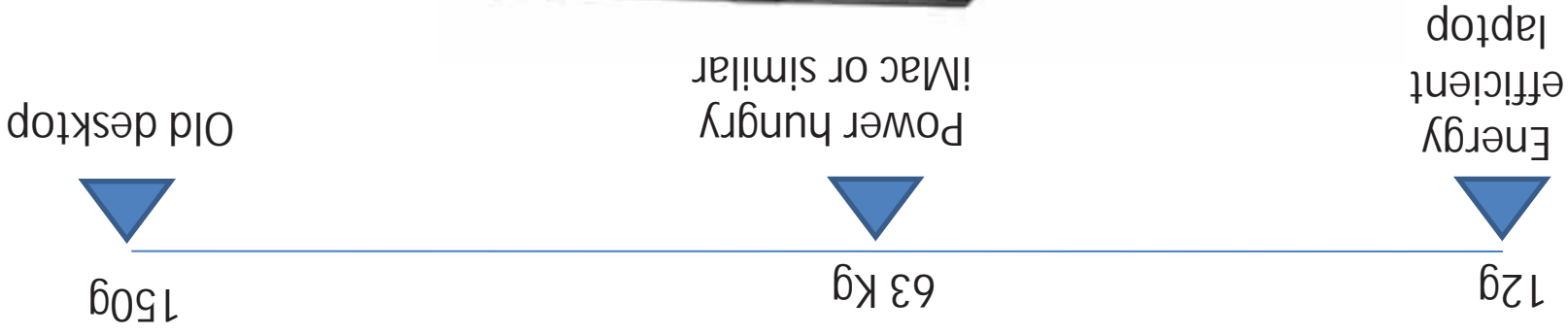
Lifetime saving:  
50 tonnes CO<sub>2</sub>e



# LAPTOP: 400KG



# LAPTOP: ~50G / HOUR OPERATIONAL





# TEXT MESSAGE: 0.014G PER MESSAGE

0.014g

One message



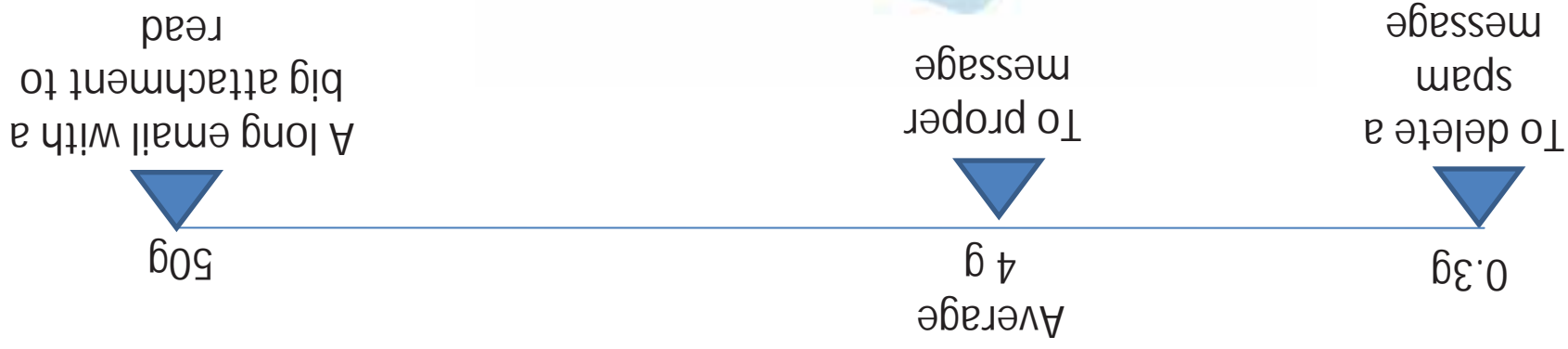
32,000 tonnes

All the worlds texts per year

# TEXT STATS

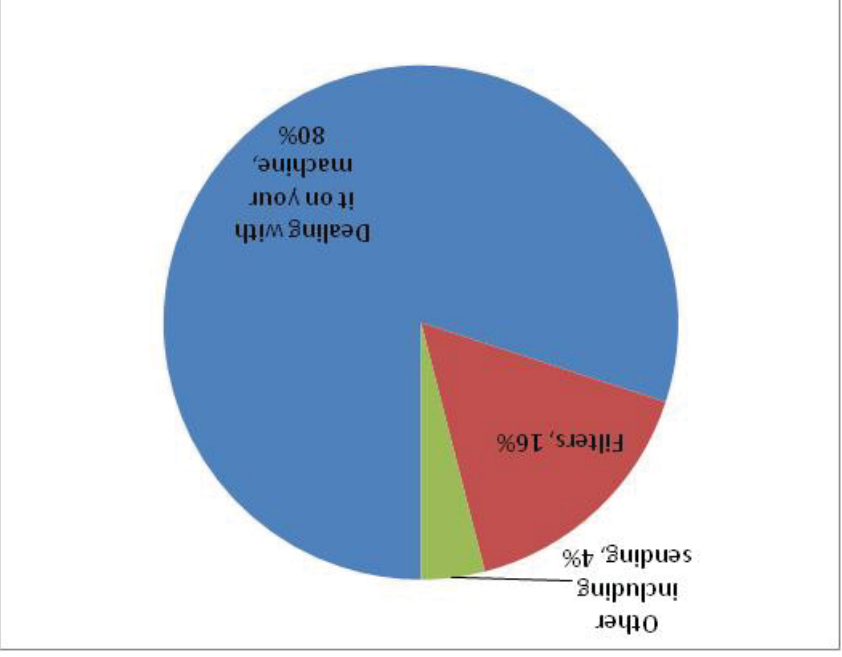
- 2.5 Trillion per year
  - (25% in China, 20% in Philippines where each phone sends 15 per day)
  - We send 6 per day, in the US it's 2 per pay) (Gartner 2007 Prediction for 2008)
- Globally, 32,000 tonne footprint per year
- Is that a lot?

# AN EMAIL: ~4-50G PER MESSAGE



# SPAM STATS

- 62 trillion spams per year requiring 33 billion kWh of electricity and 20 million tonnes of CO2e
- 78% of email incoming emails are spam, resulting in 22% of the footprint of your email ( because they are quick to deal with)
- What if the cost of an email was 1p?



## EMAIL CONTINUED ...

- 60 emails (proper ones) has the same footprint as 1 letter

- So does email give us a carbon saving?



# DATA CENTRES

2010: 130 million  
tonnes CO<sub>2</sub>e

Prediction for 2020:  
250 – 340 million  
tonnes CO<sub>2</sub>e

NOBODY WANTS TO BE TOLD  
WHAT TO DO ...

... BUT THEY DON'T WANT YOU  
TO HOLD OUT ON THEM  
EITHER!

