SUPPLY CHAIN SUSTAINABILITY SCHOOL

Housing and the environment:

The Future Homes Standard and beyond

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HBF Future Talent Conference, Wyboston Lakes, Bedfordshire

SUPPLY CHAIN SUSTAINABILITY SCHOOL

Hello

Ian Heptonstall

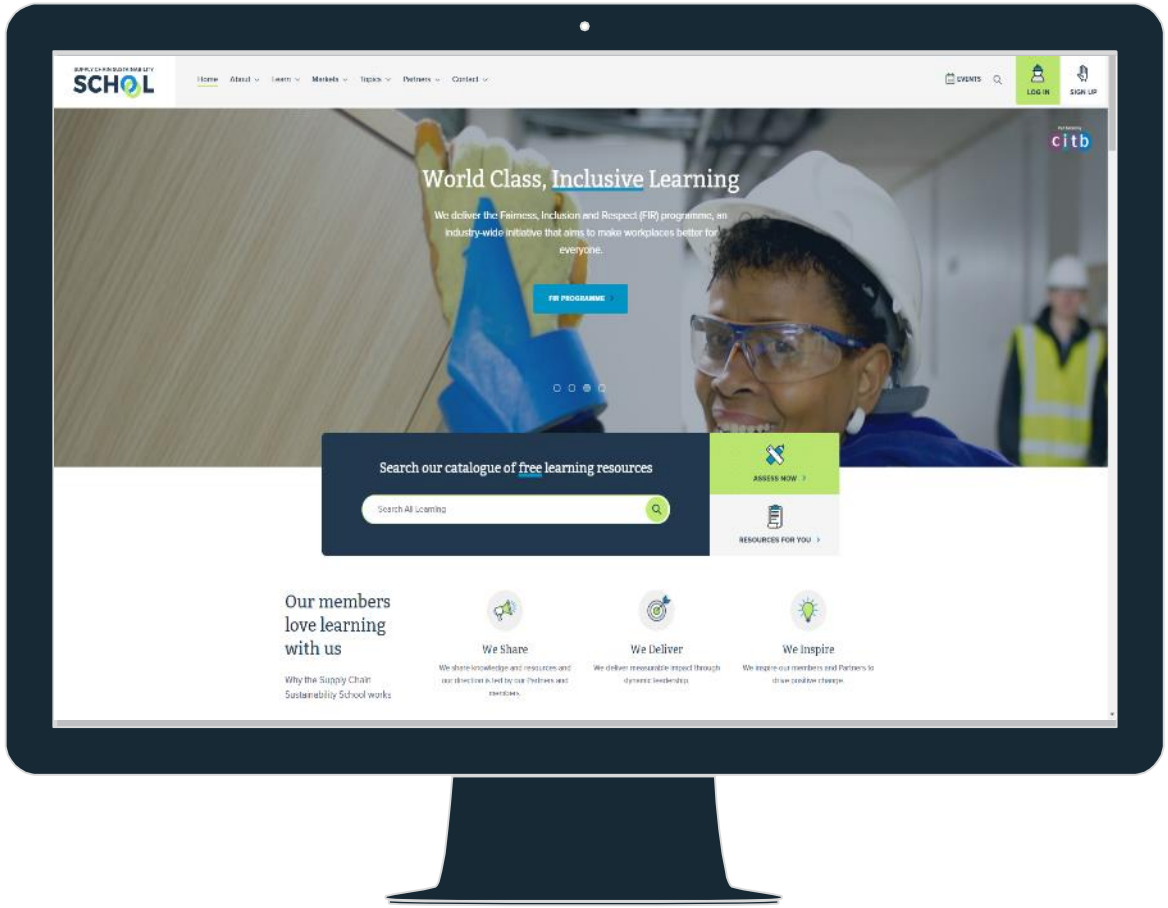
