

**Beyond regulatory compliance!
An opportunity to reduce carbon
emissions, generate savings and
benefit local communities.**

*Cifal Findhorn Event, Forres, Scotland
8th February, 2011*

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Chairman, Carbon Zero Solutions

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Agenda and Content

- Introduction to Case Study – Royal Mail
- Carbon and Energy Data Management
- Drilling Deeper with the Data
- The Creation and use of Abatement Curves
- The Creation of the Cumulative Investment Returns Curve
- The Future of Carbon Disclosure and Regulation
- Questions (for you!) and the need for further case studies!
- Questions (for me!)

CSR and Sustainability Awards

- **Winner** - Quality in Print Media Environmental Award, Quality In Print Awards 2008
- **Winner** – Best use of payroll giving award, Institute of Fundraising Awards 2008
- **Winner** – Corporate Social Responsibility category, 2008 World Mail Awards
- **Winner** – Environmental Improvement – Chartered Institute of Logistics and Transport Awards for Excellence 2007
- **Winners** – Best payroll giving award – Pay Magazine Awards 2007
- **Big Tick** – Excellence in Health Award, BITC Awards for Excellence 2007
- **Silver Jubilee Big Tick** – Royal Mail Education Programme – BITC Awards for Excellence 2007
- **Big Tick** – Feeling First Class Award, BITC Awards for Excellence 2007
- **Winner** - Corporate Social Responsibility category, 2006 World Mail Awards
- **Winner** – Best CSR Programme of the Year, Strategic Risk European Risk Management Awards 2006
- **Winner** – Traffic & Transport Management Category – City of London’s Liveable City Awards 2006
- **Winner** – Transport, Storage and Distribution Industry Sector, ROSPA Awards 2006

Signatories to the
UN Global Compact

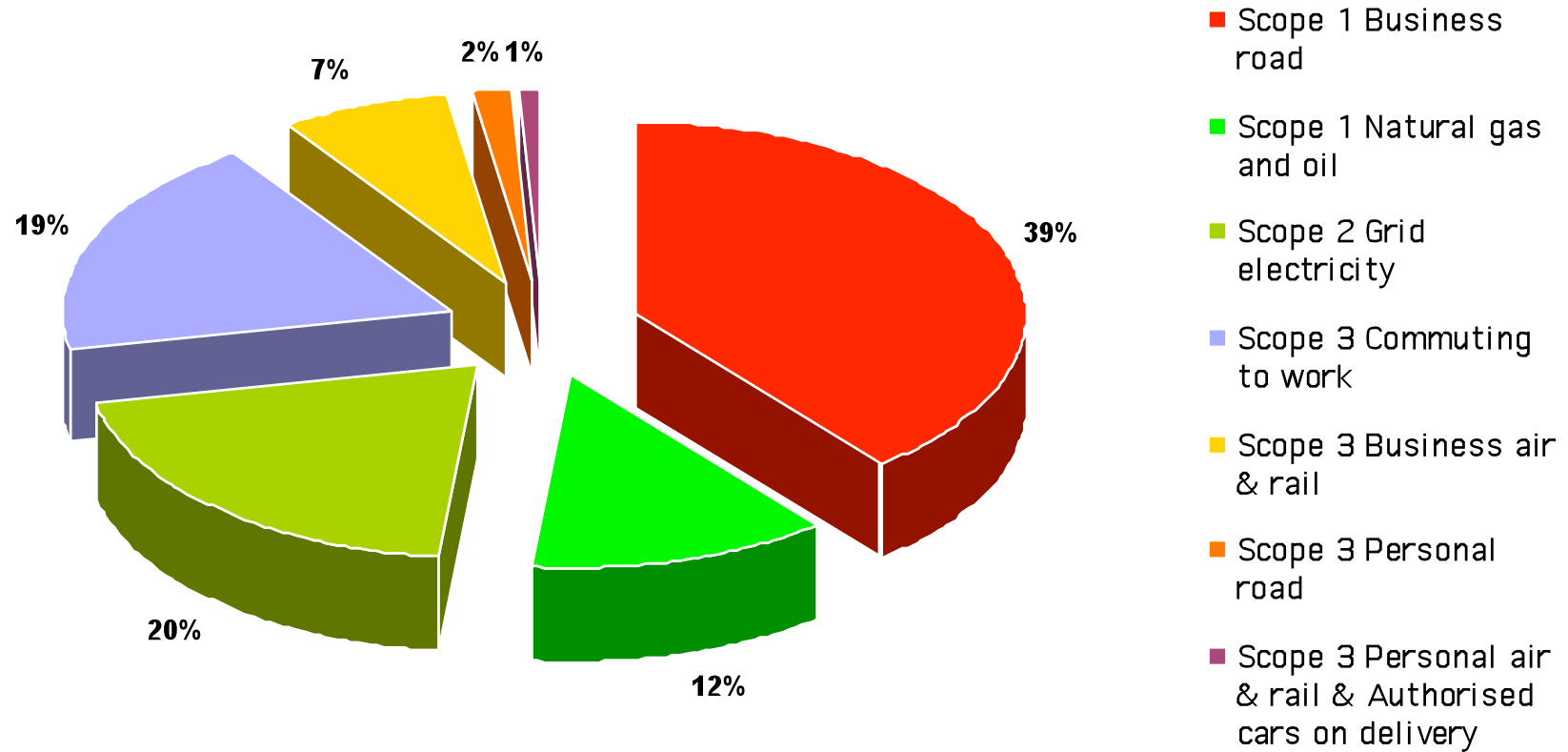


Carbon Trust Standard



- Royal Mail Group were one of the first companies to be awarded the Carbon Trust Standard in 2008.
- The scheme aims to encourage companies to measure, manage and reduce their carbon footprints through real reductions.

