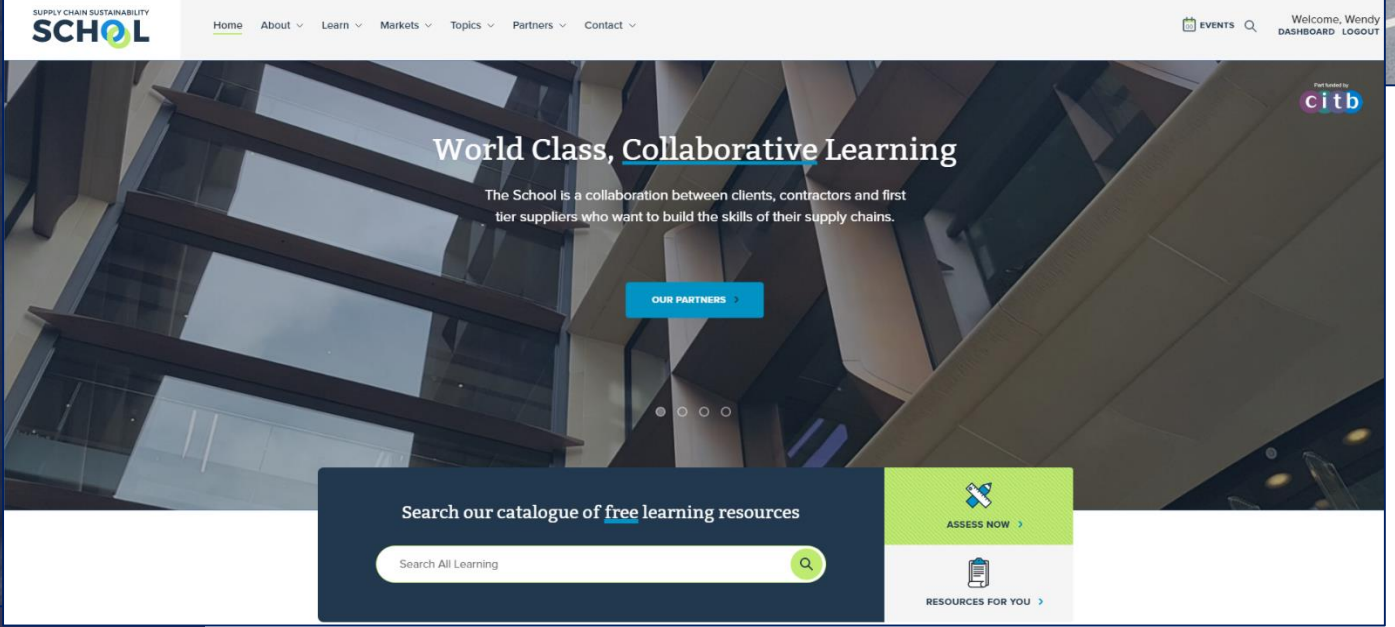
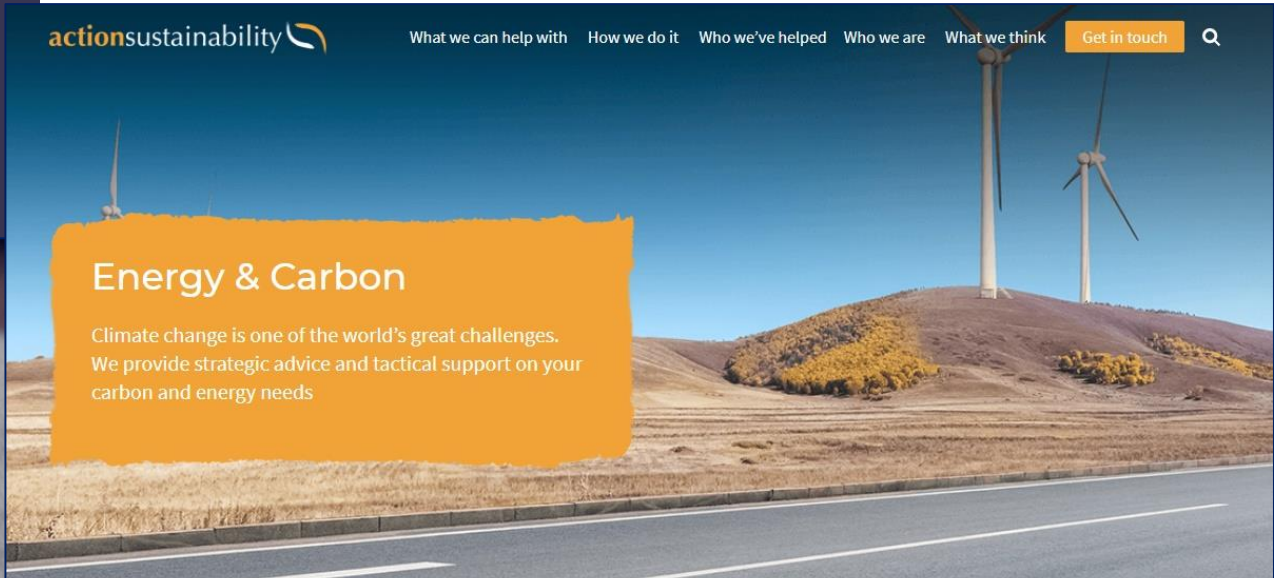
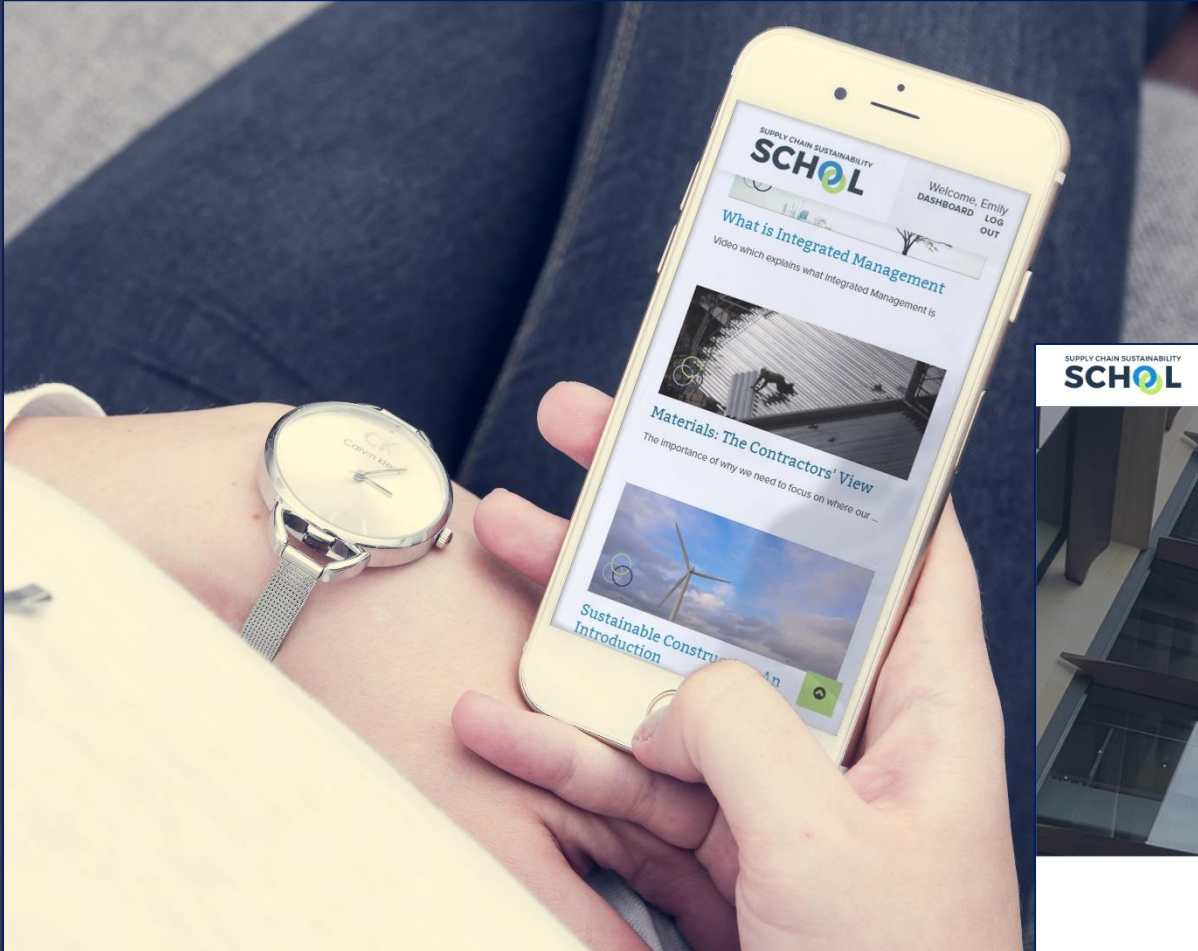