0207 697 1977

ian@supplychainschool.co.uk

supplychainschool.co.uk

Educating the supply chain

95 clients and contractors, 10,000 suppliers, 33,000 users



Five key topic areas to help you

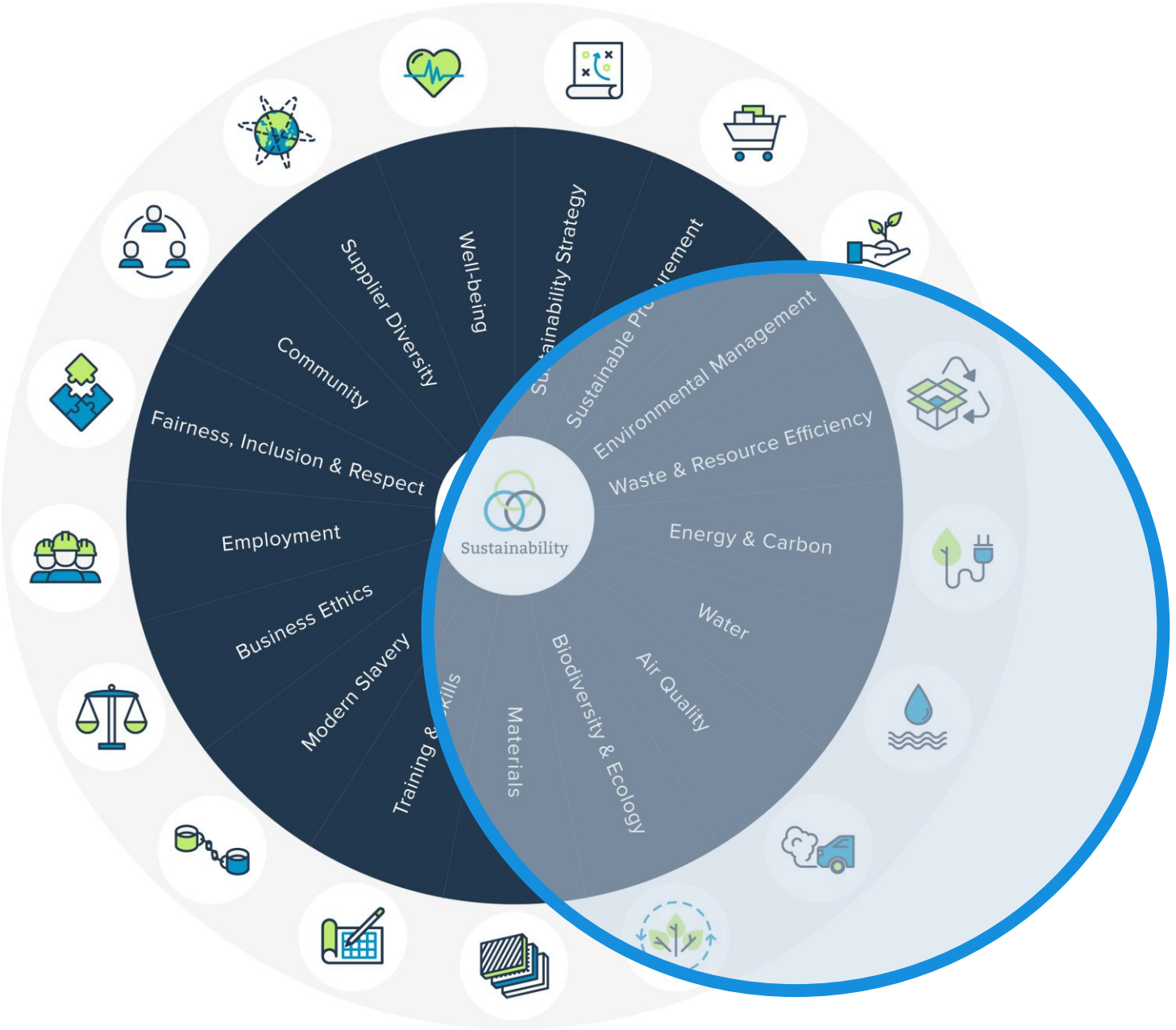
Who is your environmental superhero?

Who is your environmental superhero?