SO I'VE ENDED UP ADDING A  
COUPLE OF SLIDES .

# IF YOU *DID* WANT TO CUT CARBON

- Map out your own carbon
- Pick your battles
  - big wins with lifestyle benefits first
  - avoid miss-directions of attention
- Start with two or three big things



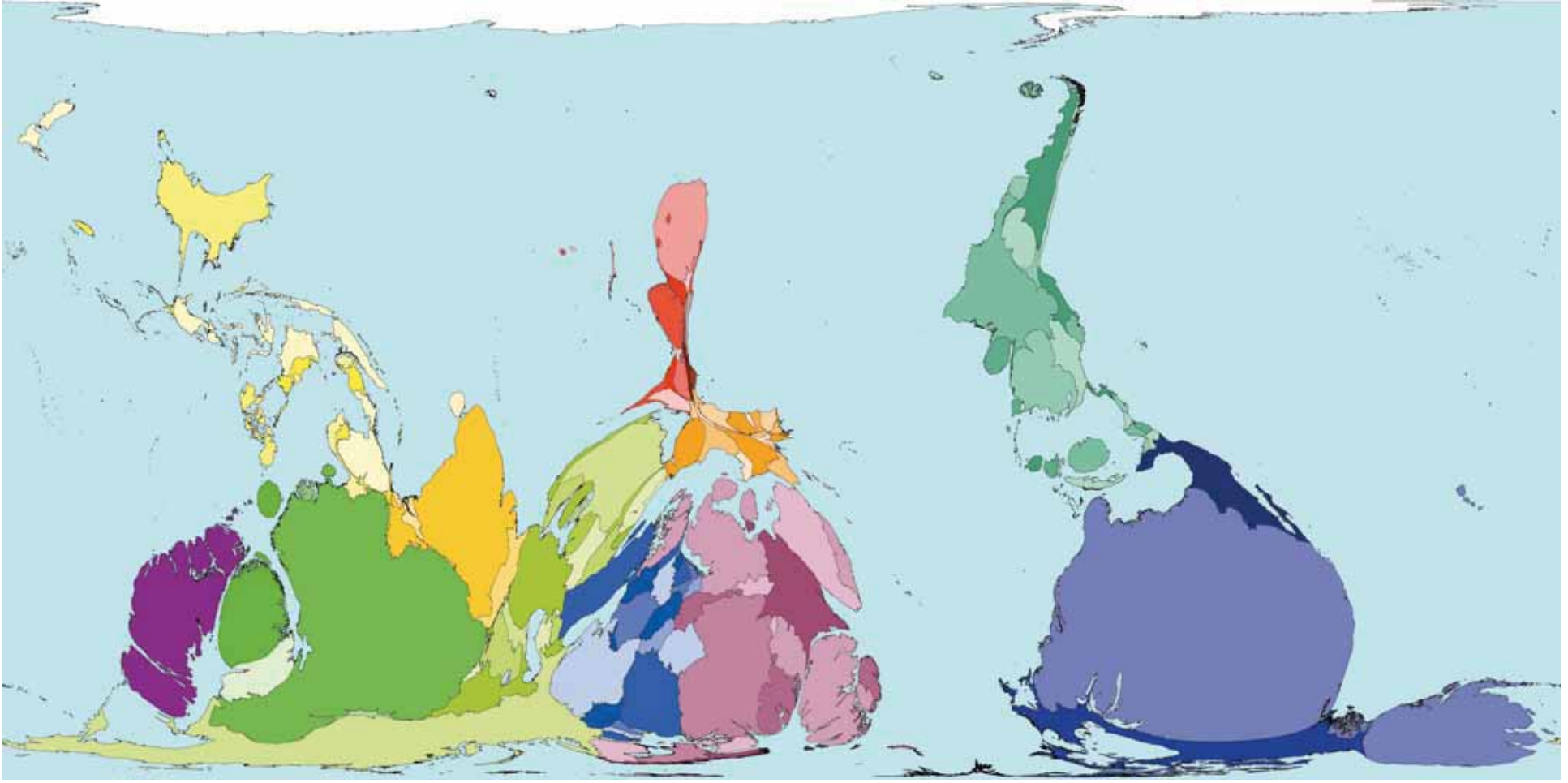
# EXAMPLES OF THINGS YOU MIGHT CHOOSE

- Reduce flights
- Change your commute/ cut your mileage
- Get an efficient small car next time or share
- Cut food waste
- Go seasonal
- Swap meat for plant-based
- Simple household energy efficiency (insulate, cut drafts, boiler, light bulbs)
- Buy less, buy quality, by European, look after it, mend it, free-cycle it.



THE FOOD WE THROW AWAY

# GREENHOUSE GAS EMISSIONS



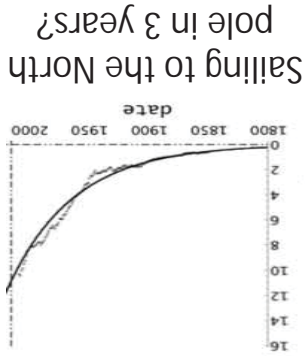
From [www.worldmapper.org](http://www.worldmapper.org)



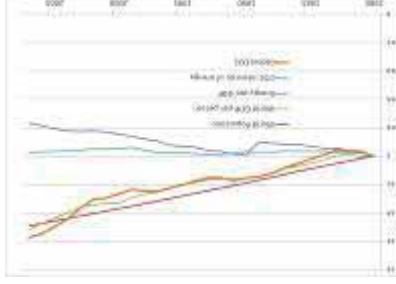
# TO SUMMARISE WHERE WE ARE

ARE

No dents in the exponential curves



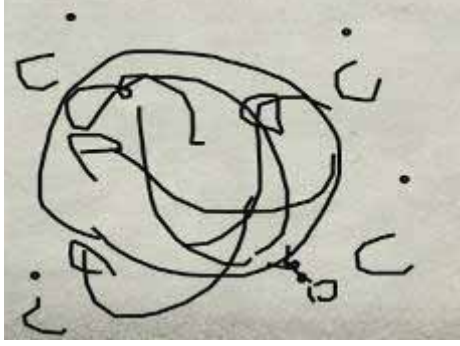
Sailing to the North pole in 3 years?



Individualistic culture is no good for a bigger than self problem

Pitiful quality of analysis

Inadequate metrics



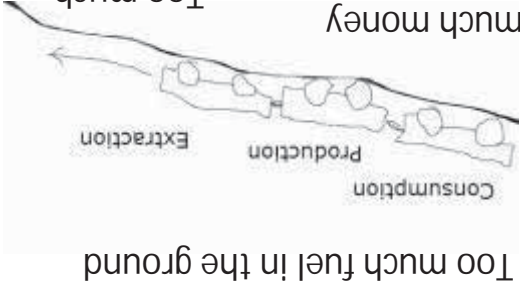
Challenges of Global Society inadequately grasped – too abstract, too complex and too far in the future for us to care about.