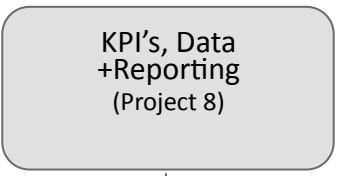
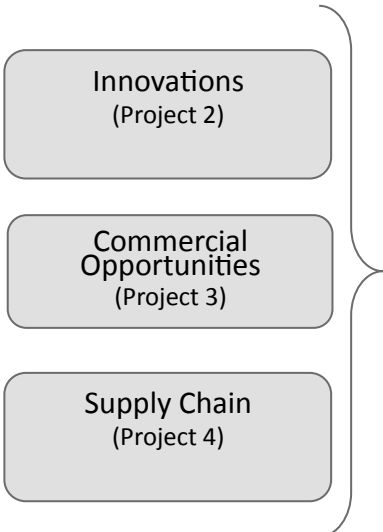
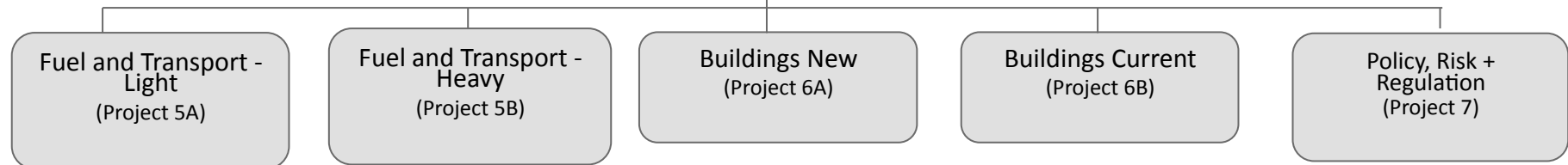
Royal Mail – Gross Carbon Footprint (Circa 2004)



RMG Carbon Management Programme



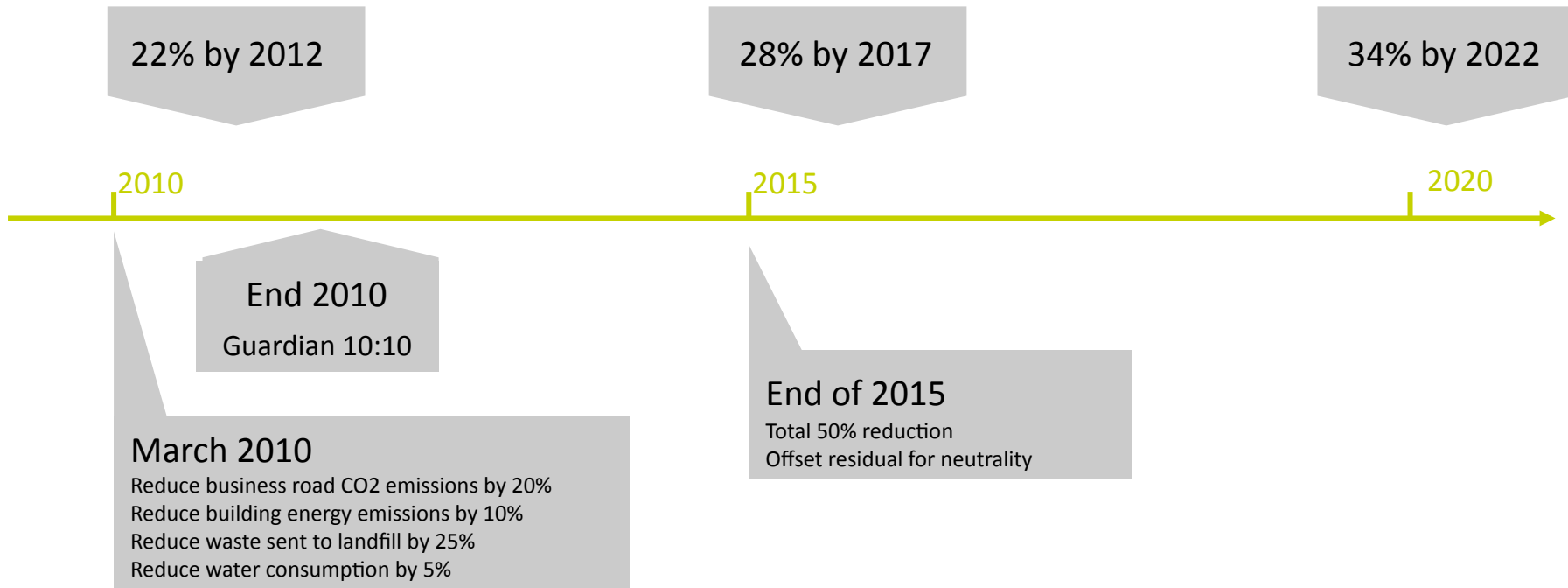
Communications + Employee Engagement (project 1)



Report to Board quarterly:
1, 5A, 5B, 6A, 6B, 8
Report on rotation:
2, 3, 4, 7, 9