Housing and the environment

1. What are the relevant environmental issues for home building?

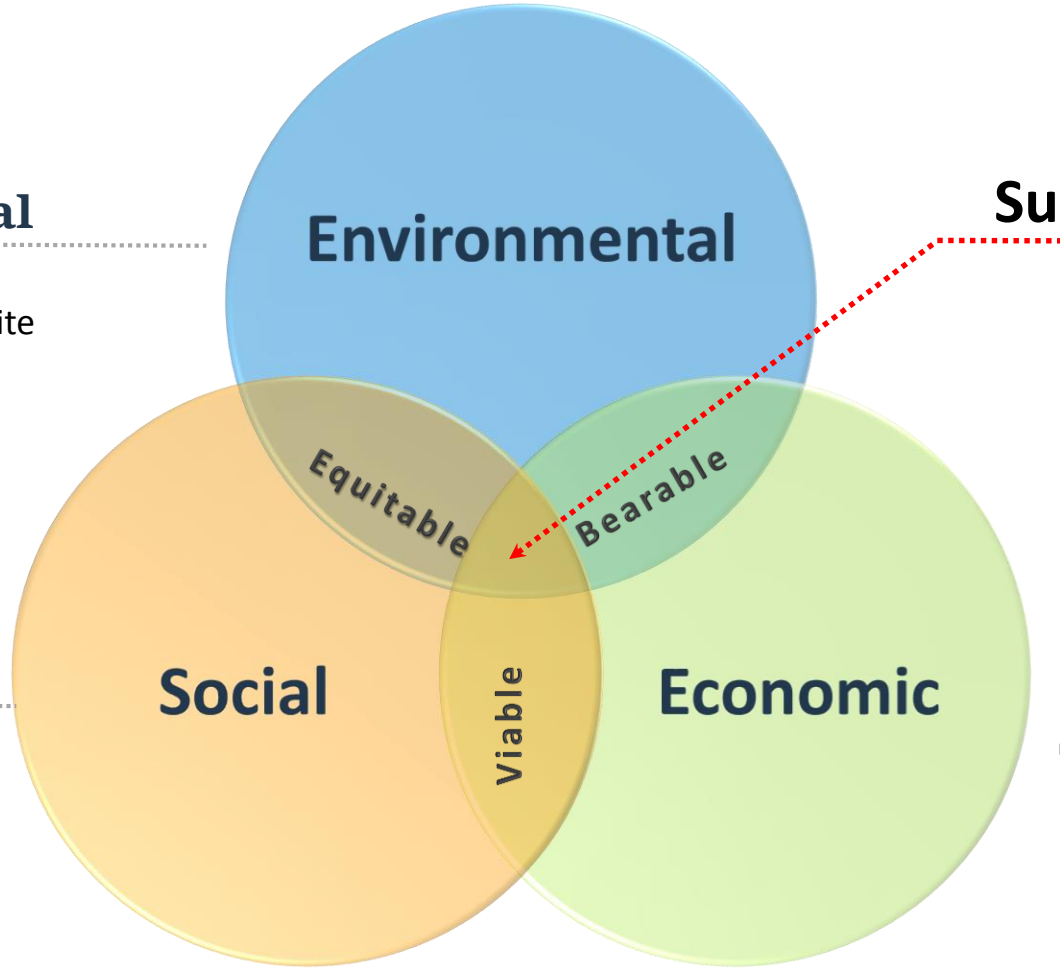
17 Sustainability Topics



Housing and the environment:

Environmental

- Issues such as; Climate change, water, use of finite resources, waste, biodiversity



Social

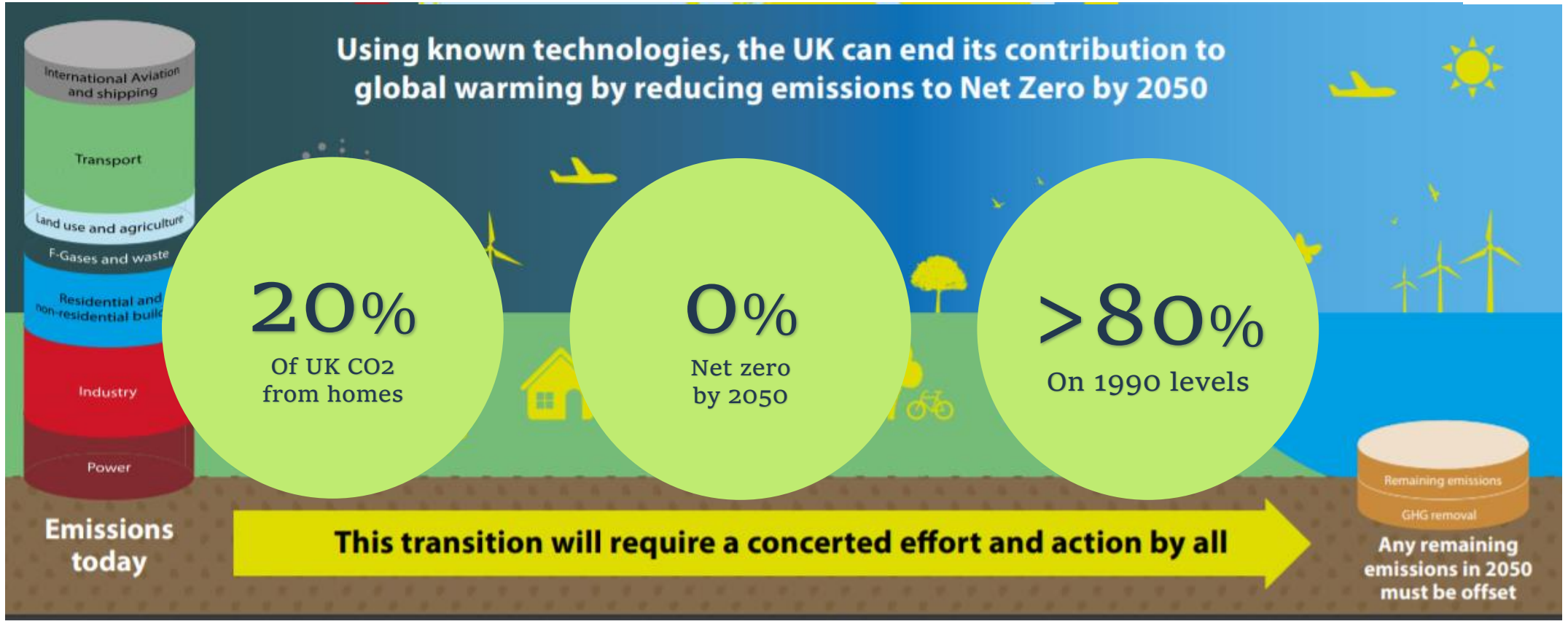
- Issues such as; business ethics, labour standards, equal opportunities, social inclusion