Denial

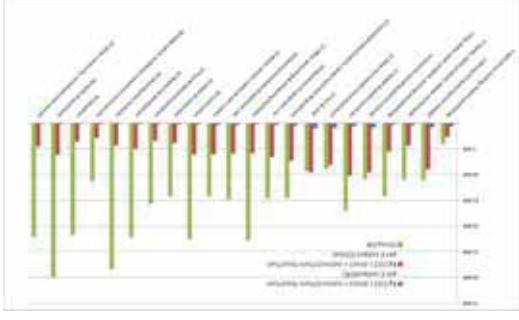
Not enough dedication to truth

Too much money wrapped up in the runaway train

Too much infrastructure for burning it



Carbon time bomb in the developing world



# HOW TO BRING ABOUT CHANGE

- Sorry, no definitive answers – just my experiments and reflections
- No-one knows the answers – otherwise we'd be getting there – and we're not.
- Parallel processes? – will what works for me, my friends, you work for 'businesses, the UK, the world?

# HOW CAN WE ASPIRE TO THINGS THAT DON'T STOP OTHERS HAVING WHAT THEY NEED?

- Cars / fast fashion / weekends on the other side of the world?
- What are the alternatives? How we make them even more appealing?

# ENGAGING BUSINESSES

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**SOME PREDICTIONS**

Were they right?



# Research on brand impact of climate change

- 'climate change could plausibly become a mainstream consumer issue in the next five years.'
- 'When this happens, there will be reputational implications for many sectors.'
- 'For many sectors the lead time for action could be several years, leaving unprepared companies at risk.'

'Brand Value at Risk from Climate Change' - Carbon Trust 2009



# Research on brand impact



- “The universal adoption of basic green ideas has been possibly the swiftest shift in consumer attitudes we have witnessed in recent times ... faster than the internet revolution and faster than the take-up of mobile phones.”
  - 80% of 3000 consumers questioned believe it is important that companies are environmentally friendly
  - Green brands are perceived as having high quality
  - How consumers judge greenness is a ‘complex mixture of perception and reality’.
  - “Brands that align themselves with environmental concerns at this relatively early stage in the debate can expect to secure competitive advantage given that environmental concern can only grow in the future.”
- ‘2007 ImagePower Green Brands Survey’ - Landor Associates May 2007

■ Retailer to record CO<sub>2</sub> emissions related to its lines ■ Leahy says idea reflects climate awareness ■ Decisions over what to include likely to be controversial

products." Lorenzo Wood, a Tesco will become the first ket is ready. Customers tell us the future last night. "The mar- measuring the carbon required to at Oxford University. "That could boost local suppl-

supermarket chain in the they want our help to do more in "The carbon footprint" of a say when the labels would be goods to Tesco stores, as their non-profit group E Capital, said. "I ha

We have to make sustainability a required part of its manufacture, packaging and transport to the shelves, in an effort to attract label' to every product on its significant, mainstream driver of change? But we don't want it required for its manufacture, packaging and transport to the shelves, in an effort to attract label' to every product on its significant, mainstream driver of change?

[illegible]

The U.S. biggest chain said the labels would record the year as they seek to win over the methods for collecting such information, and some of the in a similar way to nutritional of the influential government- backed Carbon Trust said, "A

growing regions of shoppers' decisions over what emissions to include are likely to be controversial and consumption of the product and consumption of the environment of carbon dioxide emitted during the production, transportation and consumption of the product. He said: "The idea is that you can compare the carbon footprint in the hands of consumers to across its store the power said it would have."

Environmentalists have mooted the idea of "carbon labelling" but Tesco will invest £5m in a product as you would compare nutrition or price. It will empower us all to choose how they want to be two years ahead of the competition and schedule and world green. It will empower us all to choose how they want to be two years ahead of the competition and schedule and world green.

Labels showing this footprint make informed choices and on energy efficiency

\_\_\_\_\_

15J044

storm in

17 YEARS


17 years

NO SS012P

by William MacNamara

Thousands of commuters face

SAFETY DATA SHEET

## SOME QUOTES



- *“Some businesses are really stupid – you show them ways that they can save money and they just don't bother to do it” – Environmental consultant*
- *“It's one thing for a consultant to come in and do an audit. It's quite another thing to sell in the change” – MD of an SME*