Where's the Carbon in your Supply Chain?

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Lead Consultant
Action Sustainability





Where's the Carbon in Your Supply Chain?

Today's Presentation

- The Context
- The Scale of the Challenge
- Examples
- Using Procurement as a Lever
- Actions
- Conclusions



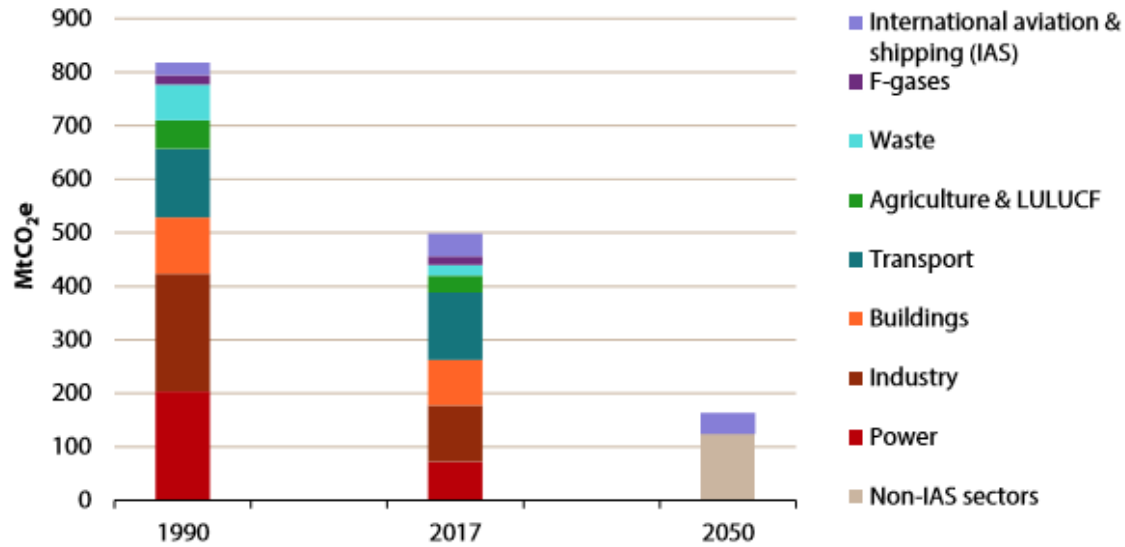
The Context:

- More frequent, more extreme weather patterns
- Unprecedented events
- Growing risk of irreversible change
- IPCC 1.5
- Net zero by 2050



