



UNIVERSITY OF
DERBY

LOW
CARBON
**BUSINESS
NETWORK**

DE-CARBONISE

NEUPC Carbon Reduction Workshop.

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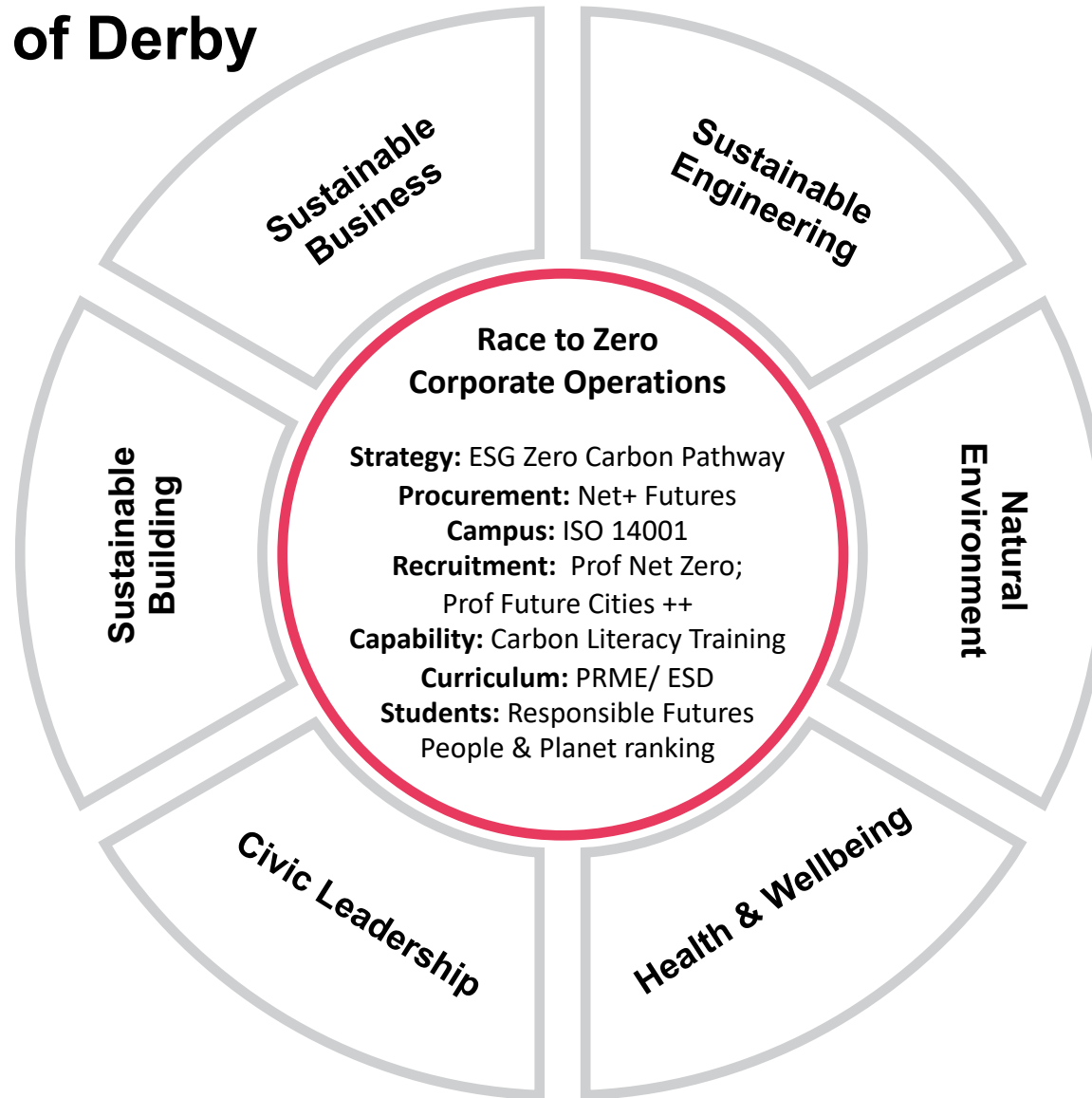
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Carbon Reduction from an SME perspective

- **Derby Uni Net-Zero Pathway – Carbon literacy for all**
- **SMEs and the ‘Race to Zero’**
- **Enablers and barriers to progress**
- **SME maturity in the transition to net-zero**

University of Derby Net-Zero Pathways



**Applied research with
global reach**

**Place-based innovation
with real impact**

**Multi-disciplinary
knowledge exchange**

**Partnering with the
cutting edge**

**Building pro-E capacity,
skills, capability**

Carbon Literacy for Universities (CLU)

Carbon Literacy Project

Training developed by:
Manchester Metropolitan University


With sector roll-out funded by:
Department for Business, Energy & Industrial Strategy

GMCA GREATER MANCHESTER COMBINED AUTHORITY

Course ID: CC000171

Net Zero - Global Emissions Target

Insert Logo



To have a reasonable chance of achieving this, global emissions would need to reach net zero by...



Climate equity and fairness

Insert Logo




Let's play a game to highlight key messages from the Carbon Map

Meeting student expectations & needs

Insert Logo




Carbon Literacy Courses for Universities

Free Carbon Literacy Project toolkits

Nottingham Trent and Manchester Met Universities have produced toolkits that have been designed to be accessible and engaging for all university members, and is equally suitable for academic or professional services staff, and for undergraduate and postgraduate students from any discipline.

There are also guides to delivering Carbon Literacy in your institution and adapting the Module content.