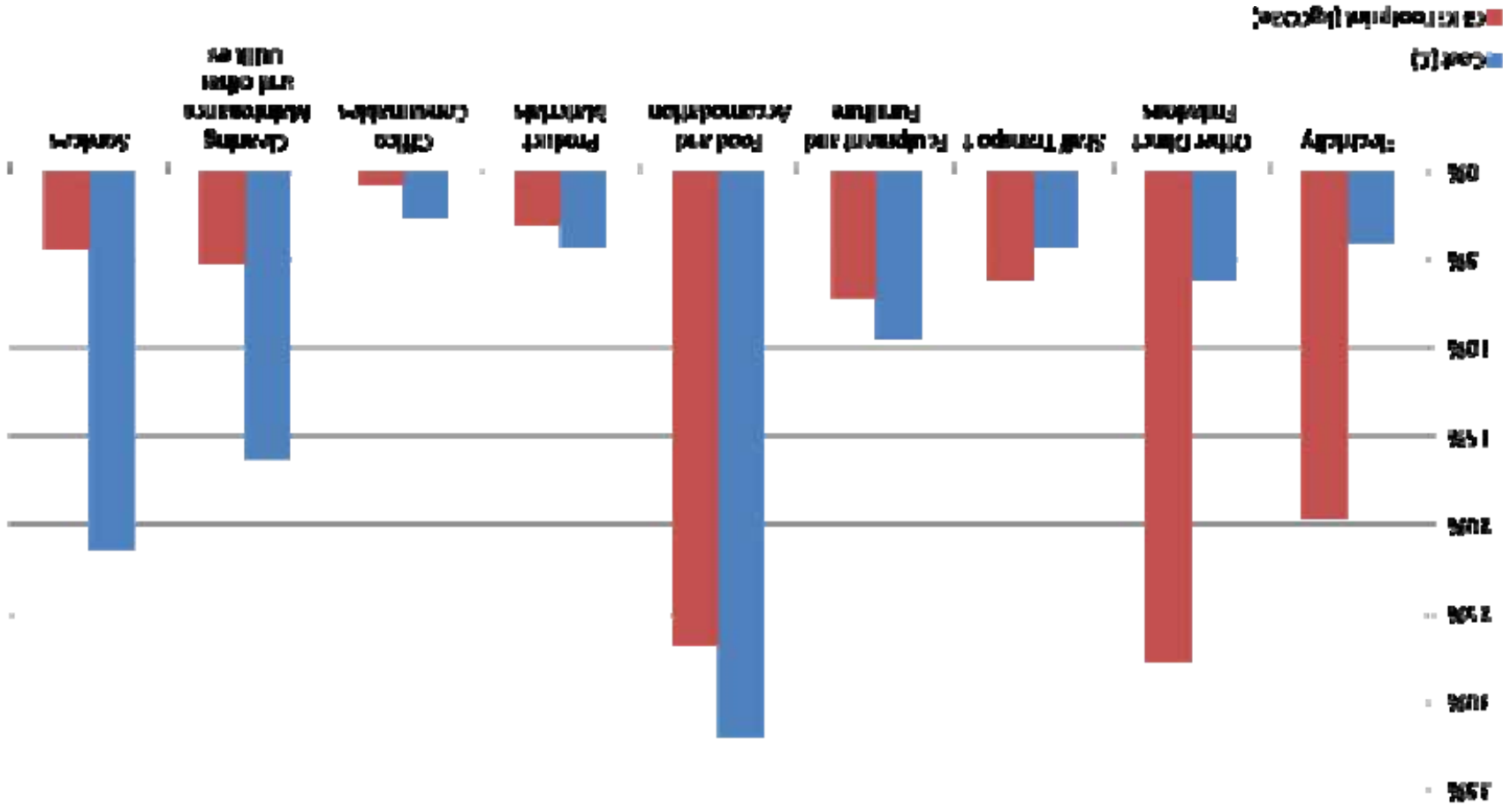




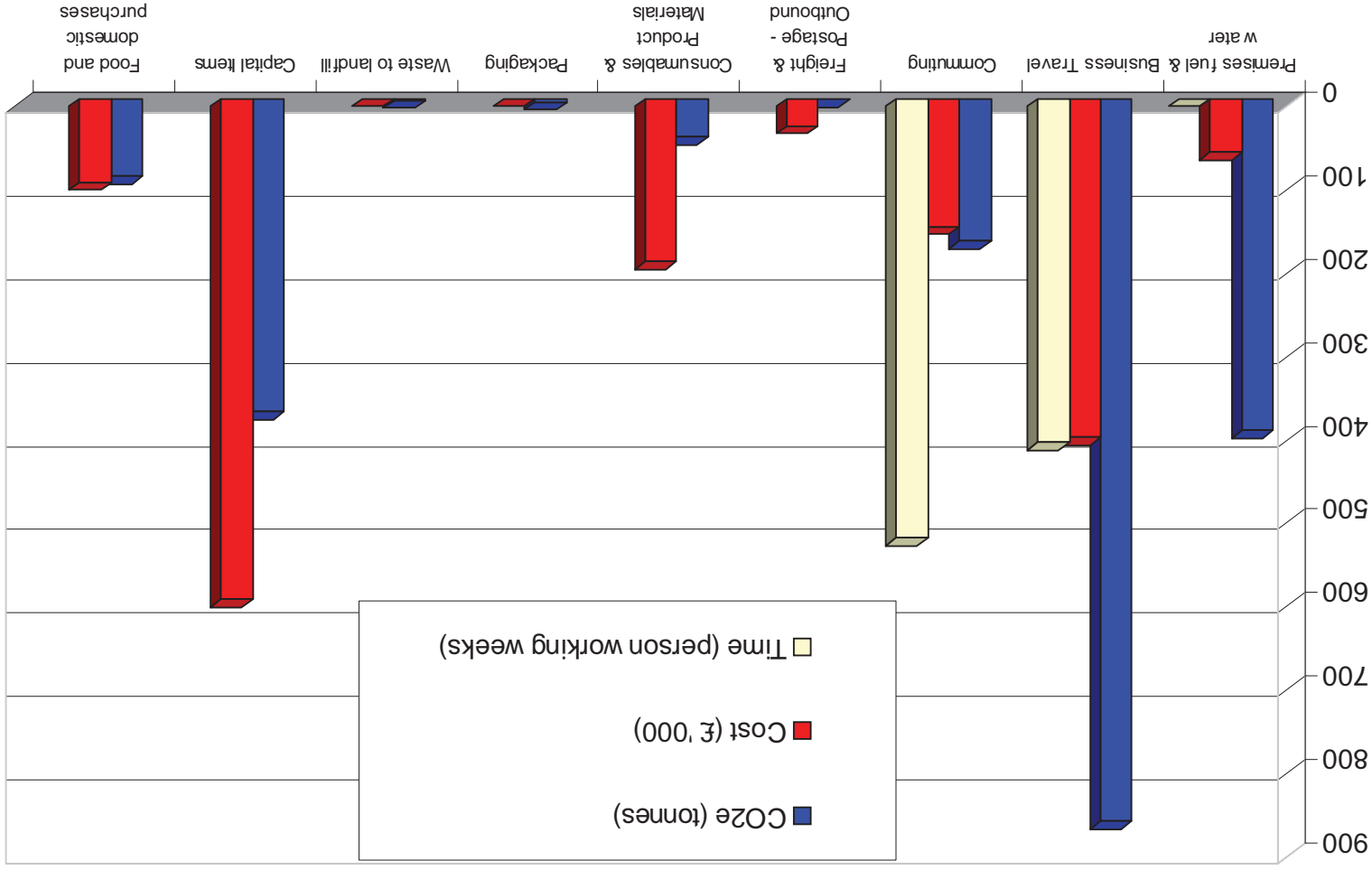
# CONSULTING PRINCIPLES

- Understand the business perspective – they are rarely stupid!
- Work with the business agenda – the *whole* agenda
- Be clear and unapologetic about environmental agenda
- At the end of the day, life has to be better as a result of what they do.