Economic

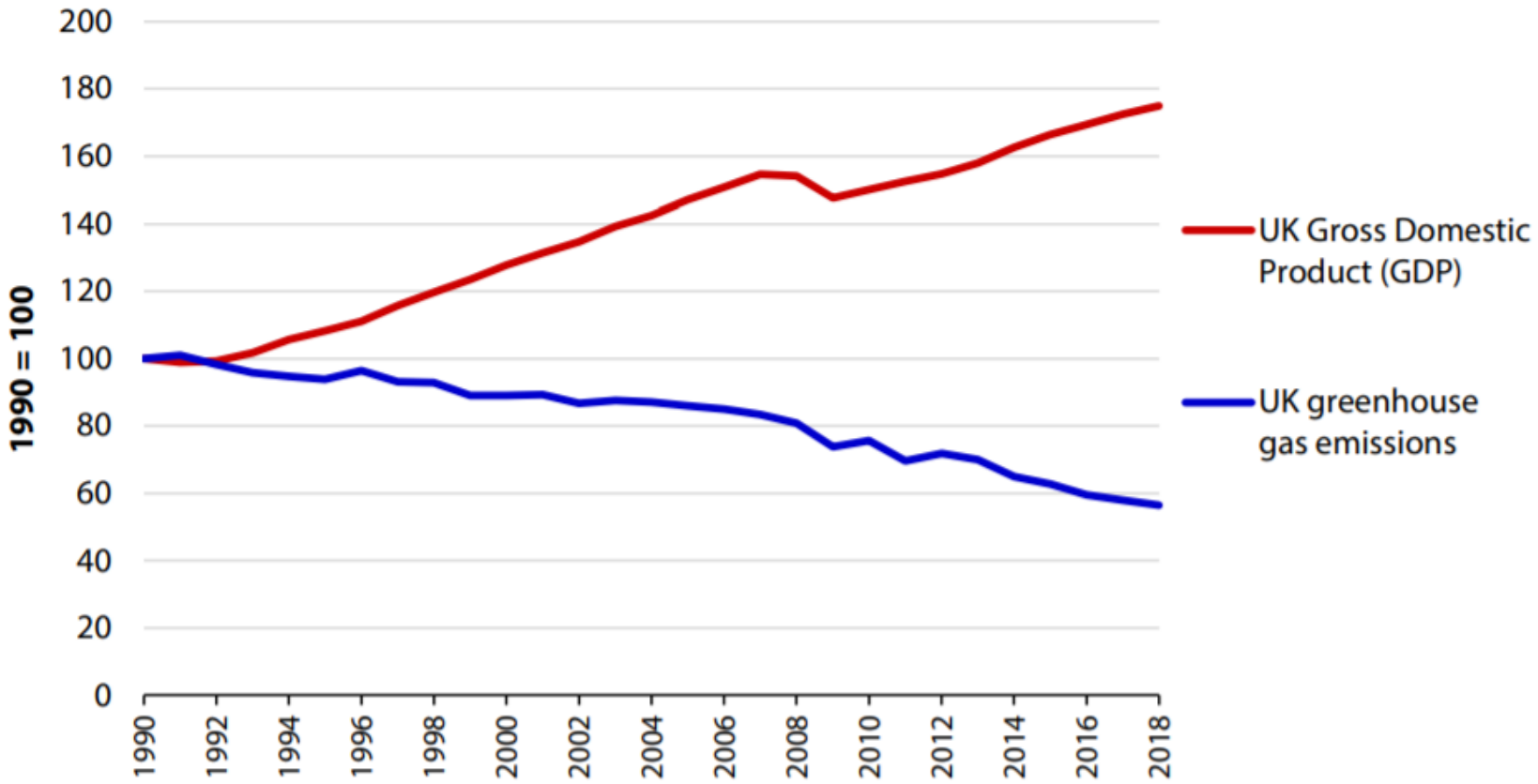
- Issues such as; profitable business, local economy, fair payment