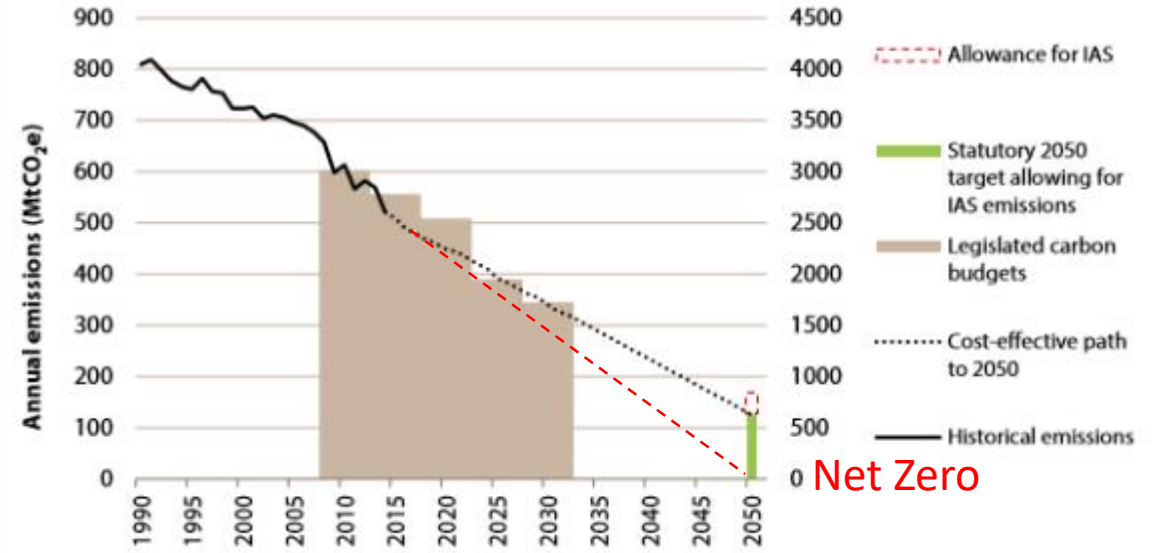
The Scale of the Challenge in the UK

Figure 5.1. The scale of the emissions reduction challenge for the existing 80% 2050 target



Source: BEIS (2019) *2017 Greenhouse Gas Emissions, Final Figures*; CCC analysis.
Notes: IAS stands for international aviation and shipping. Figure based on the current emissions inventory and does not reflect forthcoming revisions to peatland emissions or global warming potentials (see Box 5.1).

Figure 1.2. The UK's existing long-term emissions target (set in 2008) has guided the setting of earlier targets and actions to deliver them



Source: Adapted from CCC (2015) *Fifth Carbon Budget Advice*. Based on DECC (2015) *Final UK greenhouse gas emissions national statistics: 1990-2013*; CCC analysis.
Notes: This chart is from the CCC's 2015 fifth carbon budget report. GHG emissions shown are the actual emissions, while carbon budgets represent the emissions under the net carbon account; IAS stands for International Aviation and Shipping, which are included in the 2050 target but not the carbon budgets.

From The Committee on Climate Change's 2019 report "Net Zero – The UK's contribution to stopping global warming" at <https://www.theccc.org.uk/publication/net-zero-the-uks-contribution-to-stopping-global-warming/>



So your first job is to work on yourself. The greatest thing you can do for another human being is to get your own house in order and find your true spiritual heart.

— *Ram Dass* —



Scope 2

Electricity
& heating

Fugitive
emissions

Scope 1

Vehicle
Fuel

Our 'Direct'
Impact

Water

Staff &
Business
Travel

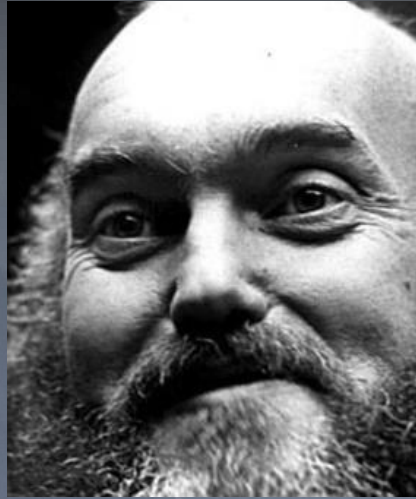
Scope 3

Waste

One Angel Square, Manchester

- The Cooperative Bank's HQ
- The design allows for natural heating, cooling and lighting:
 - Fully-glazed double skin façade curves around the whole building and full-height atrium in its middle
 - Louvres at the top of the façade: open in summer to allow warm air trapped between its inner and outer skins to rise up and out of the building; close in winter so the facade can insulate the building
- Efficient and renewable use of energy and water
 - CHP plant powered by renewable fuel (rapeseed oil) grown on the Co-operative's own farm land
 - Heat recovery from IT systems used to heat the building
 - Energy-efficient LED lighting, IT equipment and lifts
 - Greywater and rainwater recycling for toilet flushing and irrigation
- Predicted 80% less carbon and 50% less energy use than the old head office. Awarded BREEAM "Outstanding" rating.





So your first job is to work on yourself. The greatest thing you can do for another human being is to get your own house in order and find your true spiritual heart.

— *Ram Dass* —



The argument for getting our own house in order is not an argument for turning our back on the world. We cannot and should not do that.

(Chris Christie)

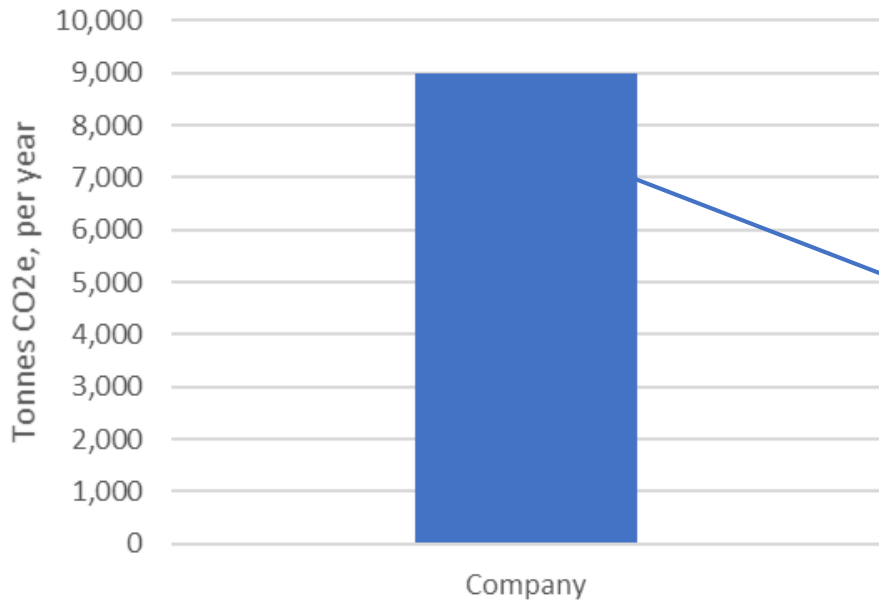


- So, what about the impact from your supply chain, all those manufactured materials being installed?
- Is it the “elephant” in the room?
- Is it in the “too hard” bucket?
- Is it the hidden part of the ever diminishing iceberg...?
- Either way, it’s too big to be ignored!