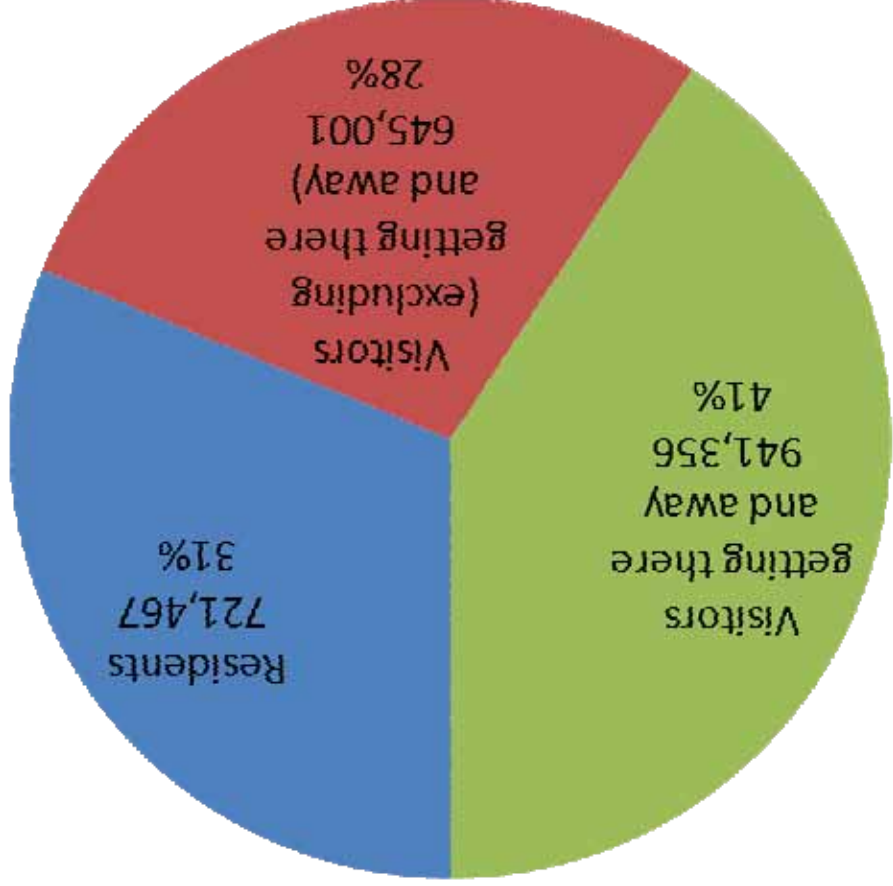
# AUGILL CASTLE



# TIME/COST/CARBON – AN ILLUSTRATION

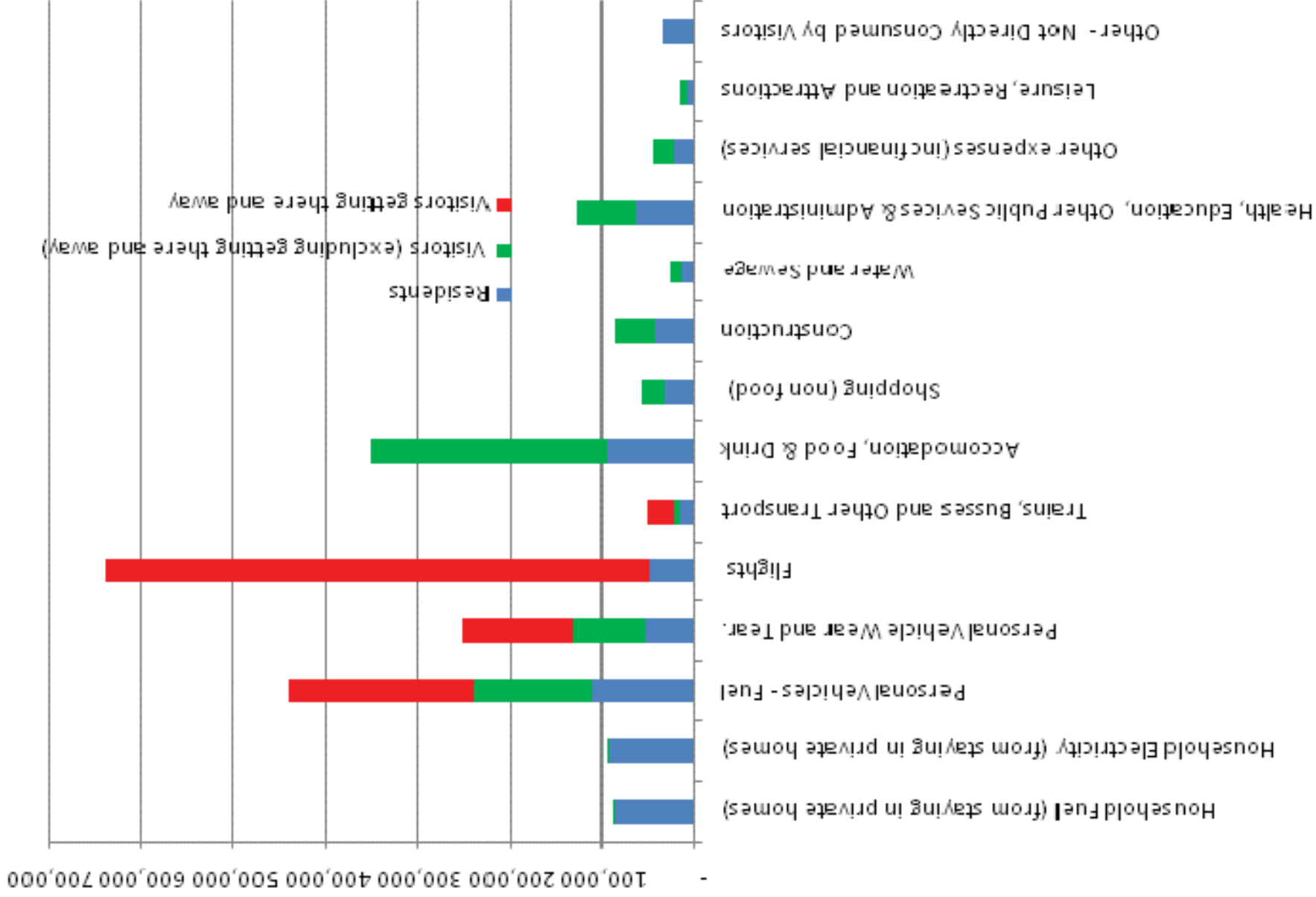


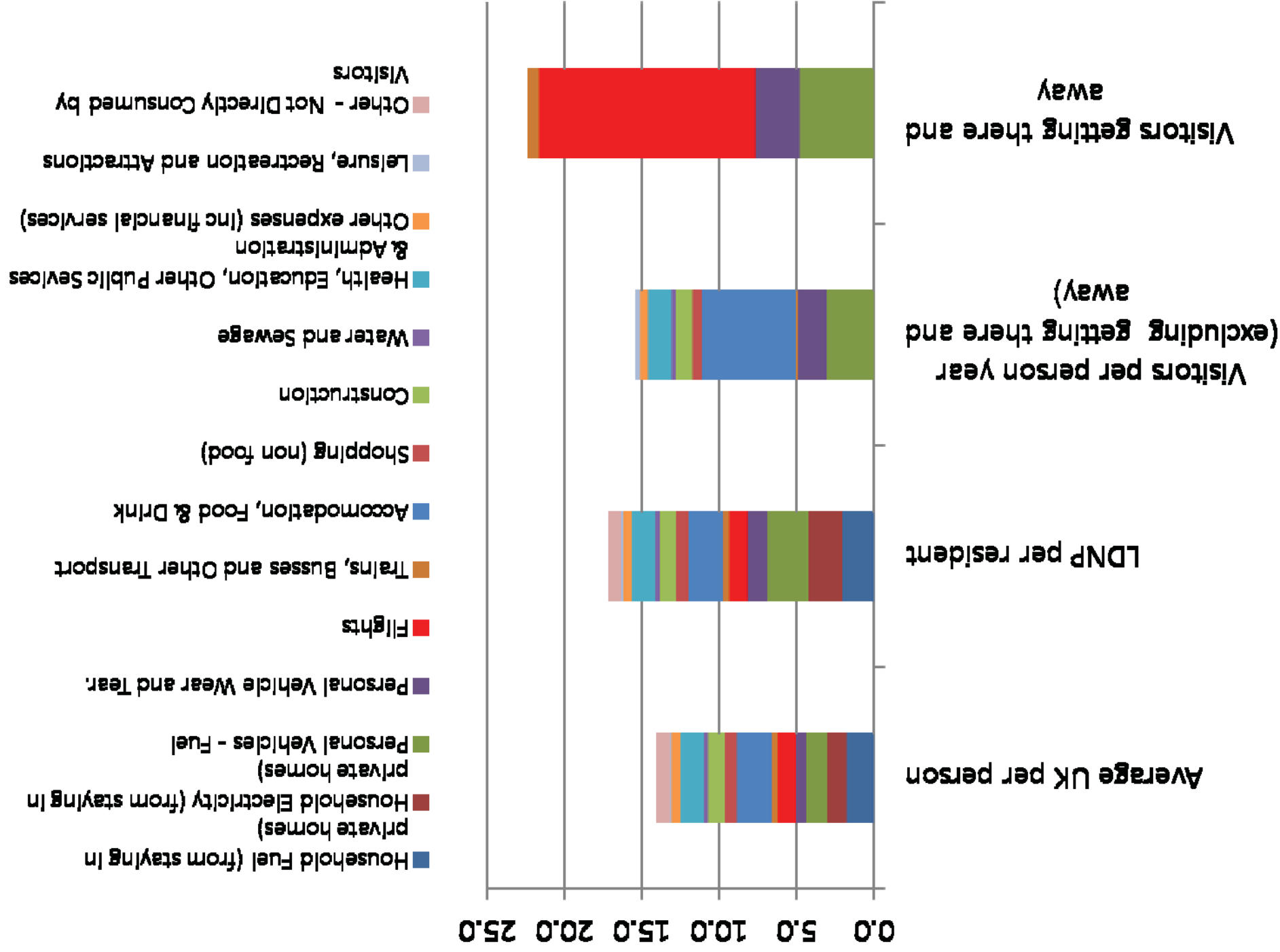
# THE LAKE DISTRICT: THE GREENHOUSE GAS FOOTPRINT OF RESIDENTS AND VISITORS: 2.3 MILLION TONNES CO2E