20% of CO_2 emissions from homes
15
7

Net Zero the UK's contribution to stopping global warming



1. Against our base line of 1990 emissions where are we now?
2. How has housebuilding contributed?



Falling emissions in a growing economy

UK action to address climate change can have an international impact

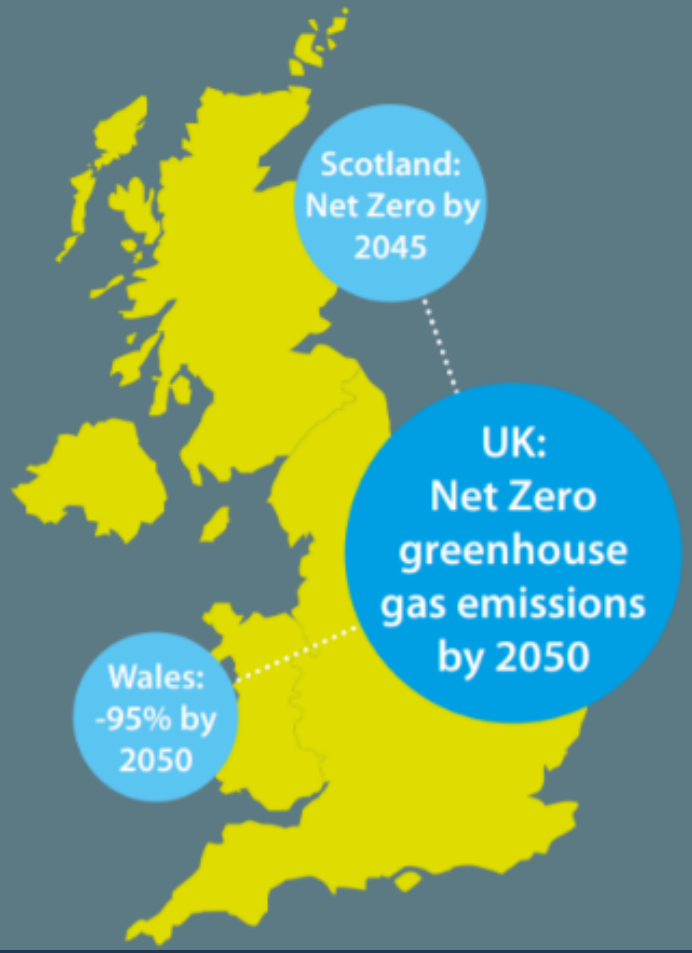
The UK can and should act as a leader in the global response to climate change - UK emissions contributed to causing it, and its leadership can have an international impact.

The UK has been a leader on climate change action. The UK has the opportunity to continue its leadership and join other countries already pursuing net-zero emissions targets.

The UK has committed to act by signing the Paris Agreement. This provides many options for countries to collaborate to reduce their emissions and prepare for the impacts of climate change.

Annual costs of achieving net-zero emissions are between 1-2% of GDP in 2050, comparable to those estimated in 2008 for achieving an 80% target.

- Innovation has driven down the costs of key technologies, such as offshore wind & battery storage.
- Some costs to consumers, such as increased heating bills, can be offset by cheaper transport costs (thanks to a widespread shift to electric vehicles) and cheaper electricity bills (thanks to low cost renewable electricity).



There are many benefits of phasing out harmful emissions

For the economy

New green industries with new jobs and export opportunities for the UK.

For the individual

Quieter streets, cleaner air, less congestion.

Smarter cities and more comfortable homes.

Healthier lifestyles, with more active travel and healthier diets.

For the country

More biodiversity, cleaner water, more green space to enjoy.

Reduced global warming, avoiding climate damages like flooding.


Future homes now

Future homes 2035

Imagine a home built in 2035

1. What will be its environmental performance?
2. What are the technologies we need to achieve this?

Future homes 2025

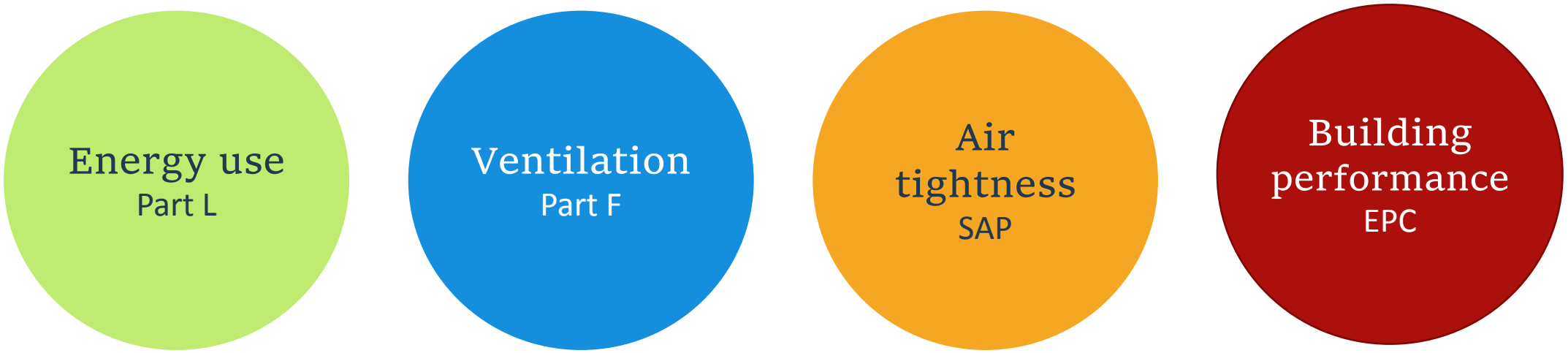
Ministry of Housing, Communities & Local Government

The Future Homes Standard

2019 Consultation on changes to Part L (conservation of fuel and power) and Part F (ventilation) of the Building Regulations for new dwellings

This consultation relates to Building Regulations for England only.