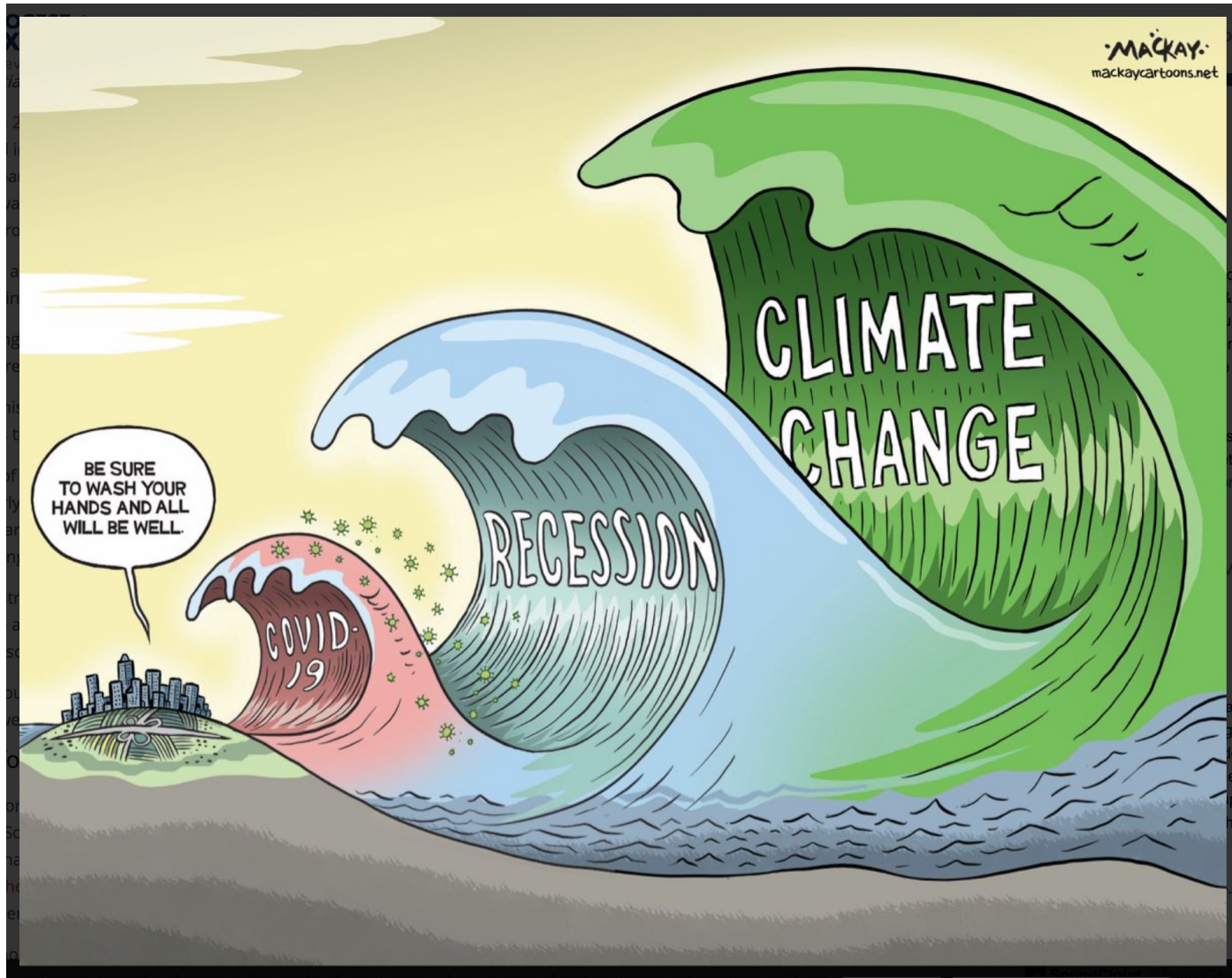
Manchester Metropolitan toolkit - Content

The course consists of 5 modules, each of which can be delivered either online or face-to-face: The Modules are:

- The Science of Climate Change
- Exploring Carbon Footprints
- A Zero Carbon World
- Our Wider Influence
- Taking Action

See Carbon Literacy Project

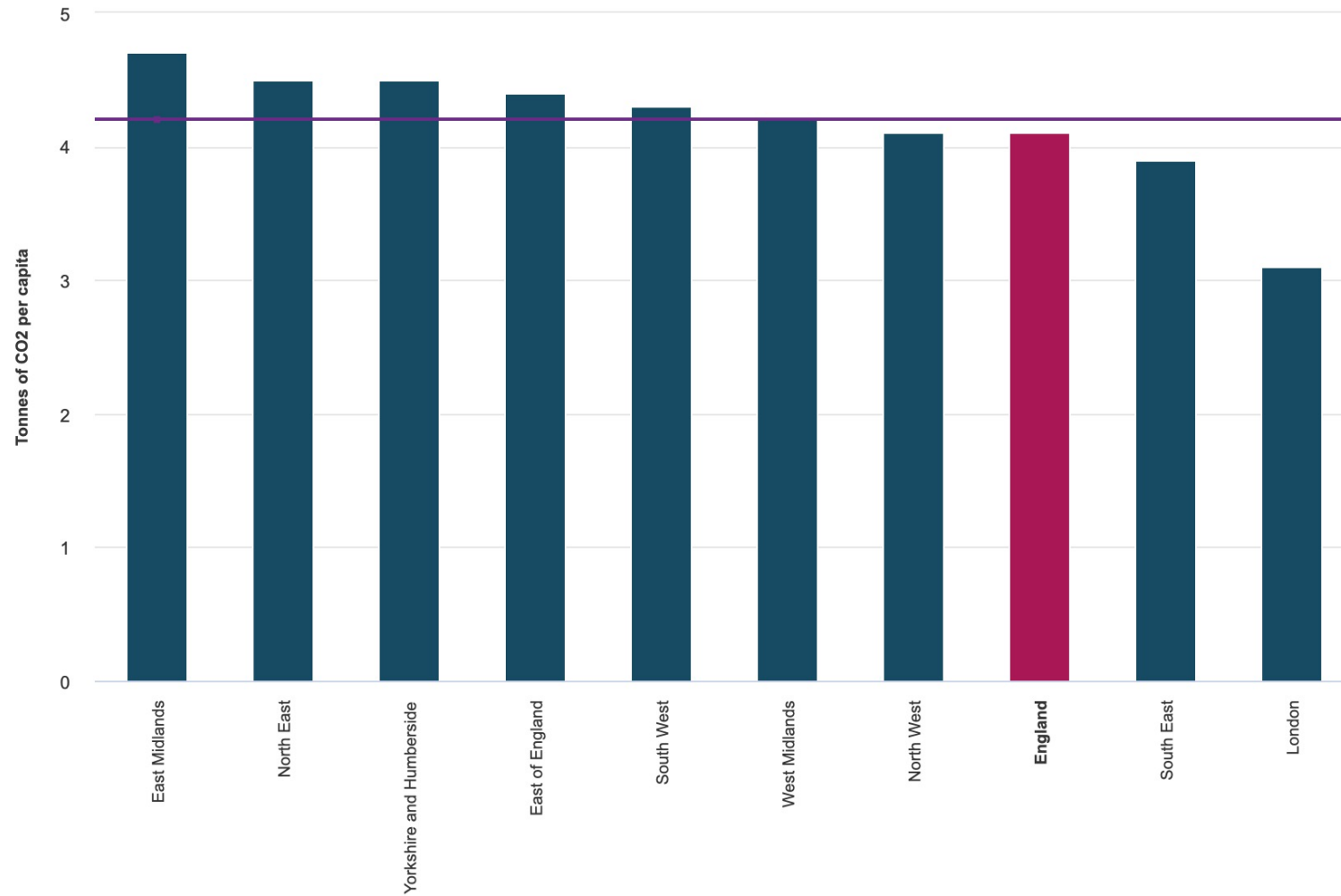
<https://carbonliteracy.com/toolkits/universities-colleges/>