The Roadmap for Carbon Reduction

Government carbon reduction targets



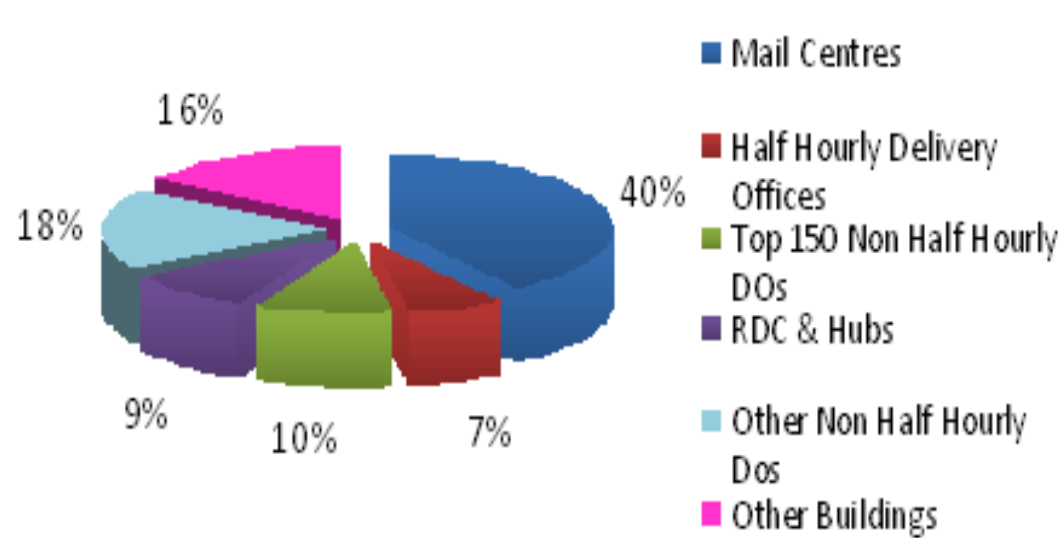
Royal Mail Group carbon reduction targets

* Based on 2004/05 baseline

Drilling Deeper with the Data!

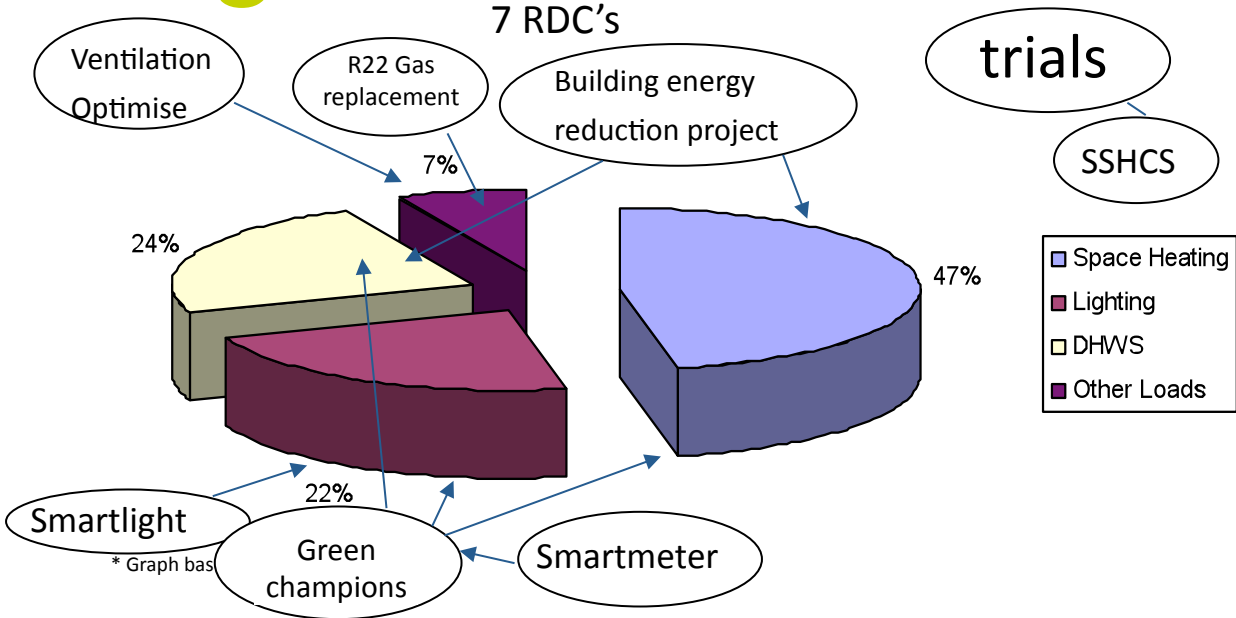
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Buildings: - Proportion of Carbon Footprint by Building Type



- 64 Mail centres largest consumers of energy representing over 40% of total consumption and most energy intense per metre²
- Around 35% of consumption is in delivery offices
- Other buildings are PFWW, POL, garage network