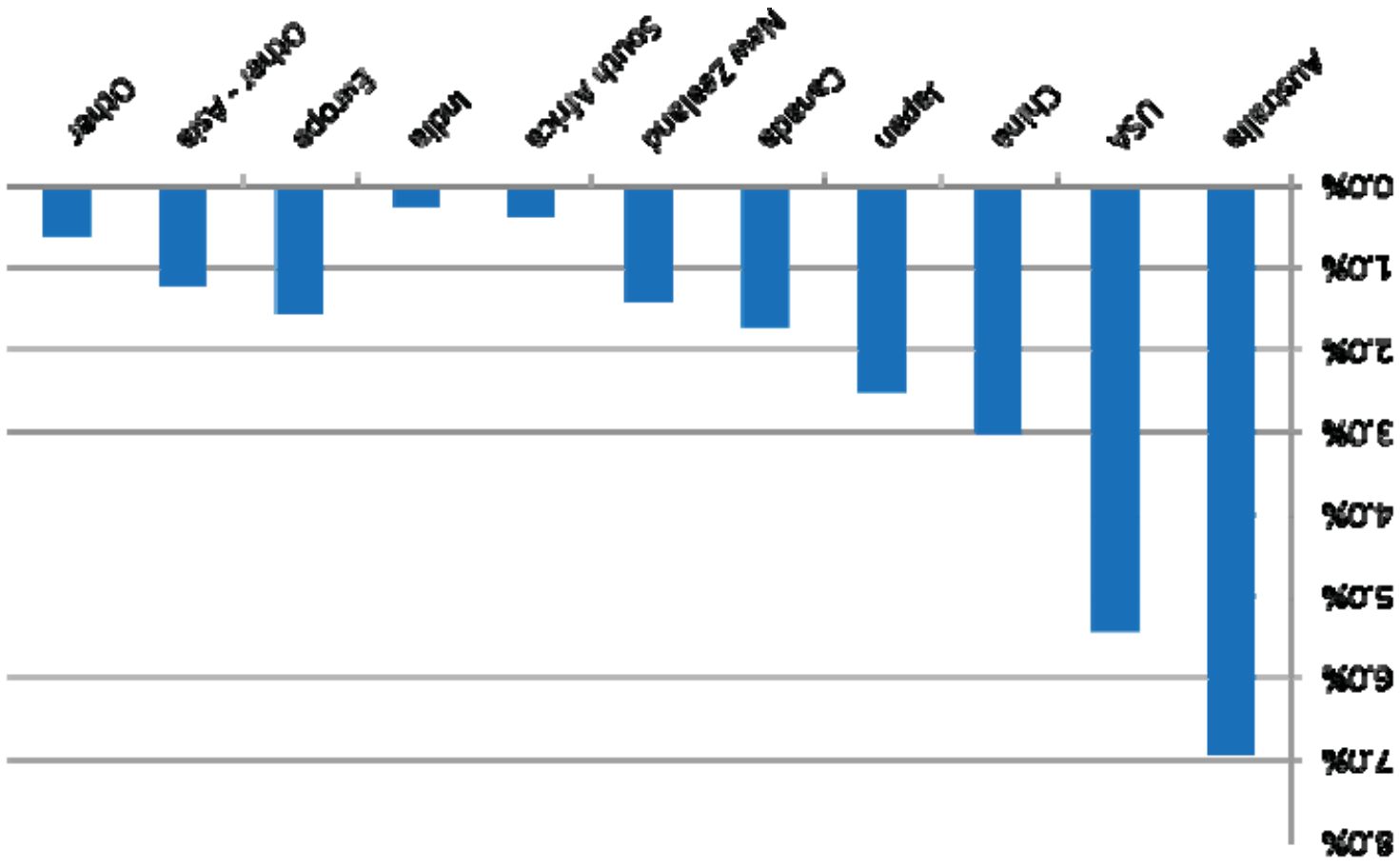


## The footprint by consumption category

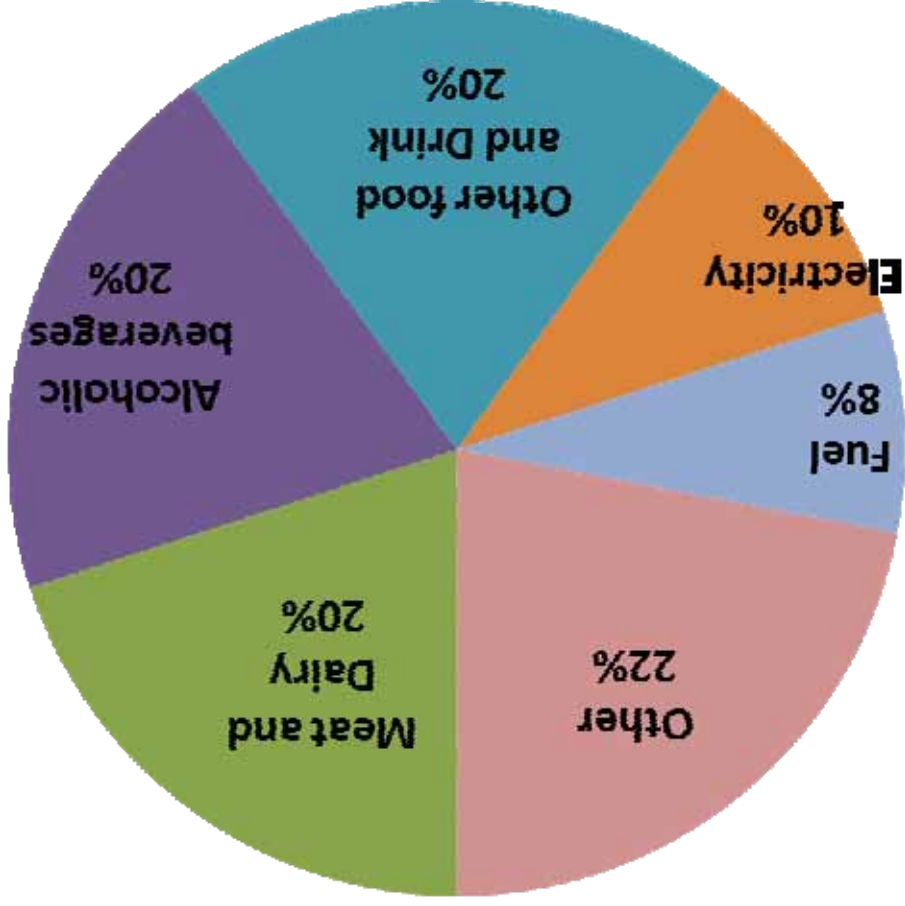




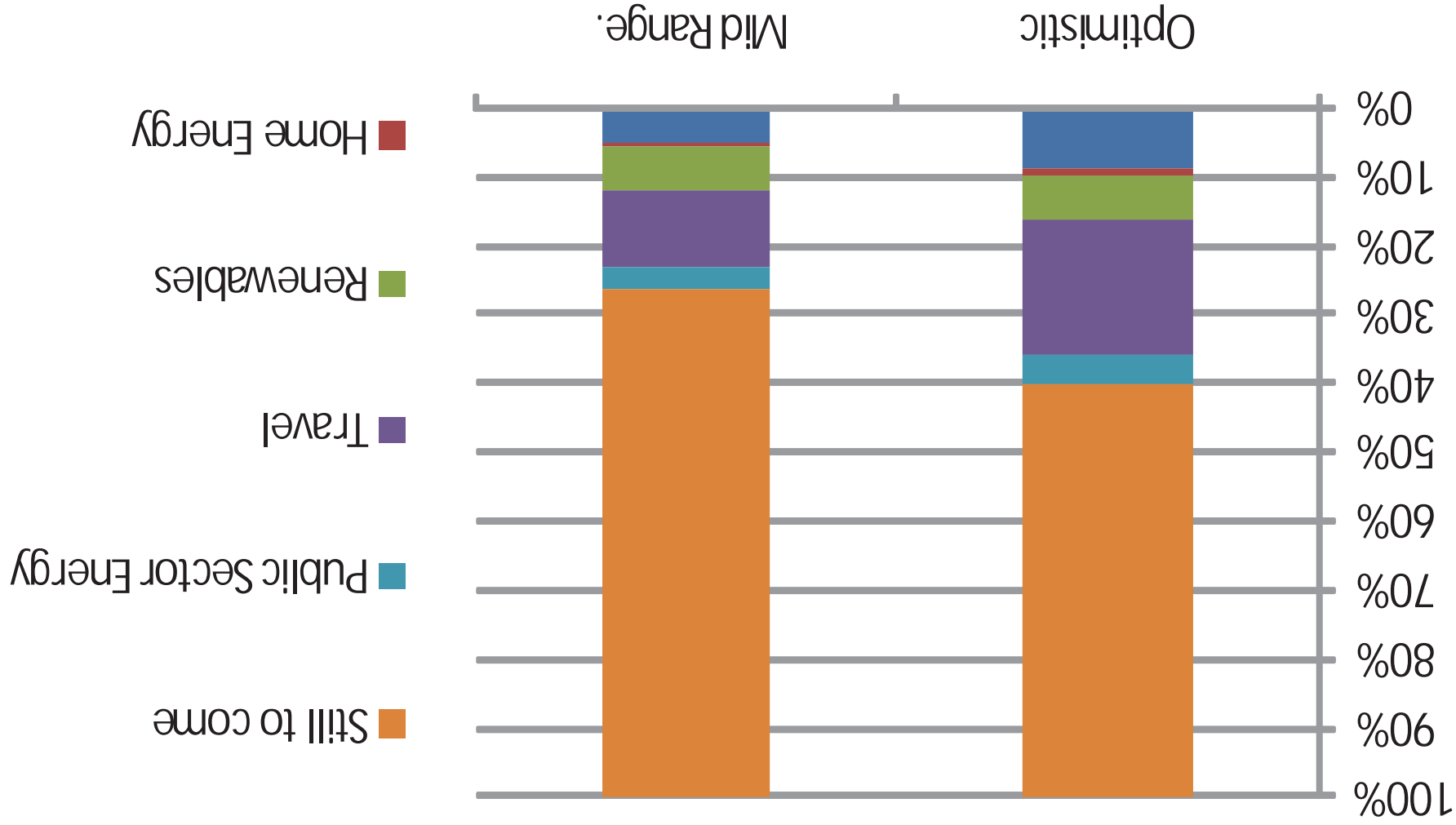
# FLIGHTS FROM... AS % OF TOTAL



# THE UK HOTELS, PUBS AND CATERING INDUSTRY



# If we did everything identified so far



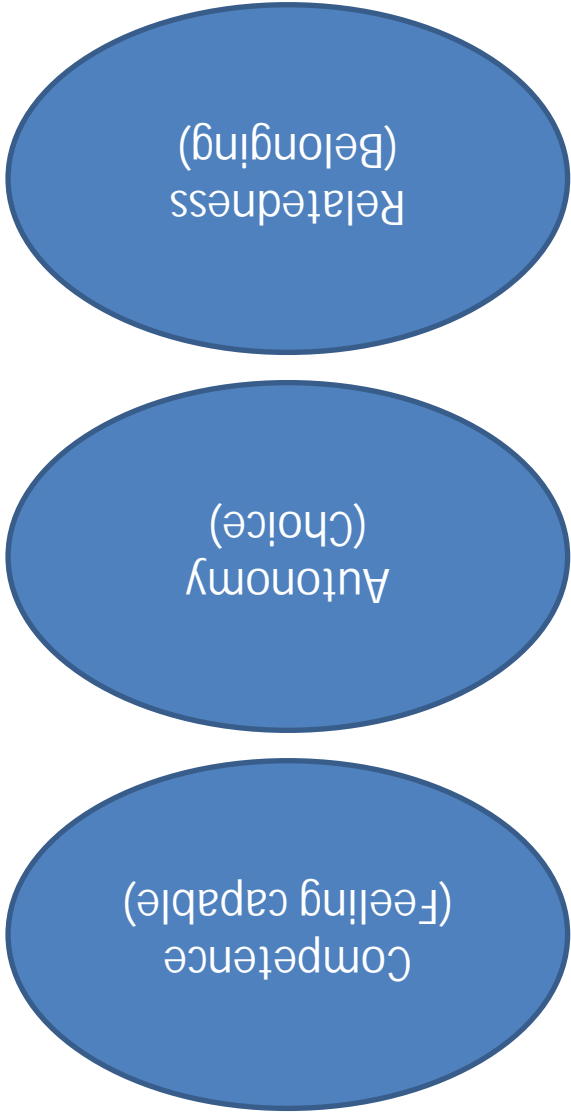
# ENGAGING PEOPLE

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# MEETING 3 PSYCHOLOGICAL NEEDS

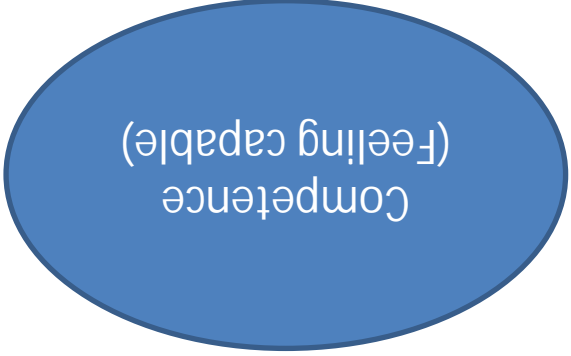


# MEETING AND DENYING NEEDS

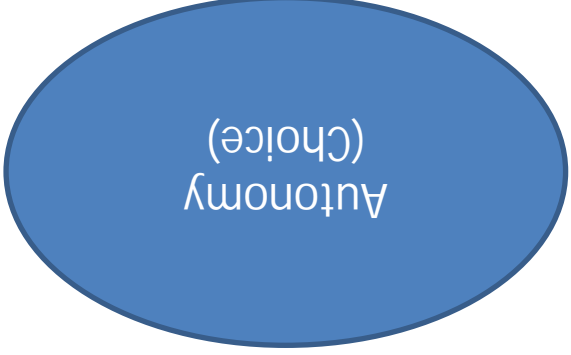
You should do something  
but you don't know  
what to do.  
Everything you understood  
about how to live has been  
wrong.

'You have to ...'  
Why the 10:10  
video missed so  
badly

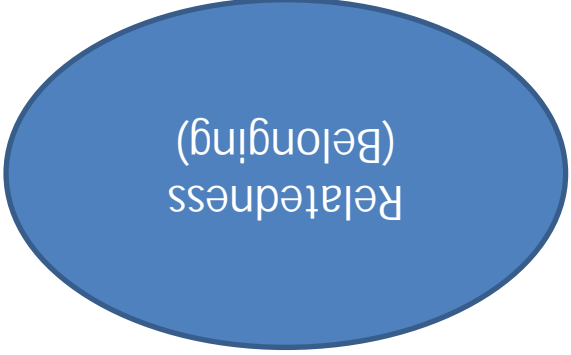
Be different  
Socially exclude yourself  
By being a nerd,  
unfashionable, worthy  
person who isn't allowed  
to have fun like everyone  
else.



Bright people get it  
People who are capable  
of abstract thinking  
and empathy get climate.  
Enable understanding



• Liberate yourself from  