4 elements to the consultation



Proposed changes to Part L

1. **Changing the whole building minimum energy performance target, which involves:**
   i. introducing primary energy as the principal performance metric, and continuing to use a CO2 as a secondary metric
   ii. removing the fabric energy efficiency metric
   iii. incorporating the latest evidence on primary energy and CO2 emissions of fuels, and removing fuel factors in the calculation for high-carbon fossil fuels and electricity
   iv. introducing a householder affordability standard for new dwellings, so that new homes are affordable to heat

2. **Taking a significant interim step towards the Future Homes Standard through:**
   i. uplifting the minimum standard of whole building energy performance
   ii. improving the minimum insulation standards
   iii. improving the minimum efficiencies of fixed building services.

3. **Future-proofing new dwellings to be ready for low carbon heating systems**

4. **Improving compliance with Part L in order to improve as-built performance**

Part L 2020 – what the changes mean

OPTION 1:

20% reduction in carbon emissions delivered by very high fabric standards

OPTION 2:

31% reduction in carbon emissions delivered by moderate improvements to fabric and the installation of solar PV or similar.

IMPACT OF CAPEX OF THESE 2 OPTIONS

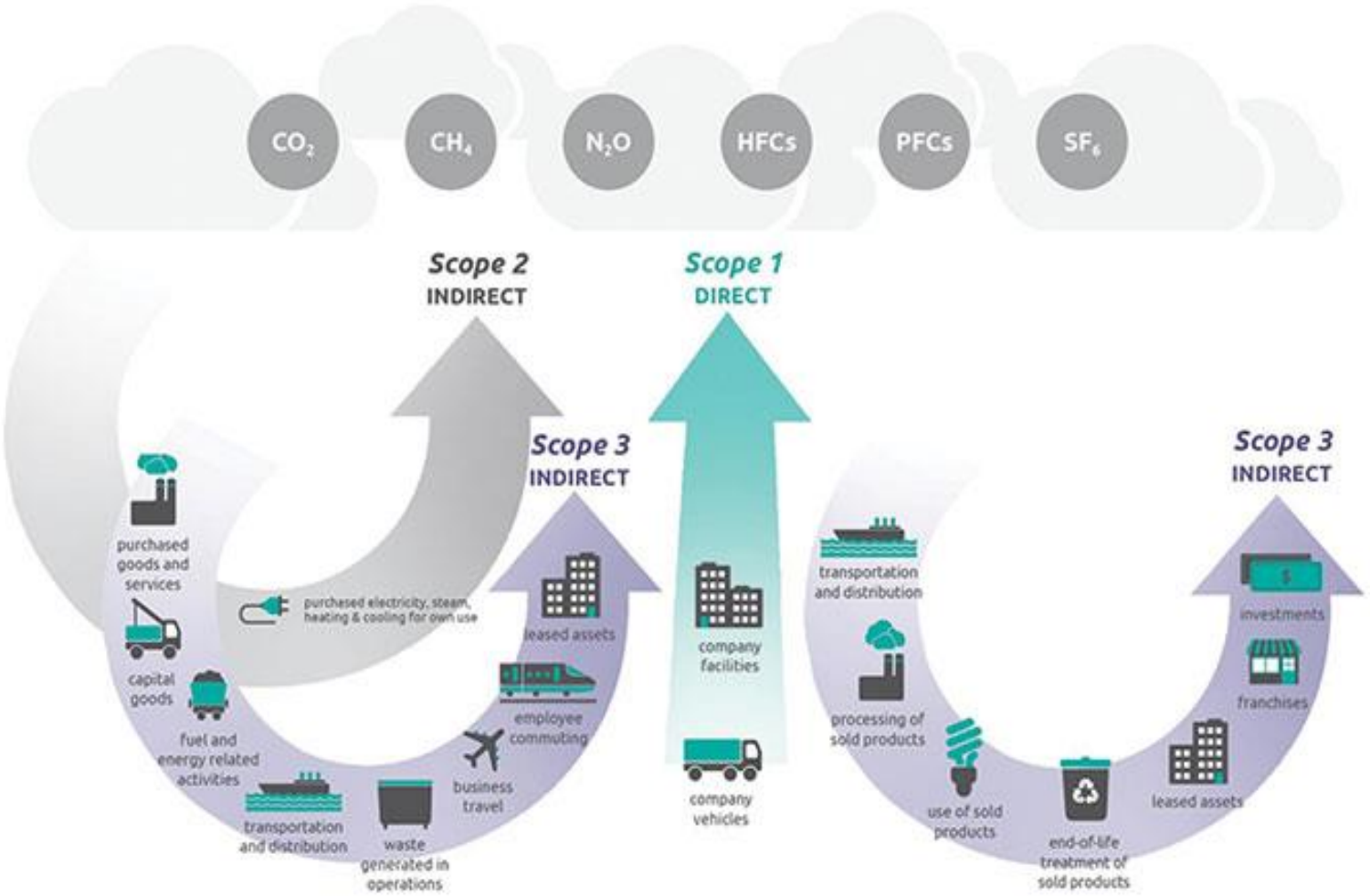
Part L 2013 compliant home are as follows:

	Part L 2020 OPTION 1	Part L 2020 OPTION 2
Detached house	£4,201	£6,524
Semi-detached house	£2,557	£4,847
Mid-terraced house	£2,195	£4,737
Apartment	£2,070	£2,256
Average (based on build mix)	£2,866	£4,615

Thanks to: Hoare Lea November 2019

Do we need to look more widely at carbon?