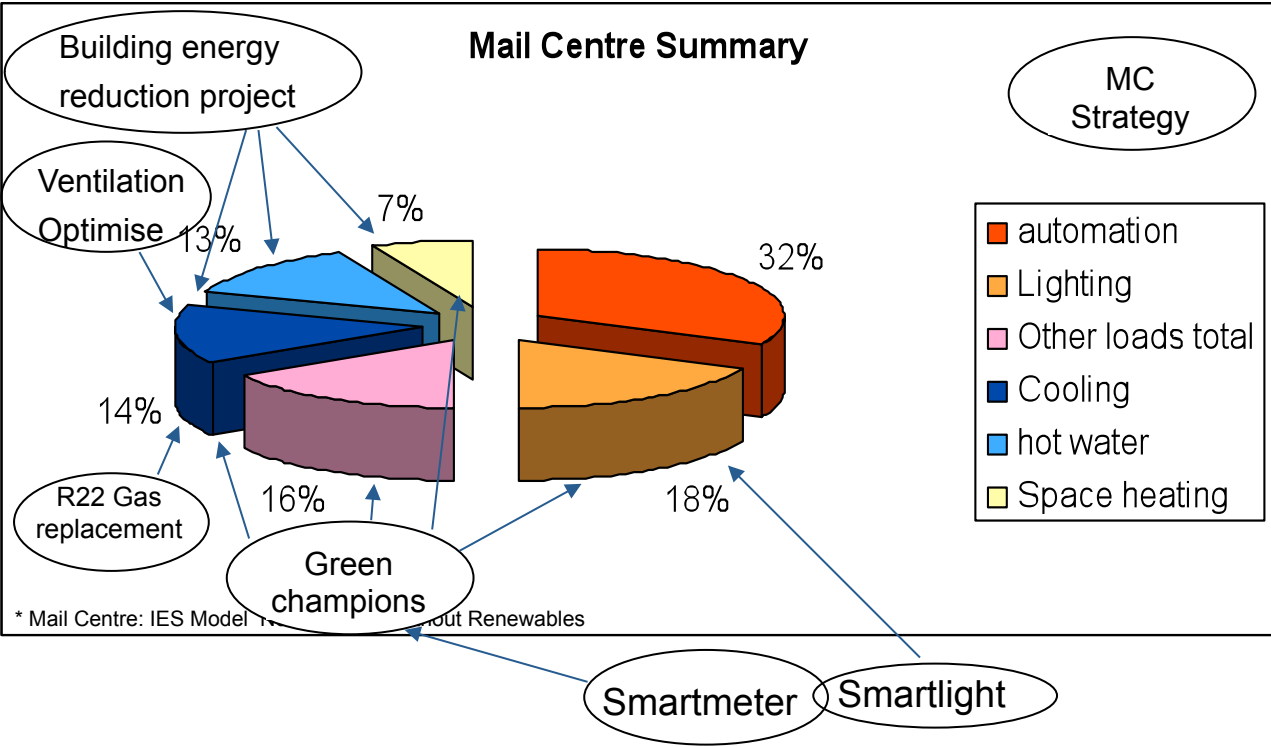
Regional Distribution Centre's



- Majority heating and lighting loads similar to large DO's
- Worst in practice is Warrington CHP site
- 1 site below best in practice average all 6 above average

	Electricity		Gas		Combined	
	kWh/m2	kgCO2/m2	kWh/m2	kgCO2/m2	kWh/m2	kgCO2/m2
Best In Practice Average	82.05	44.35	127.97	23.67	210.02	68.03
Estate Average	108.04	58.40	214.09	39.61	322.13	98.01
Worst in Practice Average	133.88	72.37	299.76	55.46	433.64	127.82

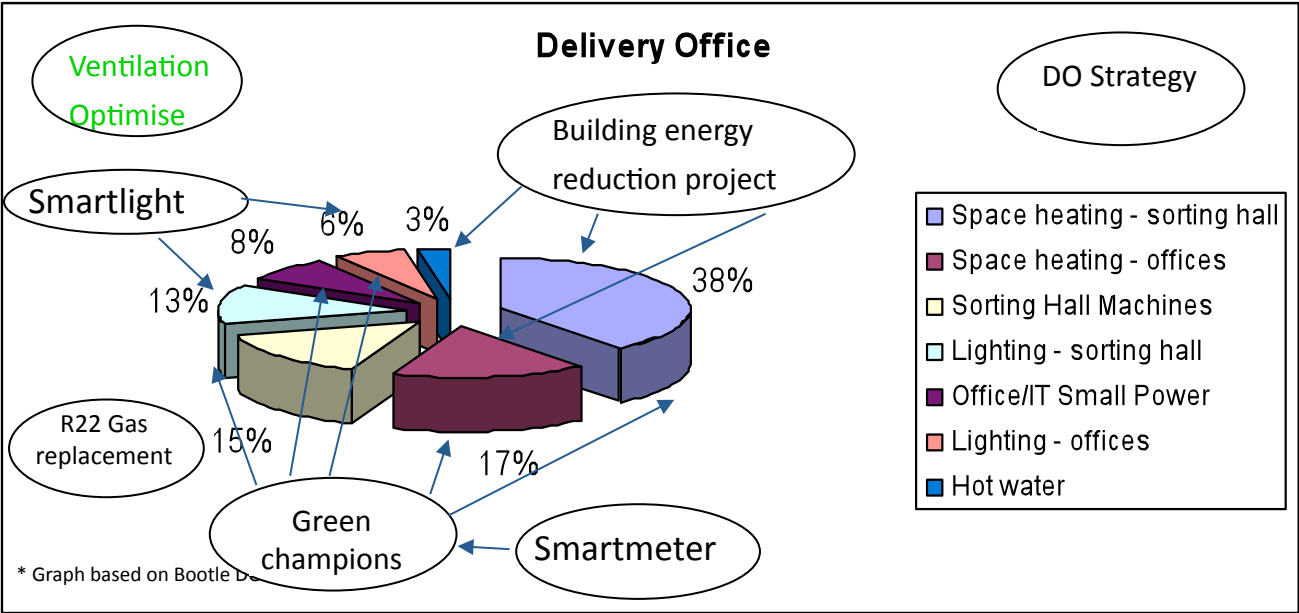
Mail Centres



- Over 30% automation load without any direct plans to reduce energy consumption
- Worst in practice are generally sites operating CHP; policy being reviewed in FM
- 21 MC's best in practice or better
- 19 Average to worse
- 24 Worst in practice average or worse

