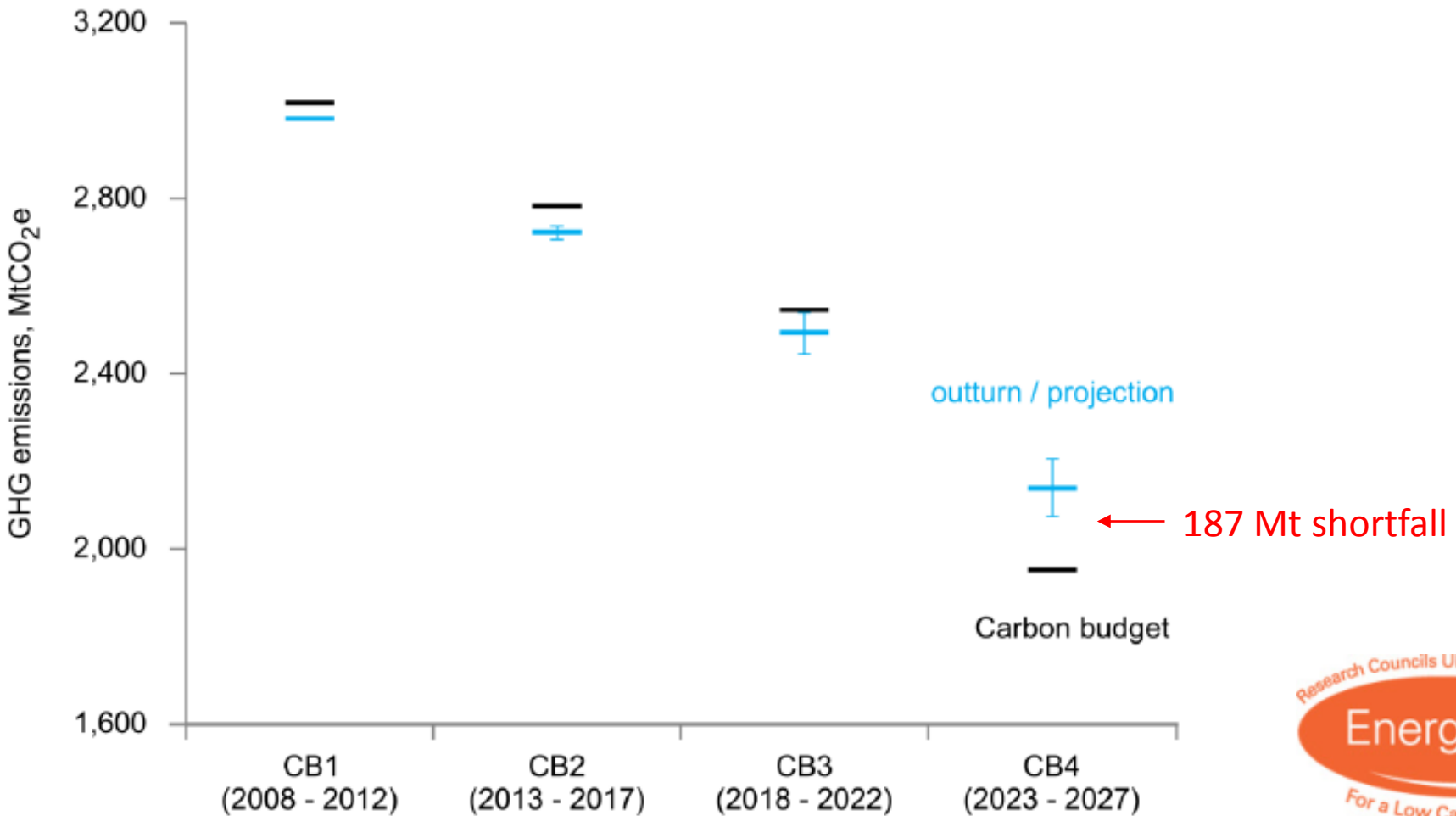


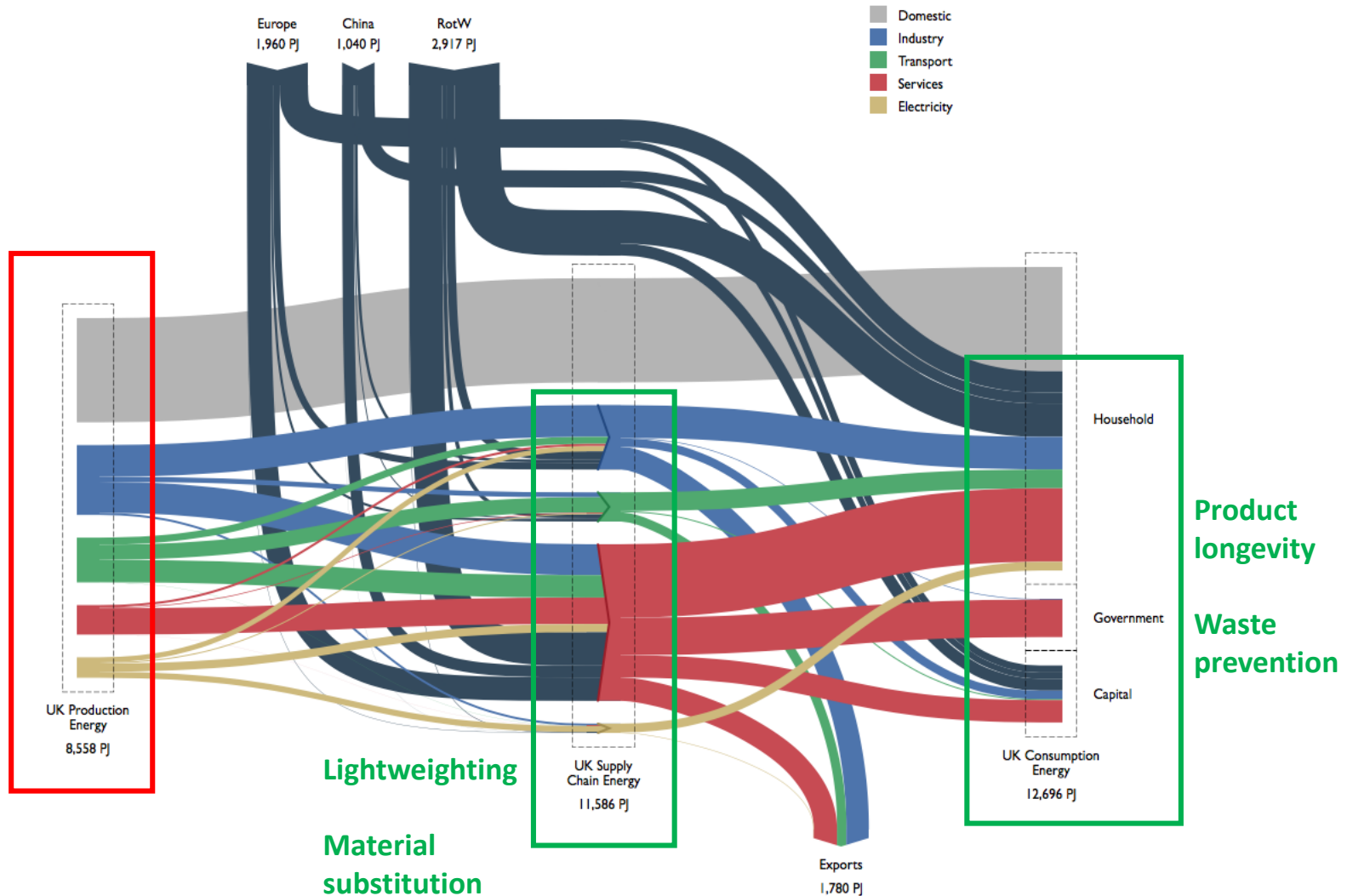
The contribution of resource consumption to meeting the 5th carbon budget