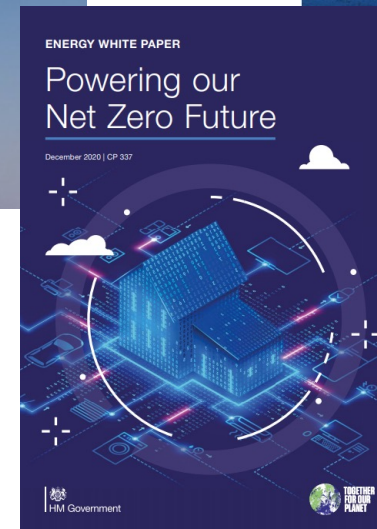


CO2 emissions estimates - Per capita emissions (LA Influence) (2019) for England & All English regions



- CO2 emissions - Per capita (LA Influence) 2019
- Mean for All English regions: CO2 emissions - Per capita (LA Influence) 2019
- England (Lead area)

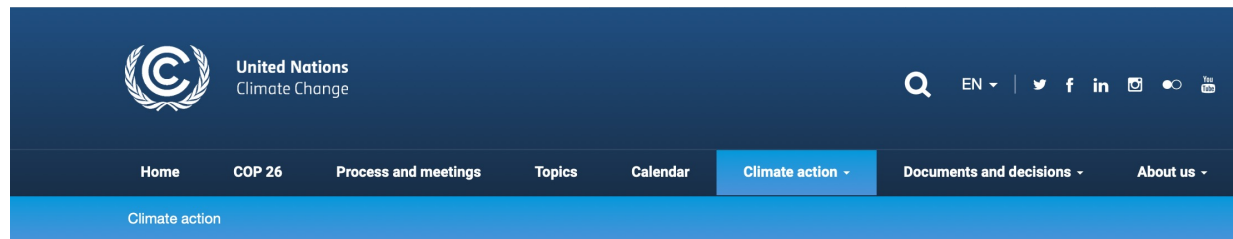
Public Policy: Carbon Neutrality by 2050



What is Net-Zero?

A working definition of net zero:

To reduce company wide and value-chain greenhouse gas (GHG) emissions in line with limiting warming to well below 2°C and ideally 1.5°C, and to balance any remaining emissions by enhancing carbon sinks which remove carbon dioxide from the atmosphere.



Race To Zero Campaign



UN Global Campaign:

“..for a healthy, resilient, zero carbon recovery that prevents future threats, creates decent jobs, and unlocks inclusive, sustainable growth”.

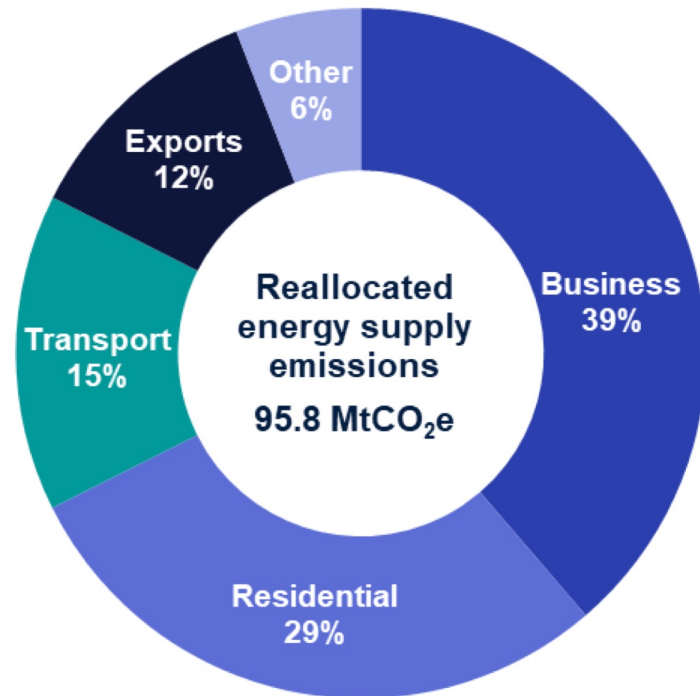
- **733 cities**
- **31 regions**
- **3000+ businesses**
- **173 major investors**
- **622 Universities**

Re-imagining the future



The role of business in the journey to net-zero

BEIS (2021) Breakdown of greenhouse gas emissions by end user



Per cent

60

50

40

30

20

10

0

SME share of UK
business emissions

SME share of total
UK emissions

- Based on employee count
- Based on gross value added (GVA)
- Based on turnover

Estimated share of UK greenhouse gas emission from SMEs

British Business Bank (2021) Smaller businesses and the transition to net-zero p.15