	Electricity		Gas		Combined	
	kWh/m2	kgCO2e/m2	kWh/m2	kgCO2e/m2	kWh/m2	kgCO2e/m2
Best In Practice Average	155.35	84.54	211.47	38.90	366.83	123.44
Estate Average	191.88	104.42	271.16	49.88	463.05	154.30
Worst in Practice Average	224.60	122.22	324.61	59.72	549.21	181.94

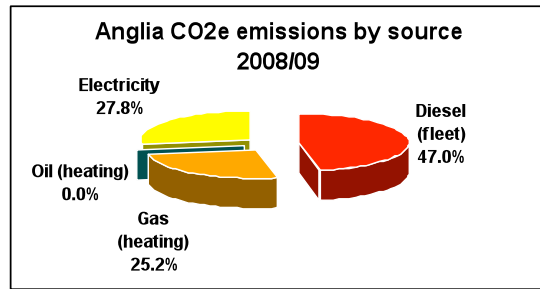
Delivery Office's



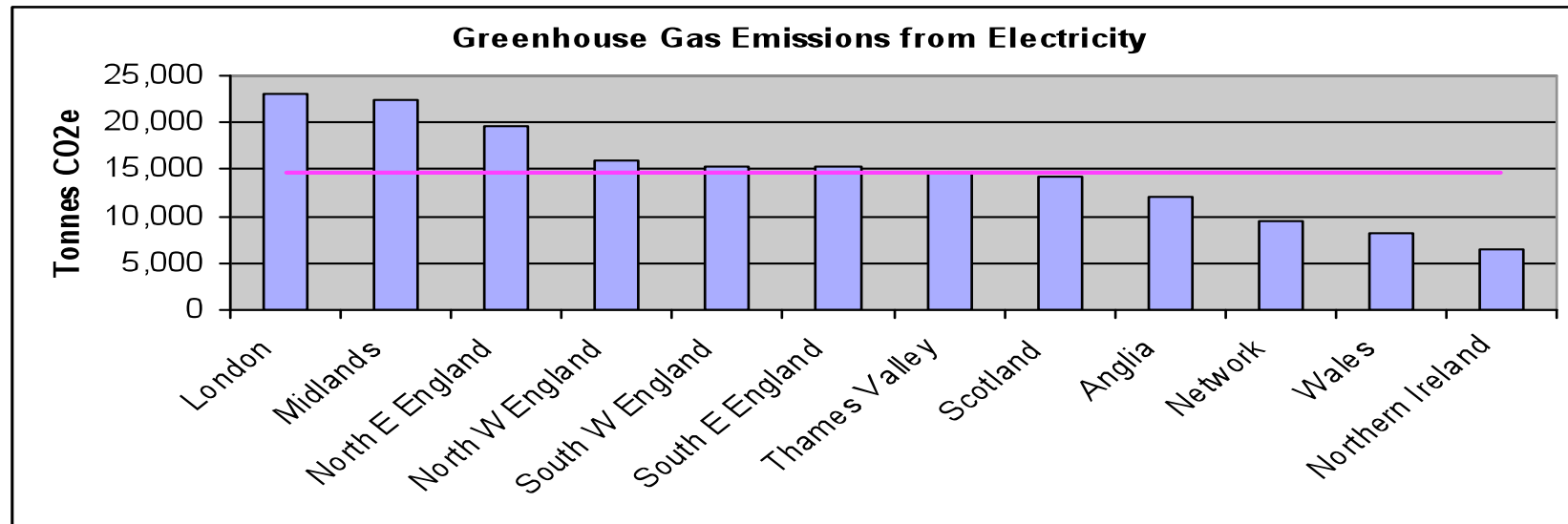
- Heating and lighting 80/20 rule
- Major heating load, move to automation in DO's will shift profile and increase consumption
- 102 sites out of 541 are best in practice average
- 160 sites are worst in practice ave. or below

	Electricity		Gas		Combined	
	kWh/m2	kgCO2e/m2	kWh/m2	kgCO2e/m2	kWh/m2	kgCO2e/m2
Best In Practice Average	61.84	33.65	138.53	25.48	200.37	59.14
Estate Average	86.10	46.85	176.33	32.44	262.42	79.29
Worst in Practice Average	111.73	60.80	216.27	39.79	328.01	100.59