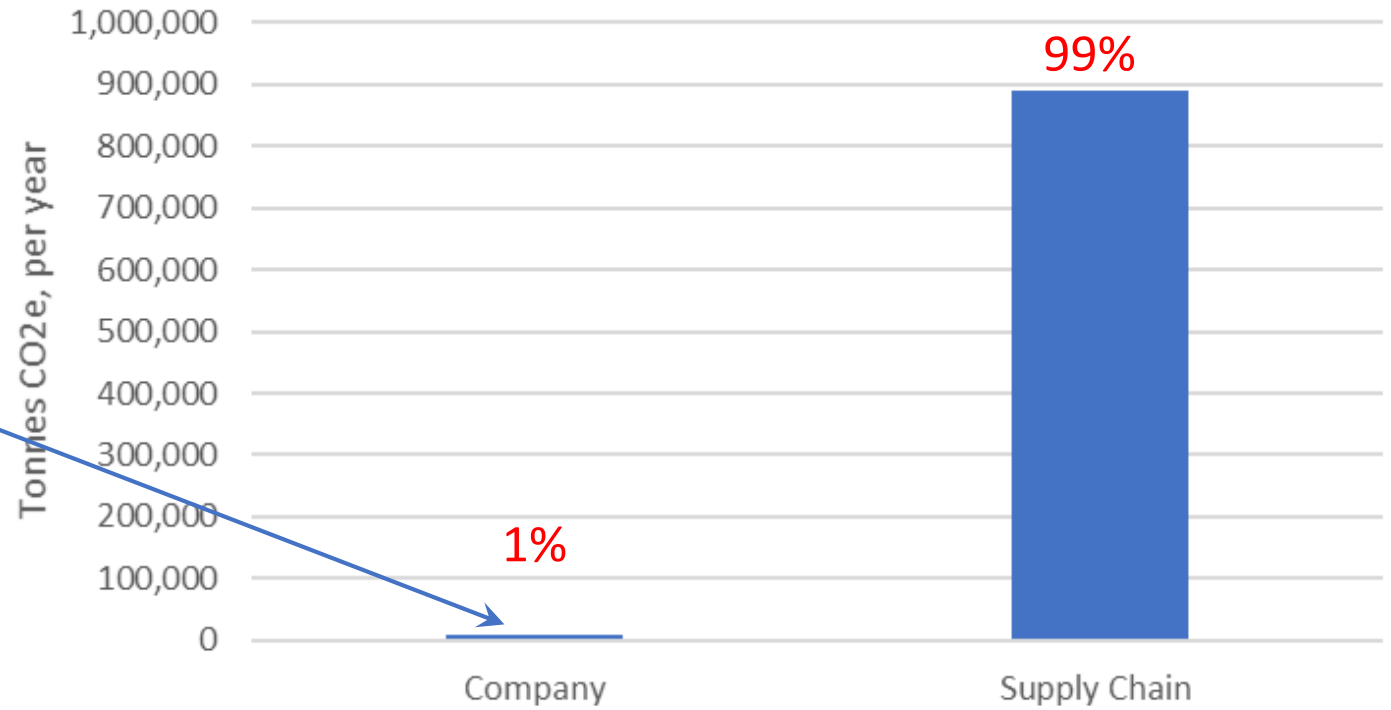


Example of the Scale of the Supply Chain for Carbon: Tier 1 Contractor

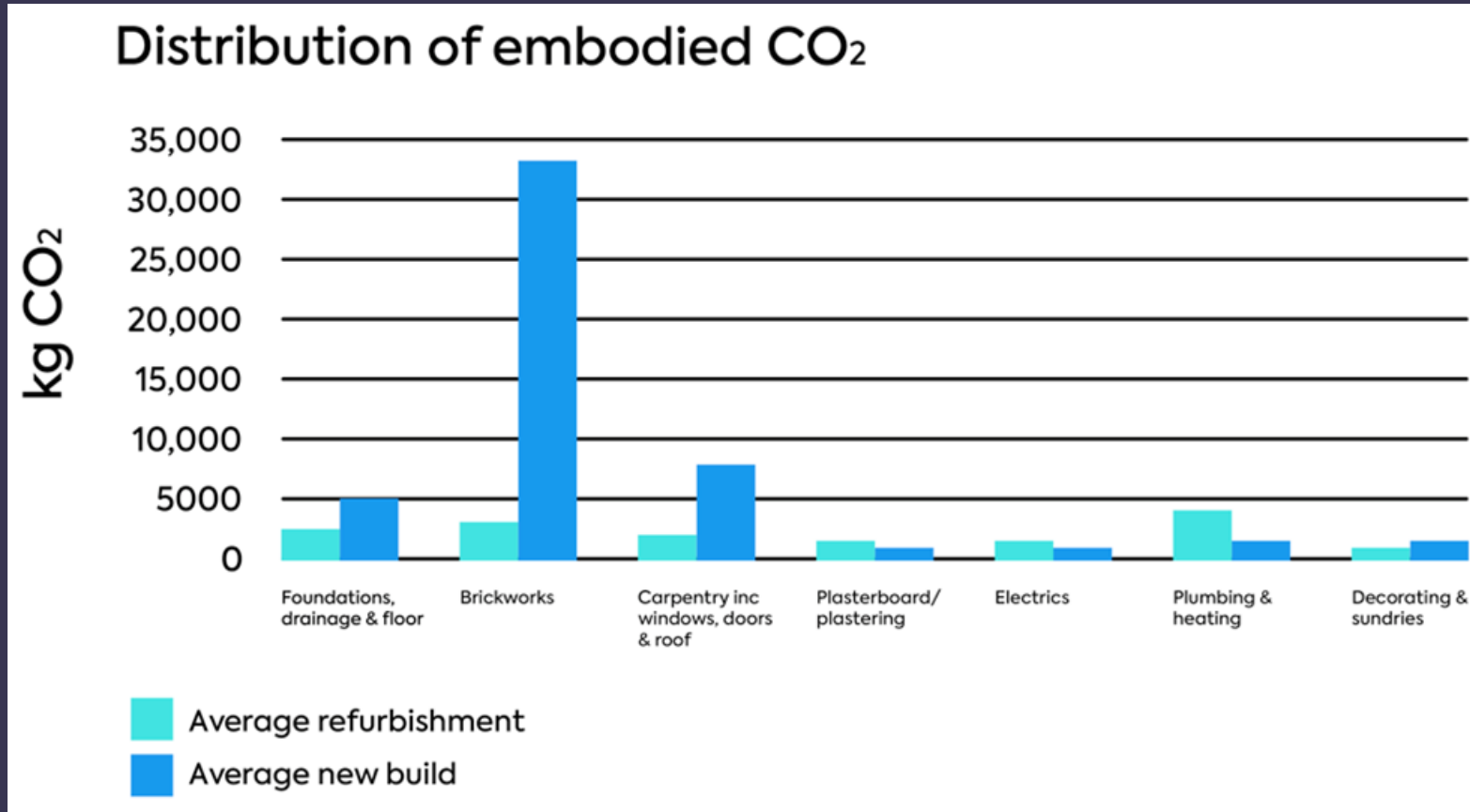
Own Company



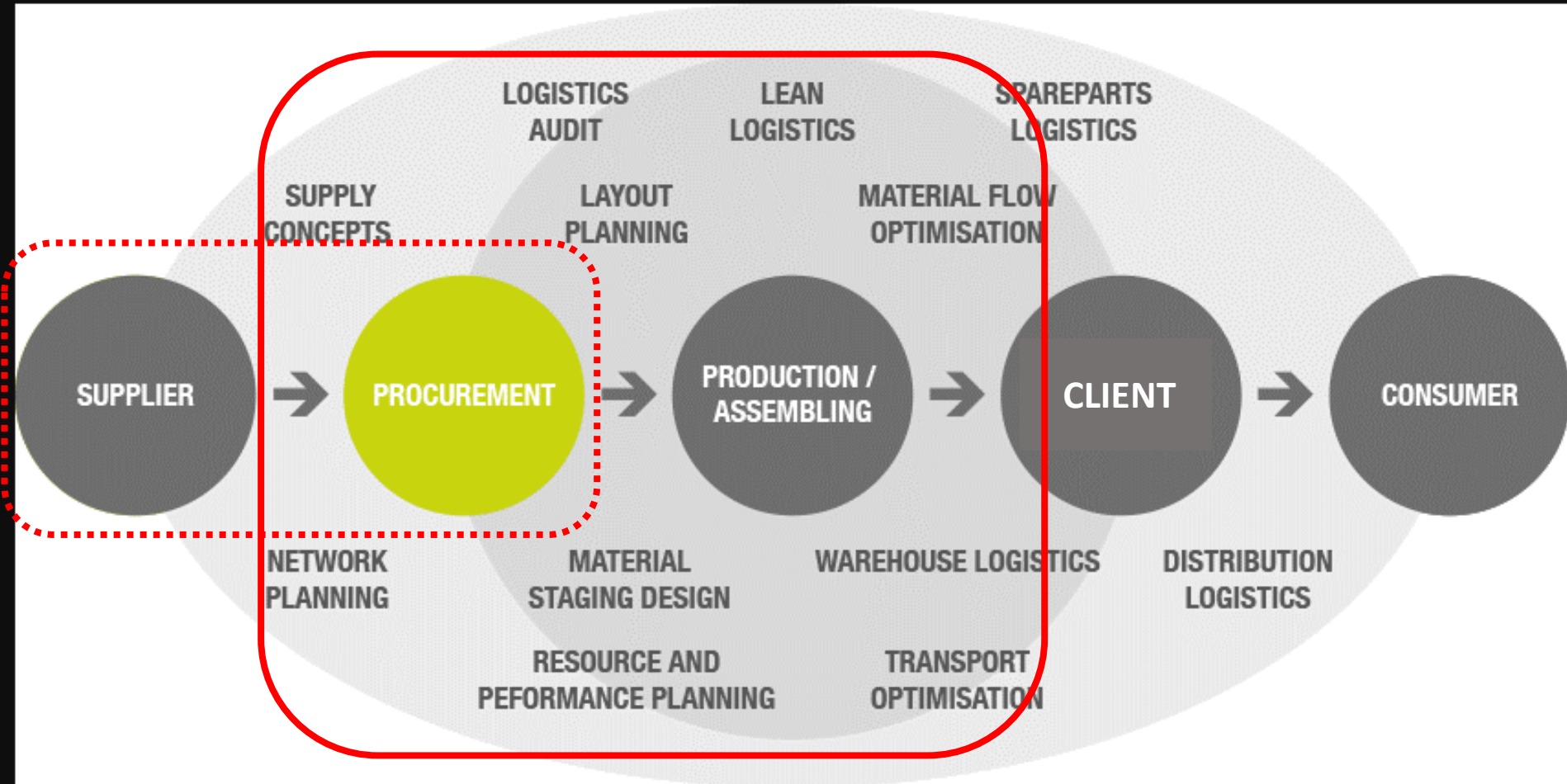
Own Company and Supply Chain



Example of the Scale of the Supply Chain for Carbon: A house

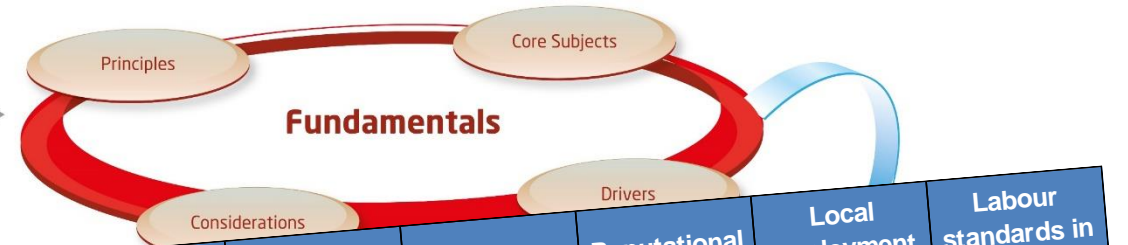


- A typical British house emits:
- **50 - 80 embodied tCO₂** from the materials and fuel used in its construction.
- **3.3 tCO₂ a year** from using grid electric and natural gas.
- This equates to a “payback” between **15 to 25 years** in terms of embodied carbon versus in-use operational carbon.
- Hence embodied carbon, from the materials bought from the supply chain, is significant: **PROCUREMENT!**



ISO 20400:2017 for

Sustainability Impact		Raw materials /Resource Eff	Waste	Energy & Carbon	Water	Security of supply	Legislative Compliance	Health & Safety	Reputational Risks	Local employment & SMEs	Labour standards in SC
Spend category	Sub categories										
Raw Materials	Chemicals, Clays, Solvents etc										
Packaging	Cans, Containers, Metal etc										