55 - 90+% of emissions lie in the supply chain

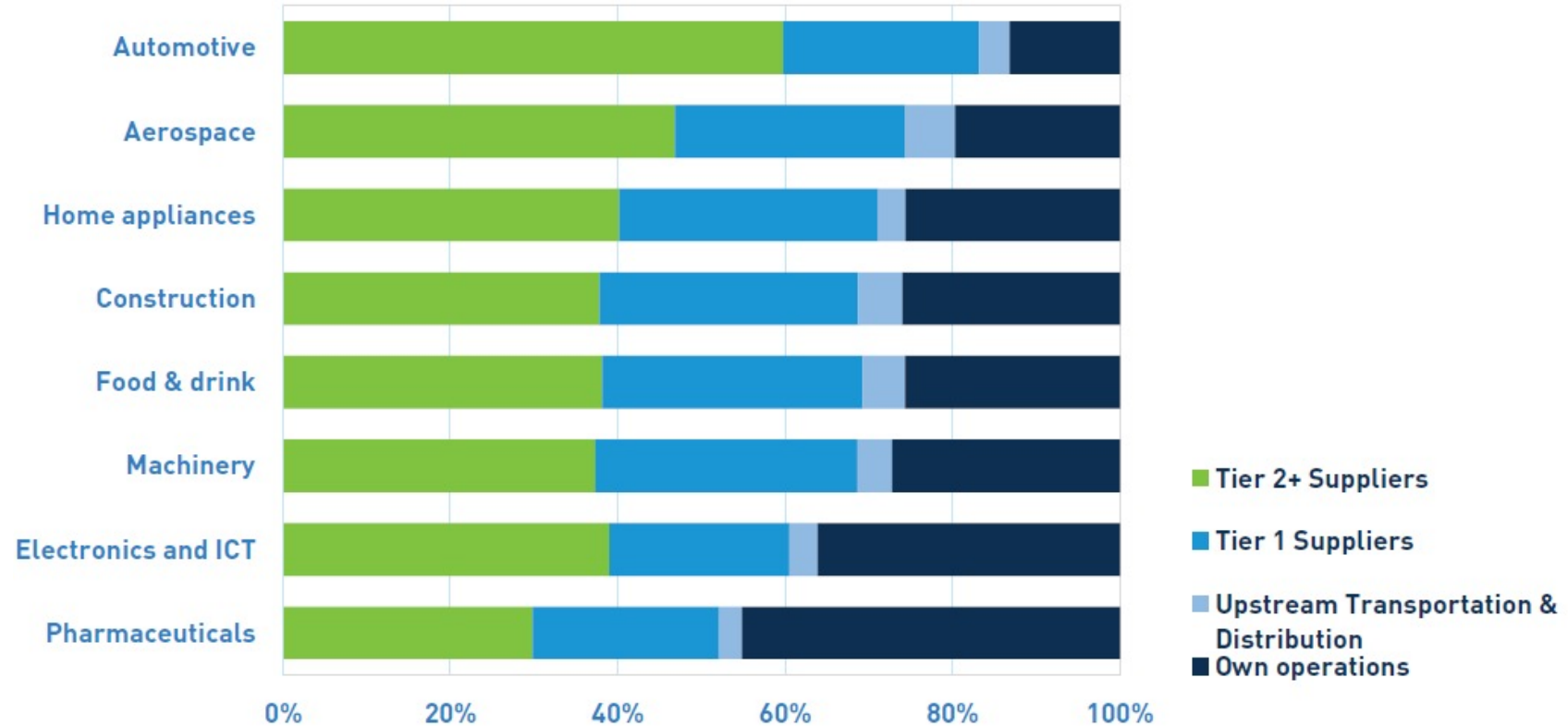
JCB VALUE CHAIN ASSESSMENT

% of Overall Carbon Produced

- Scope 1** 0.2%
Fuel for heat, cars & diesel generators
- Scope 2** 0.3%
Electricity from the grid
- Scope 3** 99.5%
Items listed to the right



Please Note all emissions are based of the assessment year (2018)



How engaged are supply chain managers?

Two years on from the UK's net-zero commitment, a CIPS survey of Supply Chain Managers found:

- 41%** do not believe they will be able to deliver against the net-zero target
- 48%** do not believe their organisation is transparent enough with consumers, clients, and regulators about sustainability
- 18%** said they were completely unaware of any corporate sustainability strategy at all
- 19%** were not involved at all in their organisation's sustainability strategy
- 43%** said they were only lightly involved.

Chartered Institute of Procurement & Supply (CIPS) Survey of 318 supply chain managers (September 2021)

SMEs already on the Net-Zero Pathway

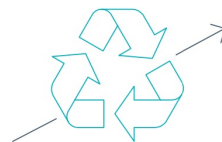
56%
believe the planet is facing
a **climate crisis** but...



...only **36%**
of small businesses have a plan to
combat climate change



67%
have taken steps to
address energy usage



64%
have **increased**
recycling



18%
have invested
in **microgeneration**

Shaping the way forward



54%
say **grants** or **low interest loans**
would encourage them to
become more **energy efficient**



9%
will switch some or all of
their fleet to **zero emission**
vehicles by 2030



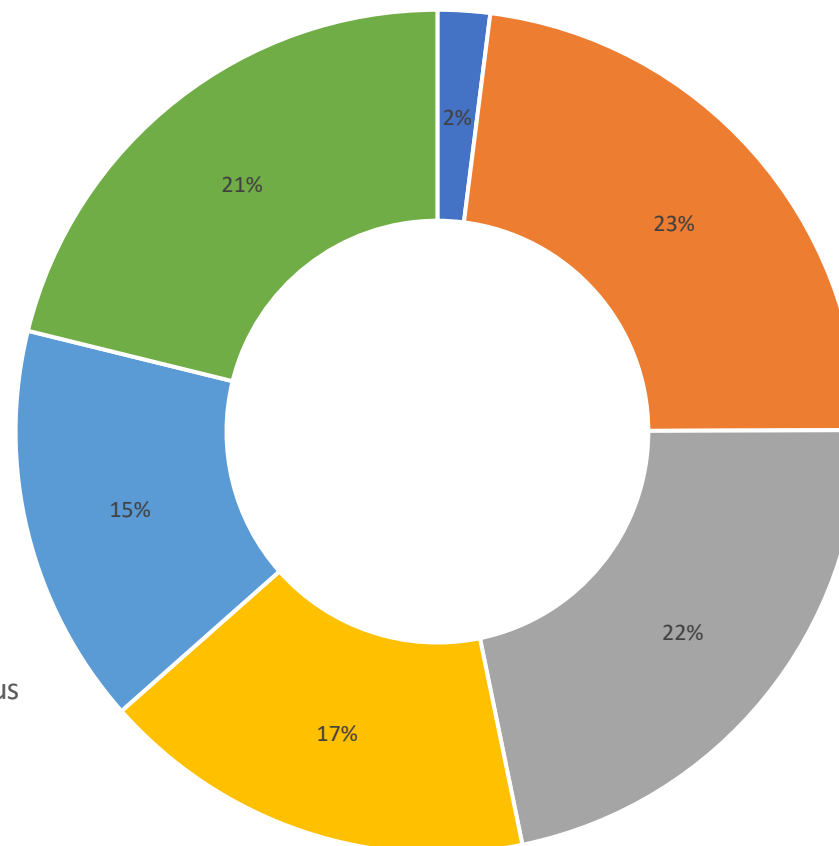
28%
say a **business rates discount**
would encourage them to
improve energy efficiency

Has your company considered opportunities for clean growth?