Creating regional footprints



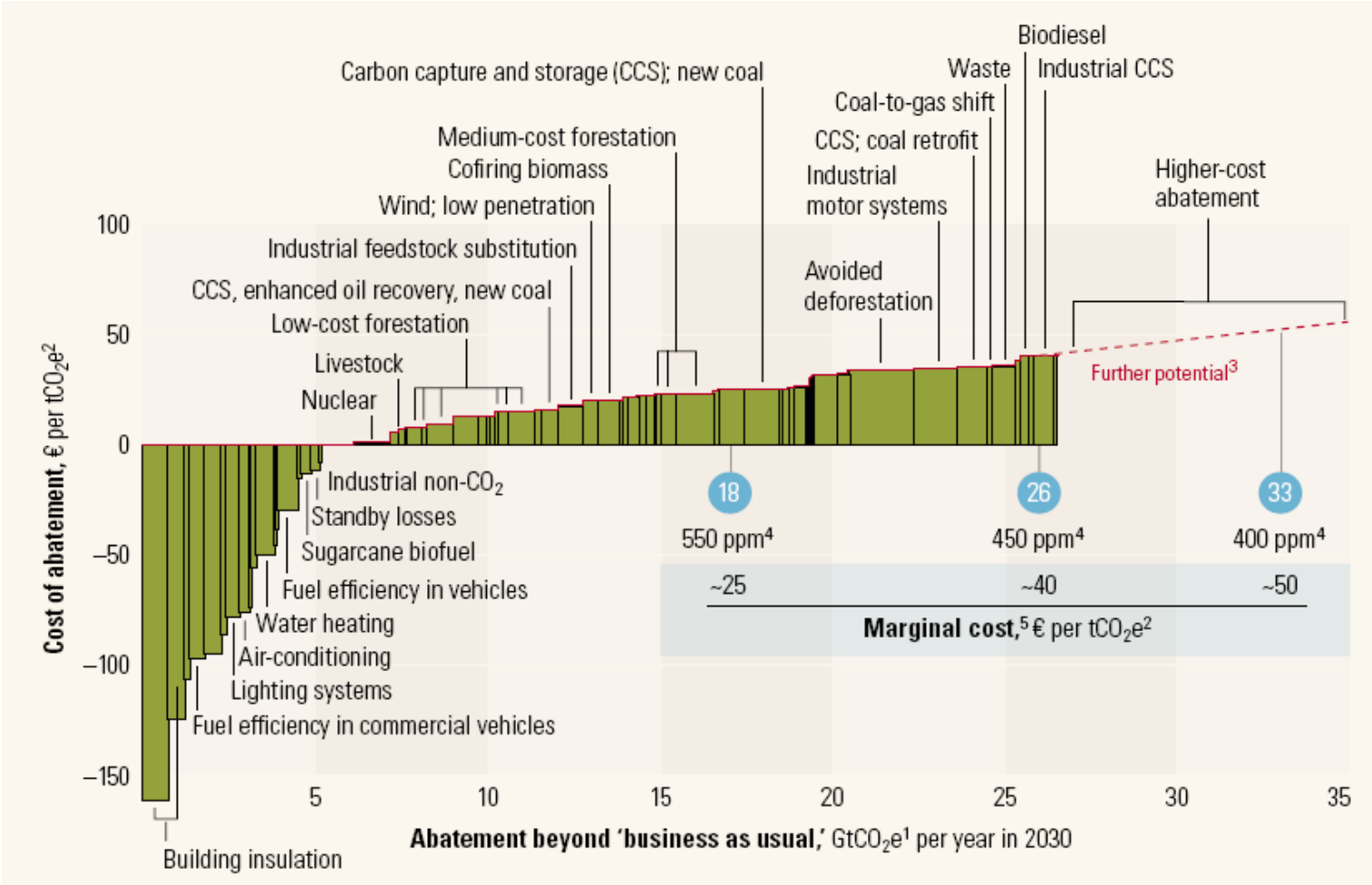
Region	Scope	Source of CO2e (aka GHG)	2004/05	2008/09	2014/15
Anglia	1	Diesel (fleet)	24,240	20,495	12,120
Anglia	1	Gas (heating)	14,328	10,990	7,164
Anglia	1	Oil (heating)			
Anglia	2	Electricity	13,431	12,106	6,716
Total GHG emissions in Tonnes			51,999	43,591	25,999