Infrastructure	Plant, Machinery and Equipment etc										
Third Party	Brushes, Fillers, Rollers etc										
Commercial	Fleet, Vehicles, Colour Cards etc										
Marketing	Display, Point of Sale stands etc										
Utilities	Gas, Water, Electricity etc										
other...											



throughout the supply chain engagement and management process;

- From organisational drivers, through policy and strategy, via stakeholder engagement and staff competency and out to the procurement process itself
- A key step is setting priorities to manage risks and opportunities, also known as heatmapping, for who is engaged, why and on what
- Magnitude, scope for change, influence with SC, granularity of detail

Half of UK businesses 'targeting carbon neutrality by 2030'

2 October 2019, source [edie newsroom](#)

A survey of 502 UK businesses has found that almost half are aiming to be carbon-neutral by 2030, with 8% claiming they had already reached this milestone.



Image: EcoAct

Conducted by YouGov this summer, [the survey](#) was used to track the climate attitudes of business representatives from major sectors including education, accounting, retail, wholesaling, transport, technology services, restaurant services, construction, real estate, personal care and natural resources such as mining, forestry and oil.

Of the respondents, 93% agreed that climate change is both real and being driven, either in full or in part, by human activity.



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Paul Alexander will be teaching procurement, supply chain and operations management at the University of Portsmouth © Helen Yates/University of Portsmouth

Procurement 'in danger of being left behind'

posted by [Will Green](#) in [Procurement](#)

4 October 2019



Procurement professionals risk being left behind and dismissed as "order placers" and "invoice clearers" if they don't move away from a process-focused role.

Paul Alexander, who has just left his role as head of indirect procurement, EMEA, at BP to become a teaching fellow at the University of Portsmouth, said processes were being systematised and "you don't need someone to run a process".

efficio

THE HUMAN FACTOR

Strategic procurement and the leaders of tomorrow

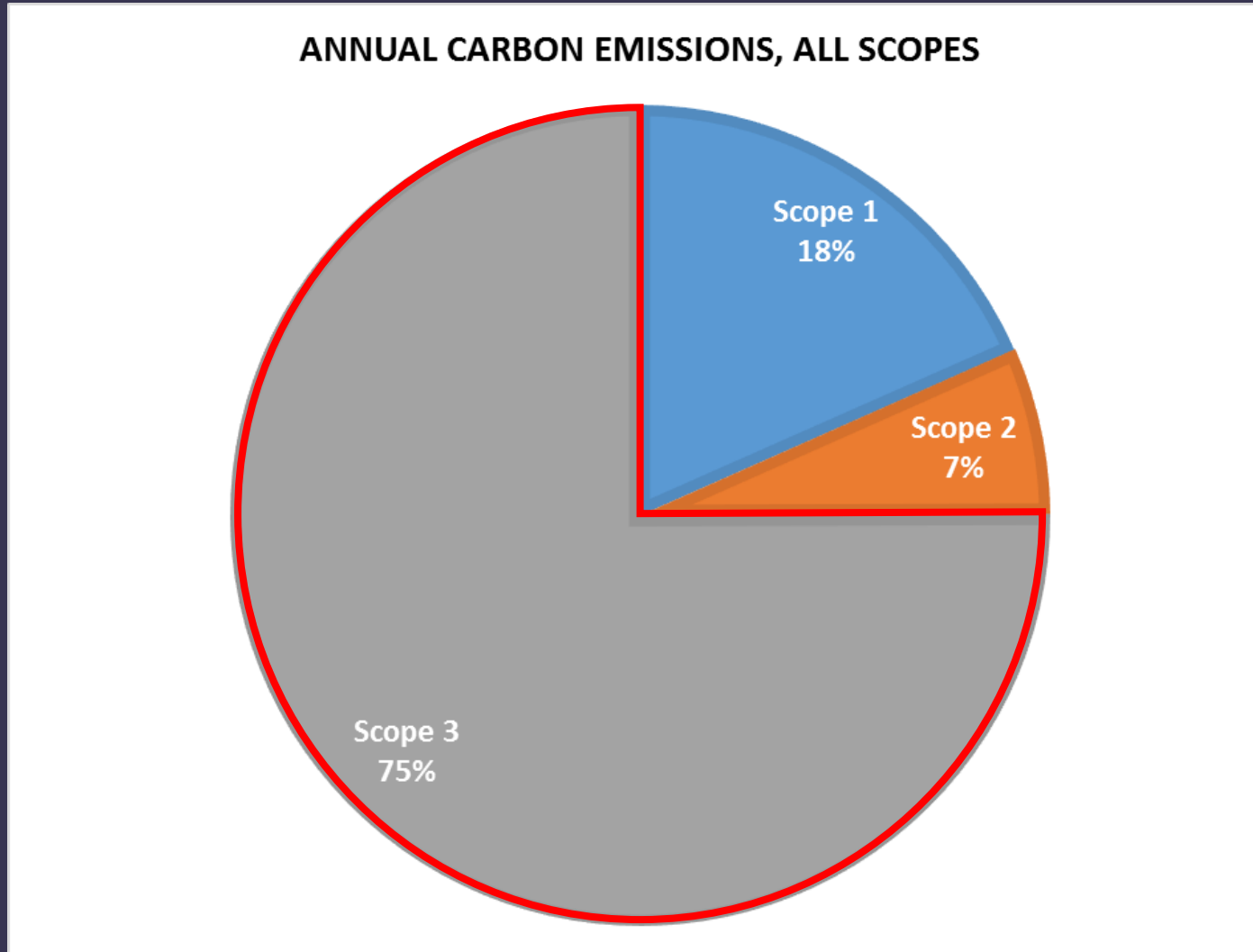
New research study coming soon!