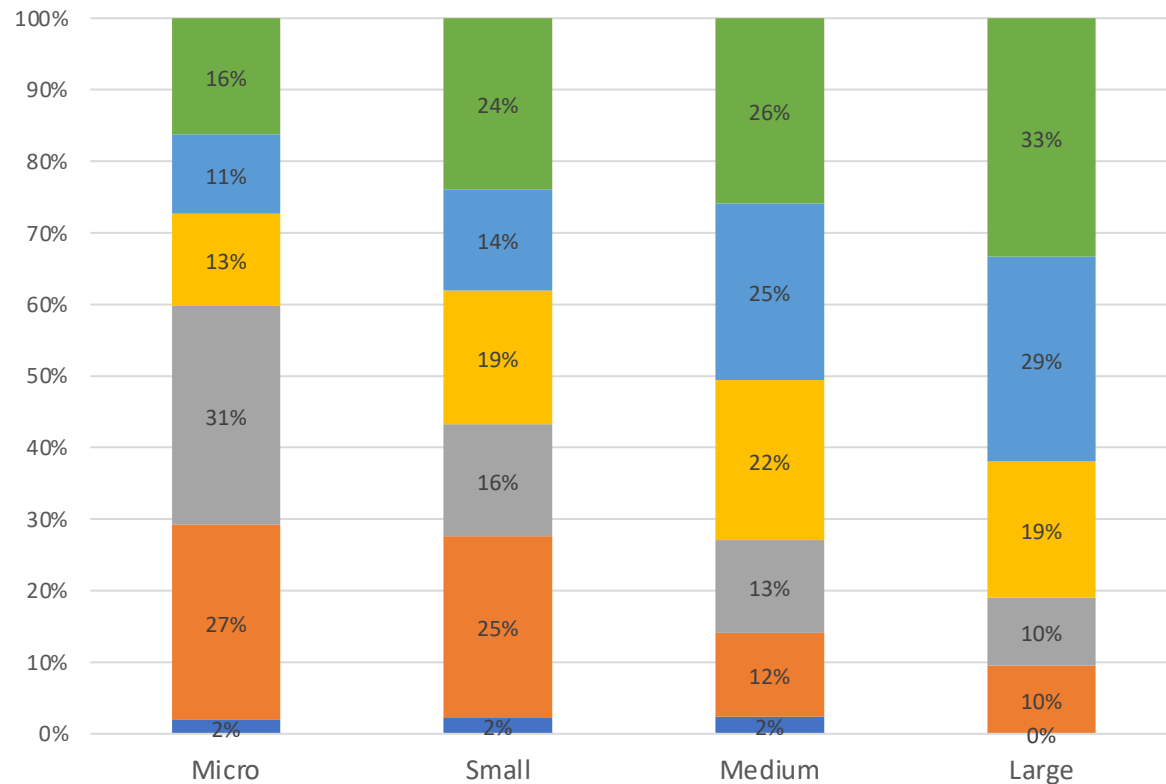
For 36% of companies clean growth is already wholly or partly integrated into their business growth strategies; up from 29% in 2020.

But 45% of firms have not considered or discounted clean growth.

- No response
- We have not considered this
- We have considered this but do not think there are opportunities for us
- We have considered this and want to start developing plans
- We have considered this and are starting to develop activity
- This is already a part of our growth strategies