The Use of Abatement Curves and Data to Make Informed Investment Decisions

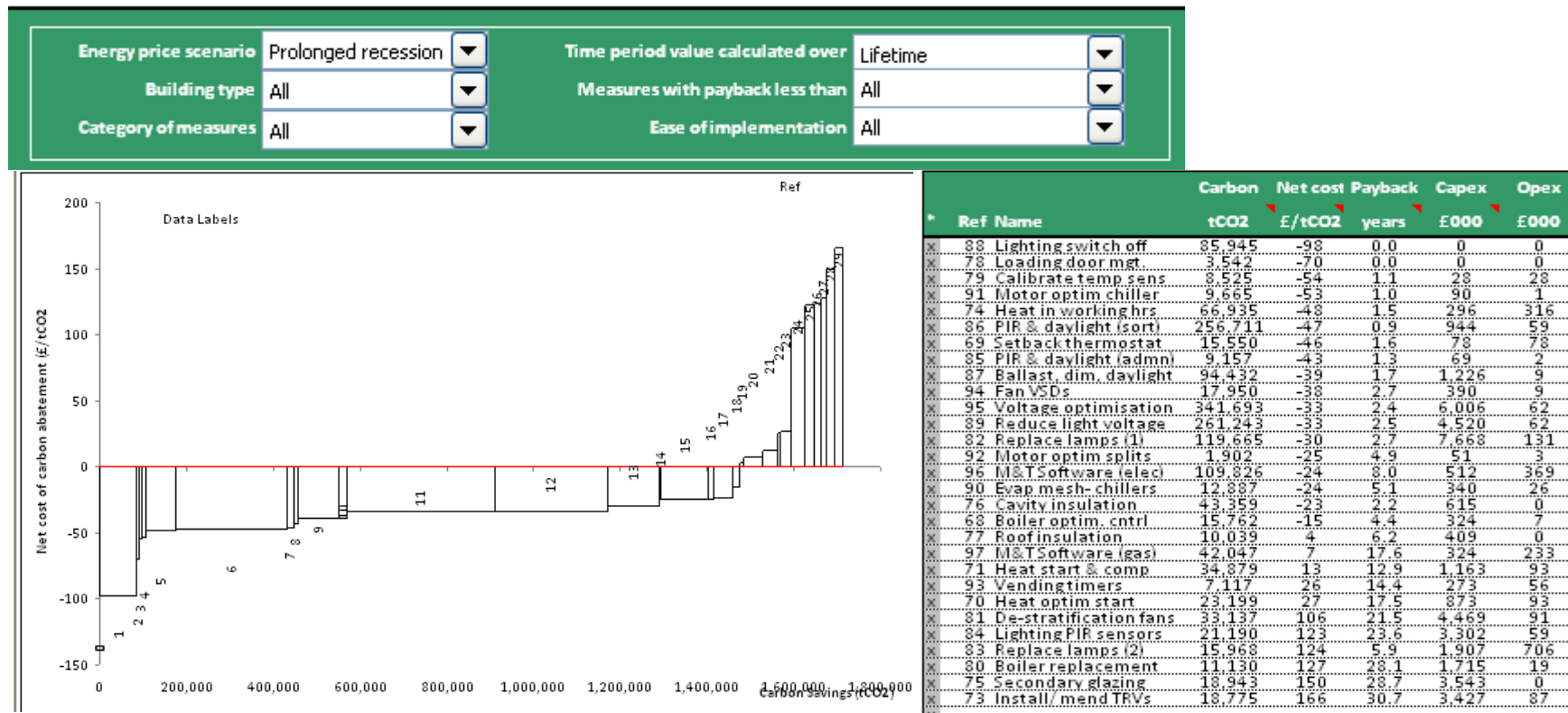
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Macro Level MACC