Home building: carbon emissions



Construction

"When the amount of carbon emissions associated with a building's production and construction stages up to practical completion is zero or negative, through the use of offsets or the net export of on-site renewable energy."

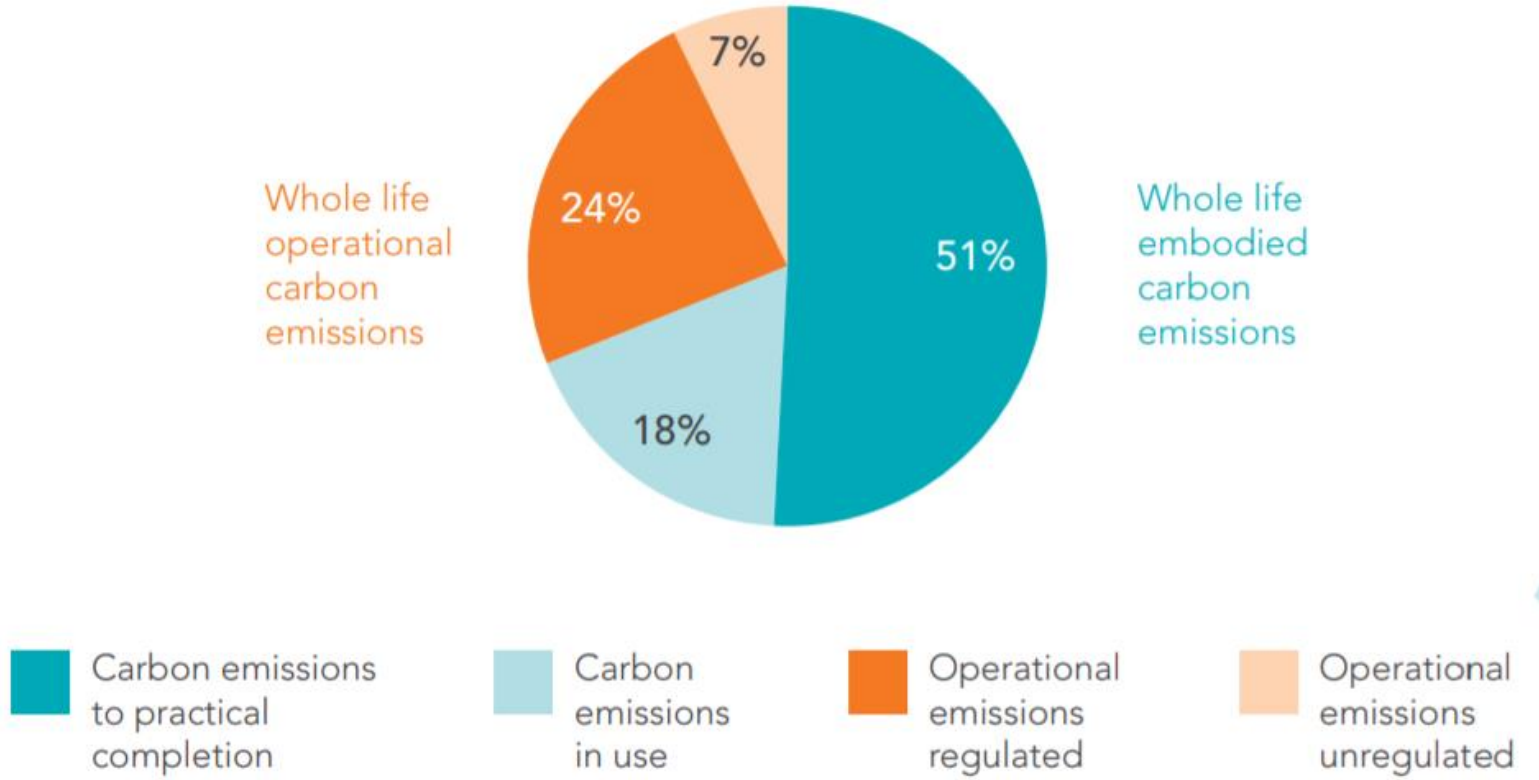
Operation

"When the amount of carbon emissions associated with the building's operational energy on an annual basis is zero or negative. A net zero carbon building is highly energy efficient and powered from on-site and/or off-site renewable energy sources, with any remaining carbon balance offset."