Clean Growth strategies by business size

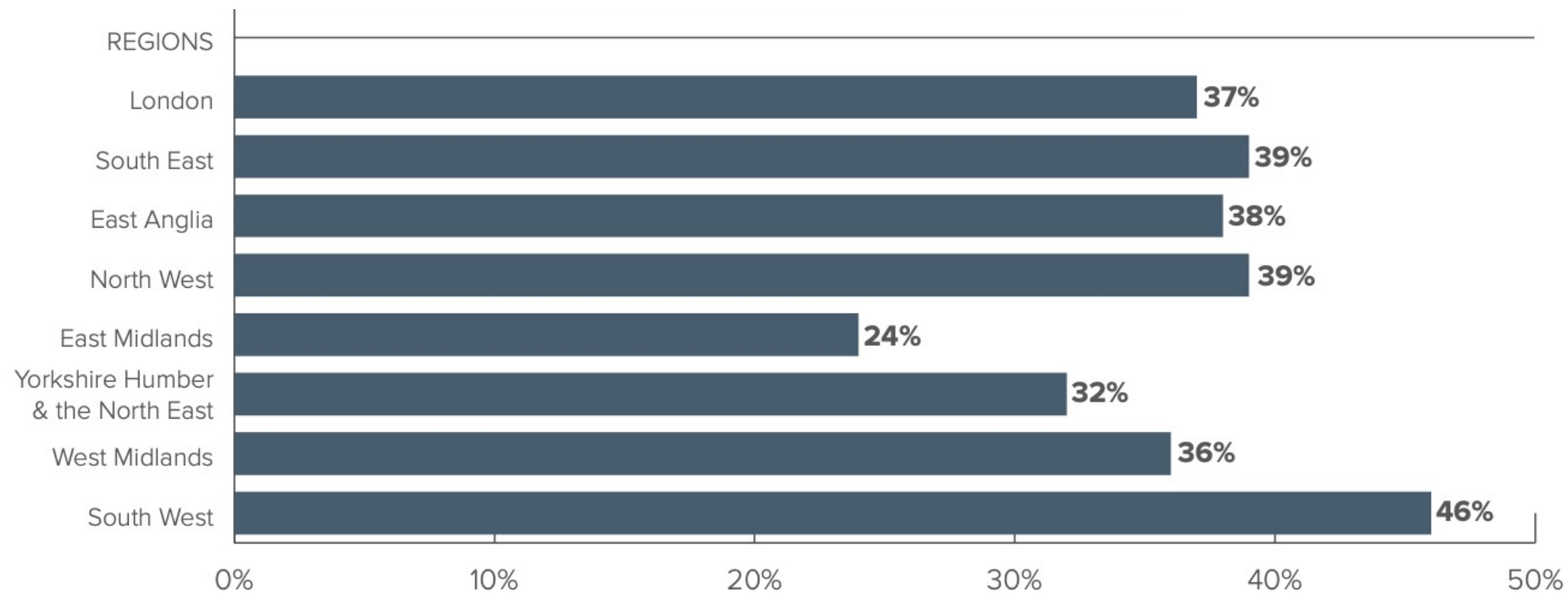


- This is already a part of our growth strategies
- We have considered this and are starting to develop activity
- We have considered this and want to start developing plans
- We have considered this but do not think there are opportunities for us
- We have not considered this
- No response

Larger companies continue to be more advanced than smaller firms in integrating clean growth in their business strategies

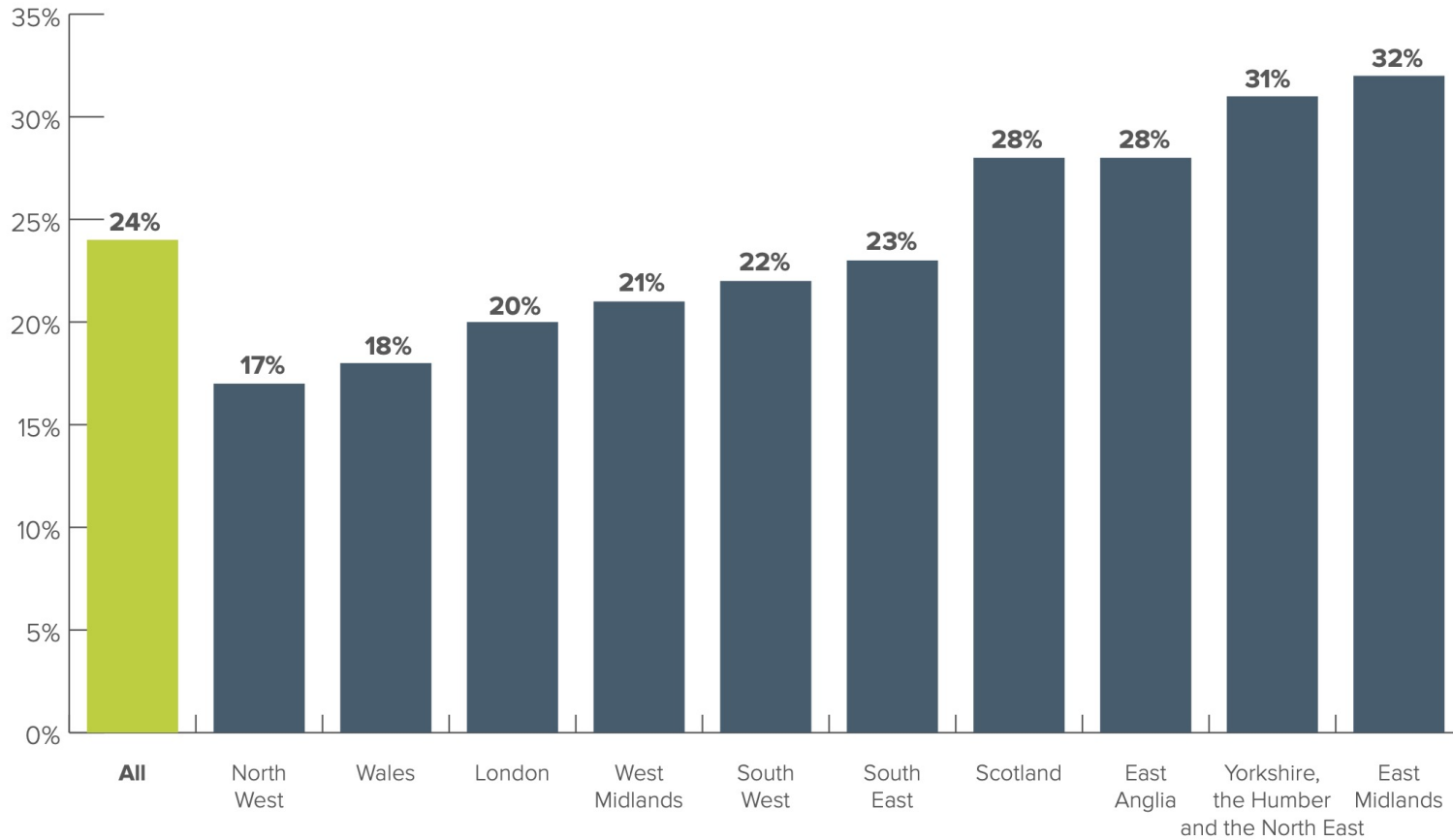
Source: Pro-environmental business and clean growth trends for the East Midlands 2021 (Gallotta et al., 2021)