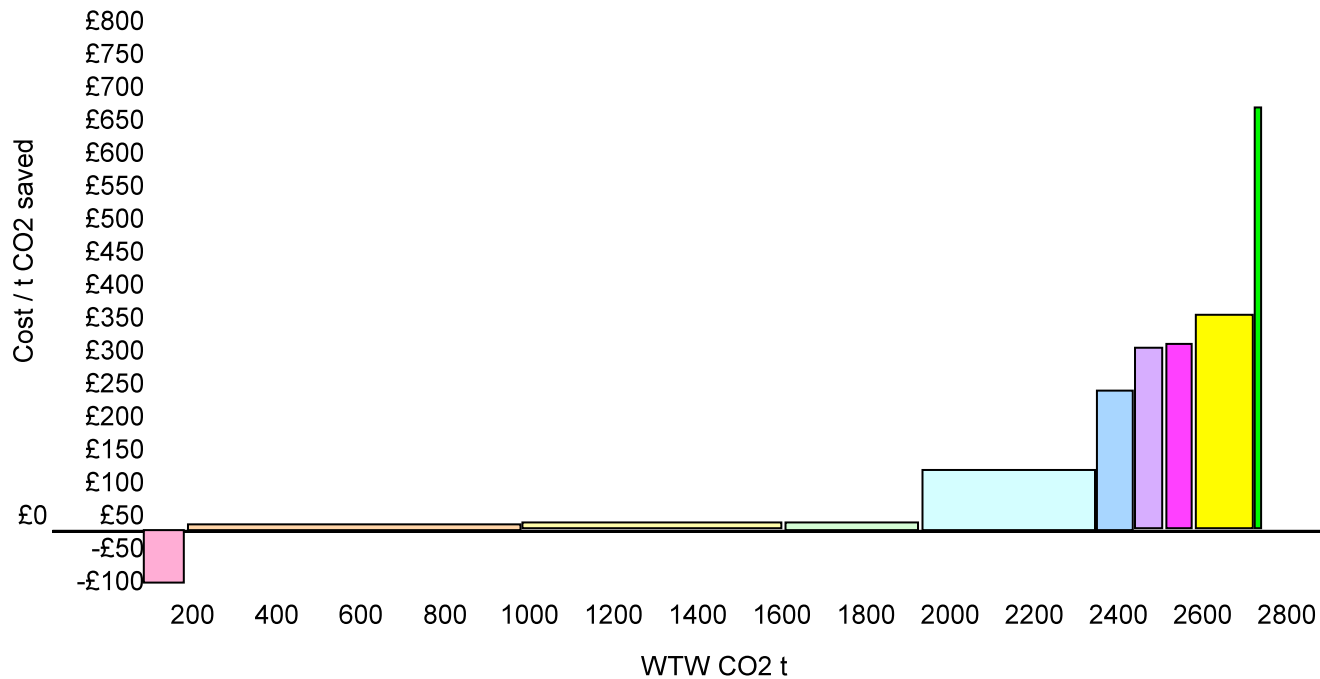
Theory into reality

Enterprise Marginal abatement cost curve



Transport MAC Curve

Vehicle Technology MAC Curve - WTW



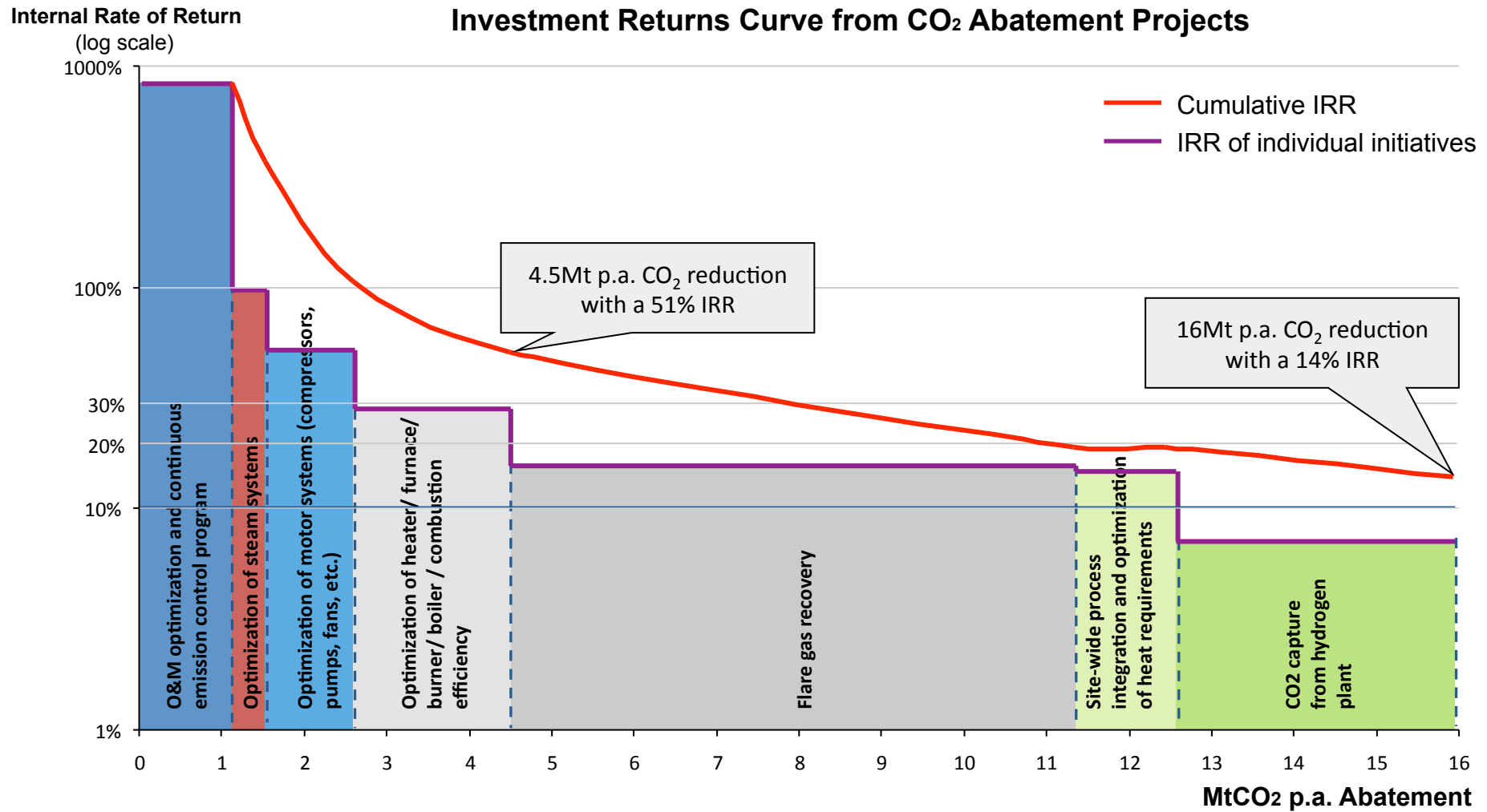
	t CO2	£ / t CO2
Trailer Aero Kit	71	-111
LGV Tractor Methane	† 898	£1
LGV Rigid Methane	† 611	£3
LGV 7.5t Methane	† 317	£18
LGV 7.5t Hybrid	404	£96
LGV 7.5t e	47	£221
CDV Methane	76	£274
CDV e	60	£280
LGV Rigid Hybrid	147	£327
CDV Hybrid - Full	11	£651

† Technology not yet in production

The Cumulative Investment Returns Curve

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A cumulative Investment Returns Curve improves a company's ability to decide what to do



The Future of Carbon Disclosure and Regulation

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Can Abatement Curve Disclosure Take the Politics Out of Carbon?

- Should Carbon Disclosure Project move to abatement curve disclosure? CDP and DECC seem to think so!
- The need for an International Standard on MACC Curve construction and reporting?
- The opportunity for third party, private or government investment with confidence
- Everyone wins! What else do we need to do to make it a reality?

Questions (for you!) and a show
of hands for my continuing
research

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Questions to the Audience!

- Aren't you already collating data for CRC?
- Are you already constructing Carbon Footprints?
- Are you already seeking to reduce your energy costs?
- But, are you creating MACC and IRR financial decision making tools?
- If not, what is the downside risk preventing you from making that step?
- Would you like to create your own MACC, save money and eliminate future regulatory risk at Net Zero Cost?

The Need for Some Further Case Studies!!

- Flagship Case-Studies Required for Research Papers and National examples of Best Practice!
- Any Volunteers?!!



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