Carbon in Home Building

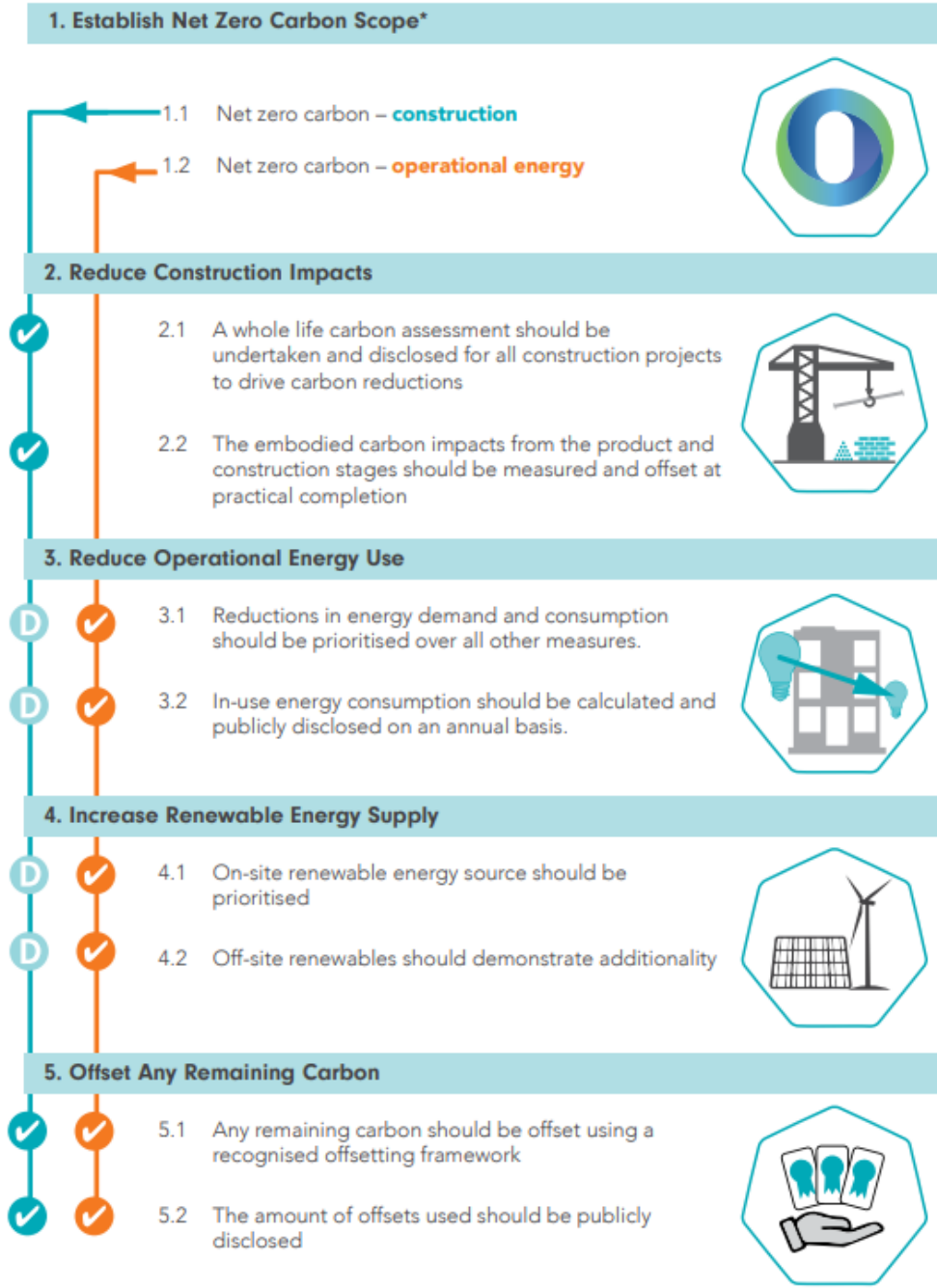
Residential

Residential block with basic internal fit-out; Oxford, UK



Thanks to: Net Zero Buildings: A Framework Definition UKGBC 2019

Steps to Achieving a Net Zero Carbon Home



Thanks to: Net Zero Buildings: A Framework Definition UKGBC 2019

Change

Your contribution

Our mission

“To be the world class collaboration to enable a more sustainable built environment”

95 Partners leading our work

SUPPLY CHAIN SUSTAINABILITY SCHOOL

Sustainability impact 2019

34%
reduced carbon emissions

58%
agree the School helped achieve this

41%
reduced waste

65%
agree the School helped achieve this

71%
increased modern slavery understanding

86%
agree the School helped achieve this

64%
increased understanding of FIR

87%
agree the School helped achieve this

45%
increased community engagement

72% agree the School helped achieve this

50%
increased understanding of responsible sourcing

77% agree the School helped achieve this

36%
increased apprentice numbers

42% agree the School helped achieve this

20%
improved air quality

69% agree the School helped achieve this

16%
reduced water consumption

53% agree the School helped achieve this

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Thank you

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