brain washing  
• Buy L'Oreal if you want to,  
not because you won't  
be worth it if you don't



• Everyone like you  
is doing it already  
• Be part of a  
radical group.



# ONE RESEARCHER'S COMMENTS

- Three most important things to suggest if you want someone to be more sustainable (learned from focus groups):
  - Be sustainable and you are more likely to get on TV
  - Be sustainable and you will become more attractive
  - Be sustainable and you will be more like everyone else

# UK - WHAT WOULD I DO IF I WAS THE BENEVOLENT DICTATOR?

- Reframe austerity / recession.
- Redefine growth
- Track wellbeing
- Reduce inequality – strongly progressive austerity measures
- Use tax and benefits to incentivise behaviours
- Three good reads:
  - *Prosperity without Growth* – Tim Jackson
  - *The Spirit Level* – Richard Wilkinson and Kate Pickett
  - *Common Cause* - WWF

# QUESTIONS AND COMMENTS?

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# LONDON TO HONG KONG RETURN



Economy - 3.4 tonnes CO<sub>2</sub>  
First - 13.5 tonnes CO<sub>2</sub>

# PLASTIC BAG

Lightweight –  $3\text{gCO}_2\text{e}$   
Standard –  $10\text{gCO}_2\text{e}$   
Heavyweight –  $50\text{gCO}_2\text{e}$



# ASPARAGUS

250 g local, seasonal:  
125g CO<sub>2</sub>e

250g air freighted from  
Peru:  
3.5 kg CO<sub>2</sub>e



# HAVING A CHILD



Carbon conscious child:  
100 tonnes CO<sub>2</sub>e

Average child:  
373 tonnes CO<sub>2</sub>e

High impact offspring:  
2000 tonnes CO<sub>2</sub>e

# LOFT INSULATION



Outlay for a 3

bedroom house:

350 kg CO<sub>2</sub>e

Payback over 40

years:

35 tonnes CO<sub>2</sub>e





A VALANTINE ROSE

# PAS 2050 PROBLEMS

- Boundary problems
- Dataset problems
- Generalisation problems (usually associated with IOA, but just as serious in simplified PLCAs)
- Not everything it says on the tin
- Organisational burden
- High effort
- Disadvantages the small organisation (and hence advantages the larger organisation)

## PAS 2050 - THE POSITIVES

- Tames the wild west slightly
- Provides basis for understanding where the issues are within a supply chain
- Provides comfort
- Provides income