SME's appetite for net-zero transformation



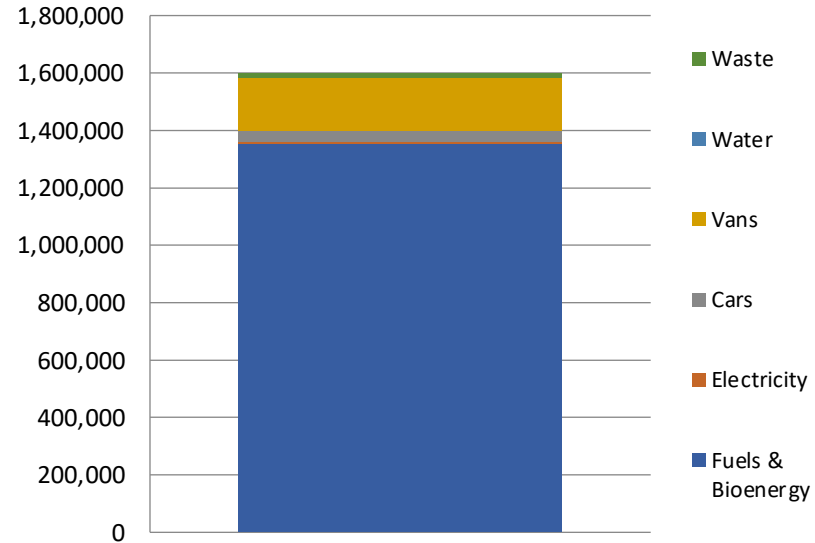
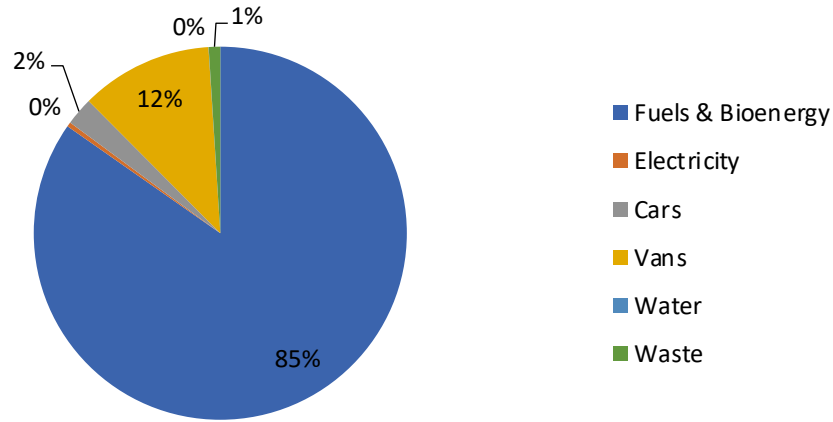
Proportion of small businesses that say they want to do more to achieve net zero

SMEs in our region want more help

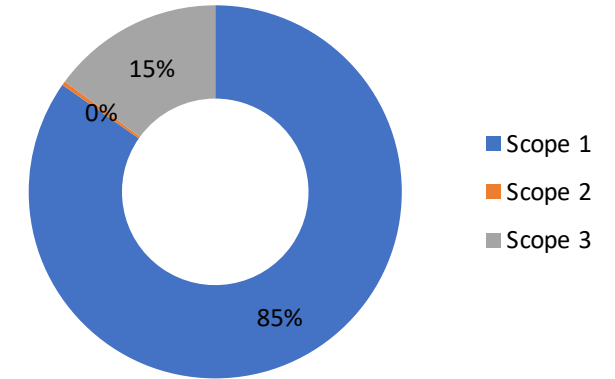


Proportion of small businesses that say more information from their local authority or LEP would encourage their business to be more energy efficient

Carbon Emissions Categories



Emissions by scope



Total annual Carbon Emissions

1,598.1 tonnes of CO₂e.

Future Fit Progress Indicators

BE06 Operations emit no greenhouse gasses

Key Actions

- Transition to Green D + HVO fuel
- Transition to Sustainable Transport

Carbon Reduction Potential

1,336.44 tonnes of CO₂

Barriers and Enablers for SMEs

<i>Primary focus</i>	<i>Common barriers</i>	<i>Common drivers</i>
Internal / intra-organisational -level	<ul style="list-style-type: none"> • Lack of awareness • Lack of specialist knowledge / technical skills • Limitations in absorptive capacity / organisational learning • Competing priorities / lack of time • Resource constraints • Access to capital • Short term tenancy agreements • Lack of strategic alignment 	<ul style="list-style-type: none"> • Cost savings • Risk mitigation • Pro-environmental values • Reputation and image • Staff morale
External / inter-organisational level	<ul style="list-style-type: none"> • Lack of trusted brokers / intermediaries • Information deficit regarding opportunities • Principal-agent / split-incentive problem 	<ul style="list-style-type: none"> • Compliance • Competitive advantage • New market opportunities • Corporate reputation • Public subsidy

Blundel and Hampton (2021) How can SMEs contribute to net-zero?: An evidence review (p.4)

Pressure to transform is mounting

66%

The UK needs to cut its emissions by around two thirds this decade

70%

7 in 10 British businesses plan to introduce net zero emissions goals in the near future

75%

Three quarters of the world's biggest companies expect to deselect suppliers based on environmental performance

Race to Zero - What can SMEs do?

“Every business must now ask not only ‘how can we reduce our emissions as quickly as possible,’ but also ‘how can we use our full resources, scale, influence, the passion of our employees, and our broader community to help build a world where all living things can thrive?’”

– Jamie Alexander, Drawdown Labs

Broad Definition of Pro-environmental Business

A pro-environmental business is one that “explicitly focus their efforts on solving environmental challenges by reducing negative environmental impacts, increasing resilience against environmental impacts, or by providing a more efficient and responsible use of natural resources. Through their products and services, they contribute to the protection of the environment, the climate, biodiversity and natural ecosystems”.

GIZ 2015 p.8

Proposed SDG Business Benchmarks

100% of employees across the organization earn a living wage

SDG IMPACT

Primary

Additional

SCOPE

Operations

Products & Services

Value Chain



Gender balance across all levels of management



Net-positive water impact in water-stressed basins



Zero waste to landfill and incineration



Zero discharge of hazardous pollutants and chemicals



100% sustainable material inputs that are renewable, recyclable or reusable



Science-based emissions reduction in line with a 1.5°C pathway



100% resource recovery, with all materials and products recovered and recycled or reused at end of use