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The challenge





Resource consumption strategies modelled



10-33% increase in lifetime



Reduce avoidable waste 30-60% by households and hospitality



Lightweight 10-20%, increase re-use 10-20%



Lightweight components up to 8%, double car clubs



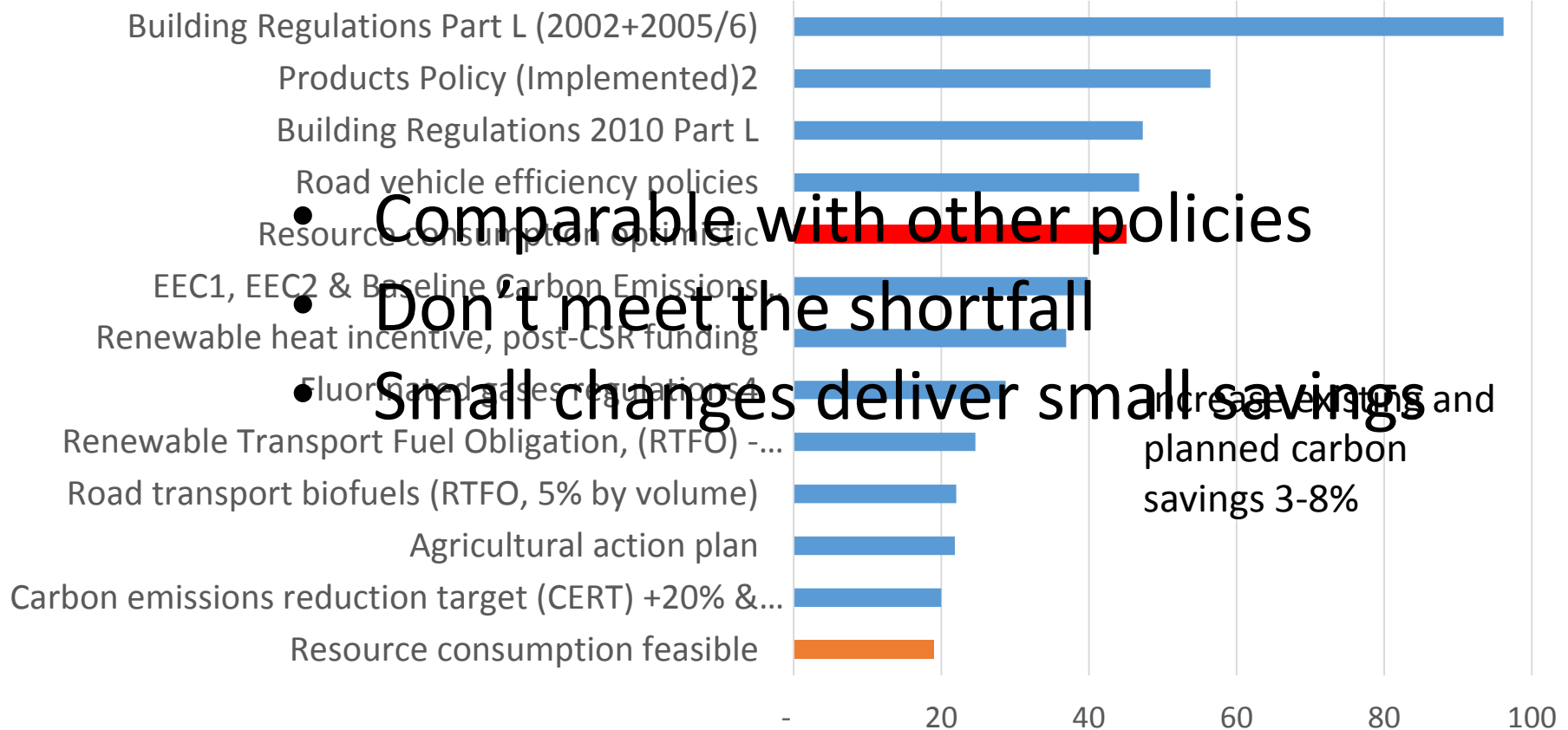
Increase household reuse 10-50% of 25% fully functioning



Material substitution, material reuse

Constrained in short-term BUT “feasible/ quick wins”
i.e. don't require significant shift in infrastructure,
business practices and consumer attitudes

Cumulative savings over carbon budgets 2 & 3 (Mt CO₂e)



Scale of change

- “Feasible” → operating within the current system
- “Optimistic” → increased coverage/ best practice
- Can we anticipate transformative change → much greater resource use reductions through changing design, business and user practices?