SIGN UP FOR YOUR COPY

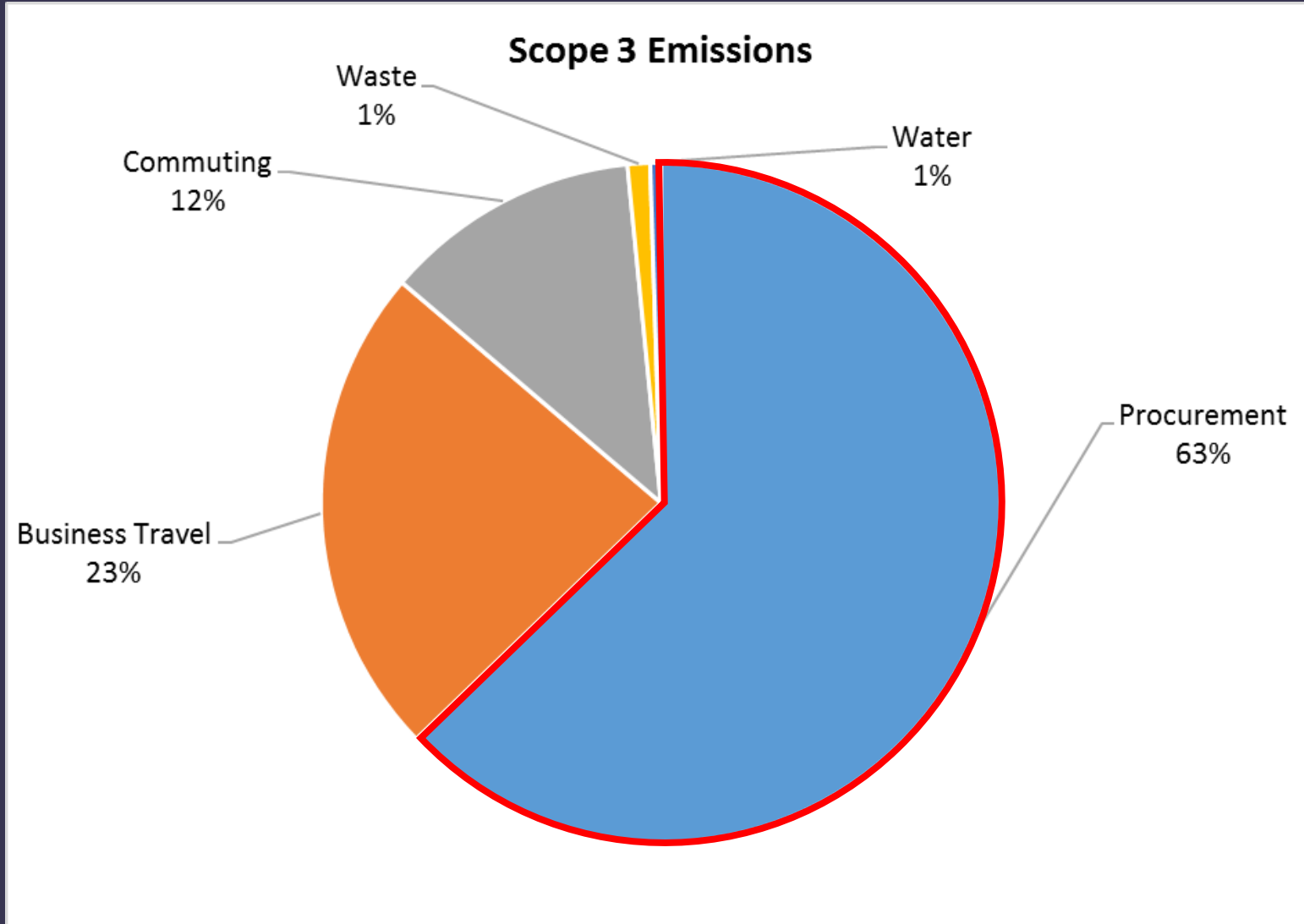
Popular Articles

The top six challenges facing procurement

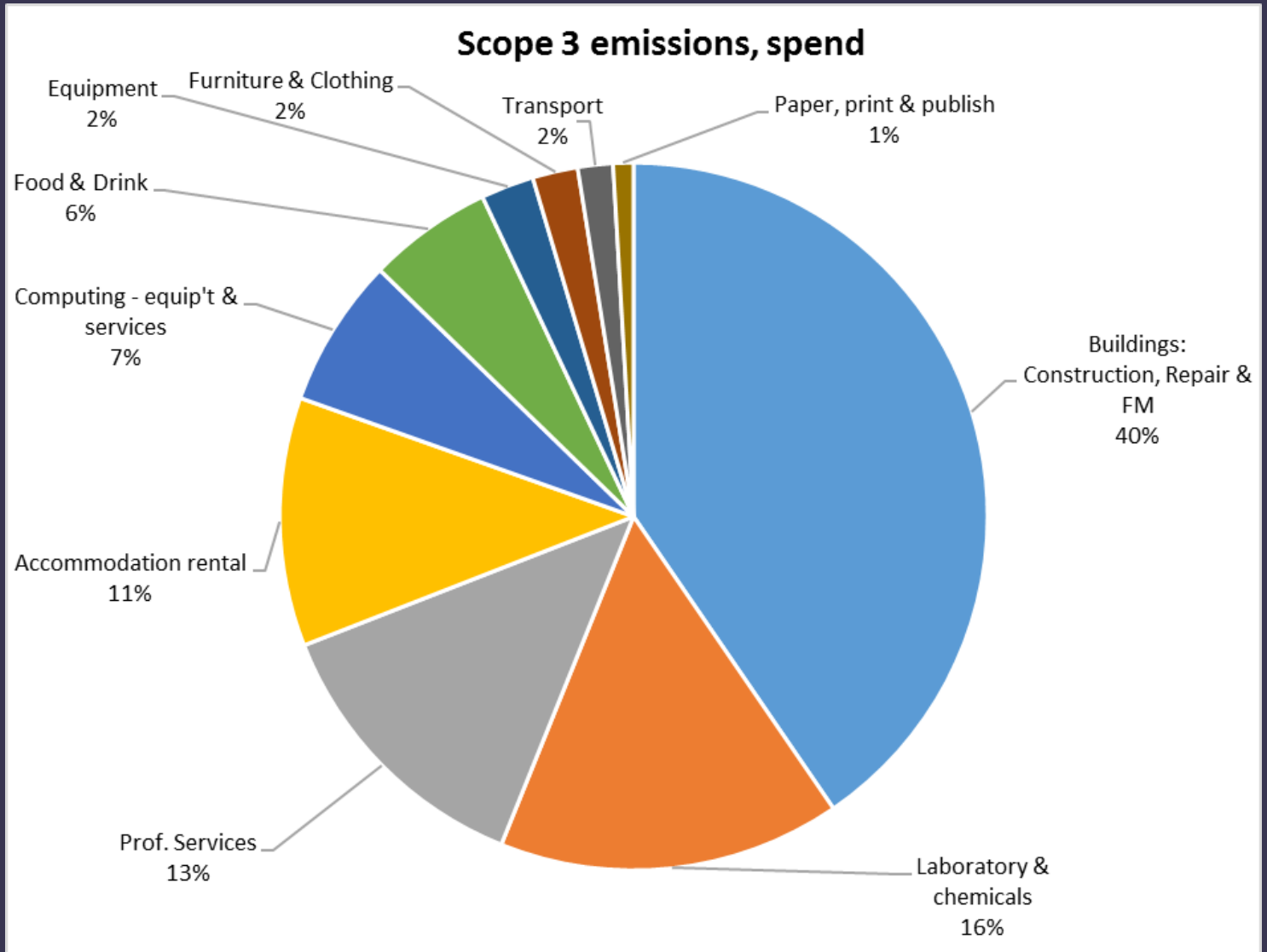
Example of the Scale of the Supply Chain for Carbon: Estates Organisation



Scope 3 Carbon: Supply Chain & Procurement



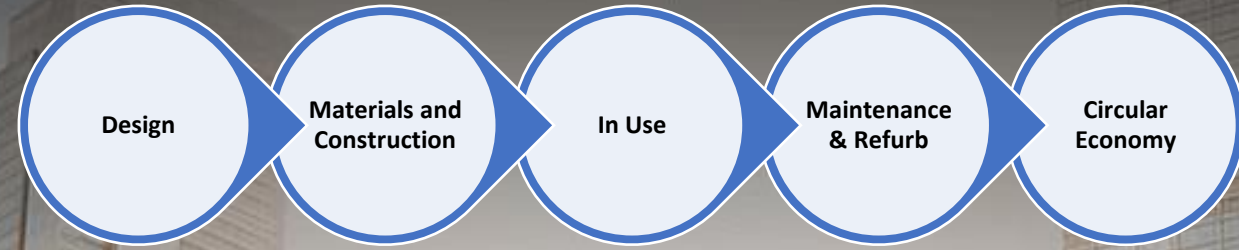
Example of the Scale of the Supply Chain for Carbon and using Procurement



- Action: to use procurement as the lever to understand, prioritise and reduce carbon emissions from the supply chain

Actions

- Take whole-life holistic approach that considers climate change mitigation and adaptation right from the outset starting with client req's & concept design
- Design for less material and circular economy
- Choose (alternative?) materials and technologies with lower embodied carbon – engage the supply chain!
- Integrate passive design features to mitigate energy use and adapt to change:
 - Orientation, including natural and demand-responsive daylight and ventilation systems
 - Thermal mass / sinks for temperature regulation
 - Insulation and heat recovery systems
- Use carbon-efficient construction plant & equipment
- Install onsite renewable energy generation: ground- and air source heatpumps, solar PV...



Actions

- Design for Adaptation to a changing climate
 - SUDS
 - Green roofs and walls
 - Greywater and rainwater harvesting capability
- Water and energy-efficient equipment :
 - HVAC
 - LED lighting
 - ICT incl. data and server rooms
 - White goods incl. catering: energy & water
 - Bathrooms: taps, showers, toilets
 - Good BMS with auto controls / PIRs
- Equipment and materials that can be maintained and upgraded for longer rather than replaced.
- Accessible transport links
- MEASURE, PRIORITISE and REPORT



Carbon & Energy
Hierarchy – an Approach

**REDUCE: use
less energy by
smart design &
behaviours**

**Be EFFICIENT with what you
do use (efficient equipment)**

**Switch to LOW CARBON / RENEWABLE
sources (input electricity and gas);**

**And only OFFSET what remains when all other
actions have been taken (*robust* offsetting)**



Our Challenge is to create
a Sustainable World...



- Engage & Collaborate
- Think Differently
- Design Holistically
- Work Innovatively

Thank you for your time

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