Land degradation neutrality including zero deforestation



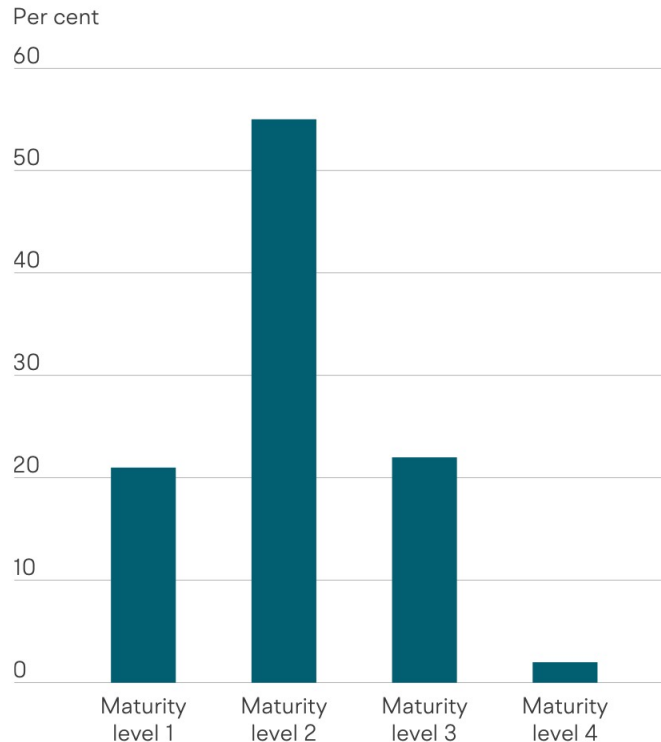
Zero incidences of bribery



SME maturity in transition to net-zero

Share of SMEs at each transition maturity level

Source: In-house analysis of the British Business Bank's net zero SME survey



Components of the net zero transition journey framework

Source: British Business Bank

1. Awareness and engagement

- Does the business demonstrate awareness of the carbon agenda?
- Does the business consider reducing carbon emissions a priority?
- Has the business set targets to reduce its carbon emissions in the future?

2. Knowledge and capabilities

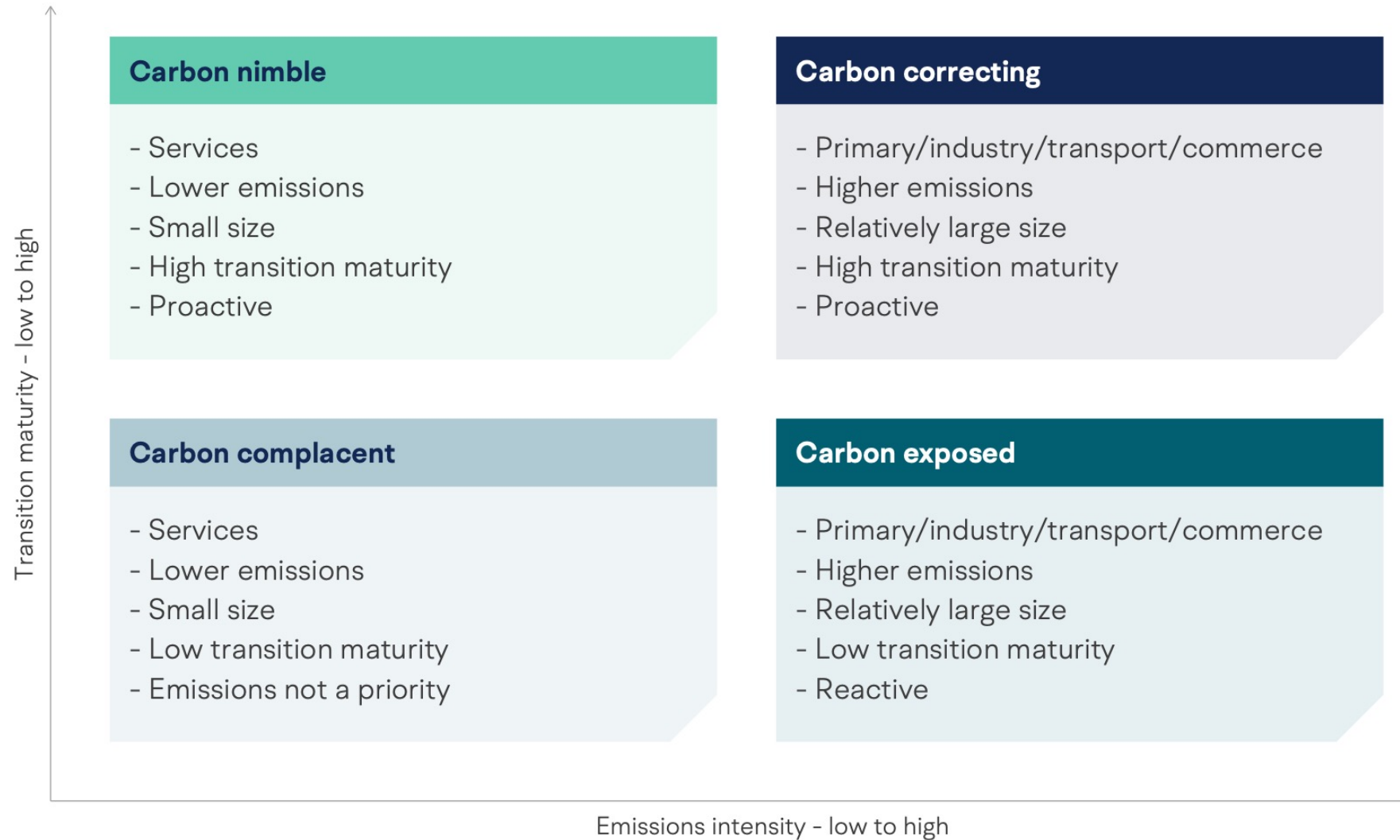
- Does the business measure its carbon emissions impact?
- Has the business implemented actions to grow its net zero capabilities?

3. Physical actions

- Has the business taken any tangible action to reduce carbon emissions?
- Is the business considering or planning any action to reduce carbon emissions in the future?
- Has the business taken any actions that are 'extensive' (ie complex/achieving significant reductions in carbon emissions)?
- Is the business considering or planning (but has not yet taken) any actions that are 'extensive' (ie complex/achieving significant reductions in carbon emissions)?

SME net zero personas – summary

Source: In-house analysis of the British Business Bank's net zero SME survey



JOIN OUR LOW CARBON BUSINESS NETWORK


Be part of a group with more than 130 local businesses leading the way in supplying low carbon goods and services in our area working towards a more sustainable future.



SUSTAINABLE SUPPLY CHAINS

Part of the DE-Carbonise programme

DE-CARBONISE PROJECT



The DE-Carbonise project has been created to help small and medium-sized enterprises (SMEs) increase their sustainability and save money by reducing energy costs and carbon emissions. The project is a collaboration between the University of Derby, Derby City and Derbyshire County Councils.



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Thank you

Procurement and the Race to Zero

www.derby.ac.uk/research/centres-groups/centre-for-business-improvement/sustainable-business

www.derby.ac.uk/decarbonise

www.lowcarbonbusiness.net

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