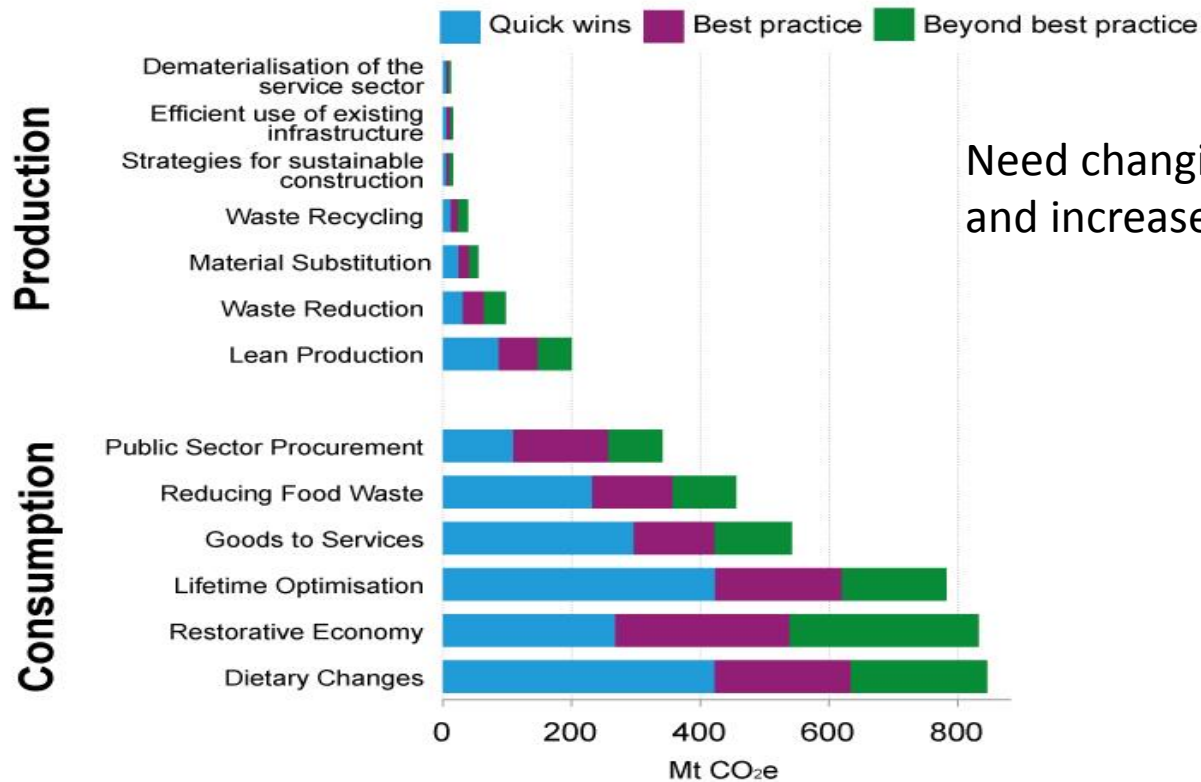


Per capita basis

Car rental schemes reduces car ownership 25%

Mitigation Options

Consumption-based responses offer greater reductions in GHG emissions than production-based responses



Need changing business practices and increased public acceptability

Improvements

- DECC assumptions and scenarios (link)
- Extend strategies (feasible, optimistic and transformative)
- Calculate cumulative savings for future budgets
- Frame scenarios (by source sector, by strategy?)
- Include overseas emissions (and INDCs)

Source sector	2014 DECC (Mt CO ₂)	2013 MRIO (Mt CO ₂)
1A2: Manufacturing Industries and Construction	58	82
1A2b: Non-Ferrous Metals	0	2.3
1A2c: Chemicals	0	12 (excl. rubber & plastics)
1A2d: Pulp, Paper and Print	0	2.8

Resource consumption

1. What would a transformative resource consumption scenario look like?
2. How can these scenarios be framed to have maximum use within a policy context?
3. Do/ could emissions reductions driven by UK actions but achieved outside the UK count in UK policy?

Industrial energy

1. What information could help UK industry to exploit circular economy opportunities ?
2. To what extent should the potential for large structural changes in UK industry be taken into account when planning for the 5th carbon budget?
3. Are there areas of potential synergy between industry and other sectors regarding the future use of energy?