

INFLUENCE!

Inspiration and insight to change
minds and policy

19 - 20

June 2019

University of Manchester



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An aerial photograph of a city, likely New York City, taken during sunset. The sun is a bright, glowing orb in the upper center, casting a warm, golden light over the entire scene. The city's skyline is visible in the distance, with numerous skyscrapers. In the foreground, a dense urban landscape is filled with a variety of buildings, including residential blocks and commercial structures. A river, possibly the Hudson River, winds through the city, with several bridges crossing it. The overall atmosphere is one of a bustling city at the end of a day.

Creating a Zero Carbon Coalition

Influence the future of your estate

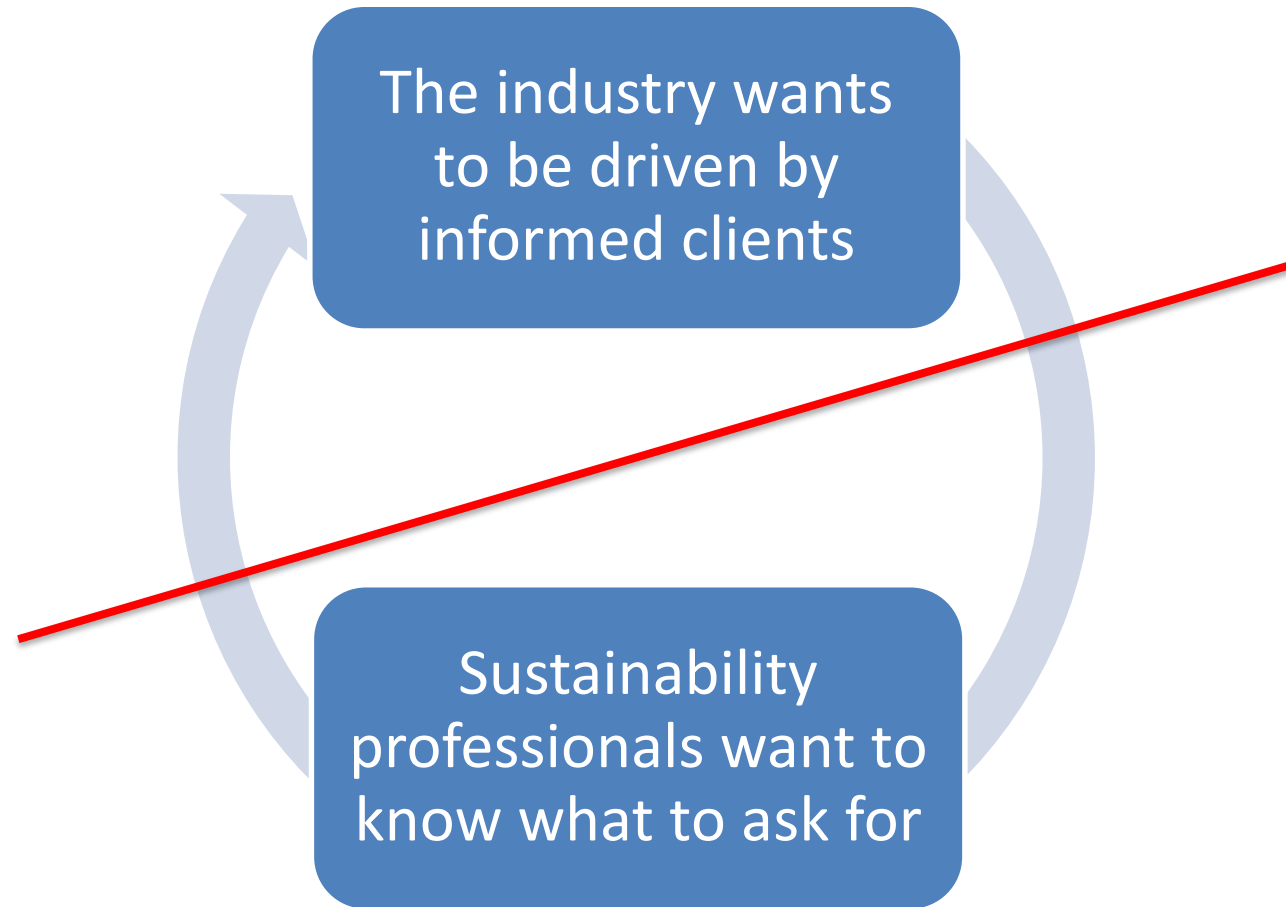
Climate Crisis

Zero Carbon Disconnect

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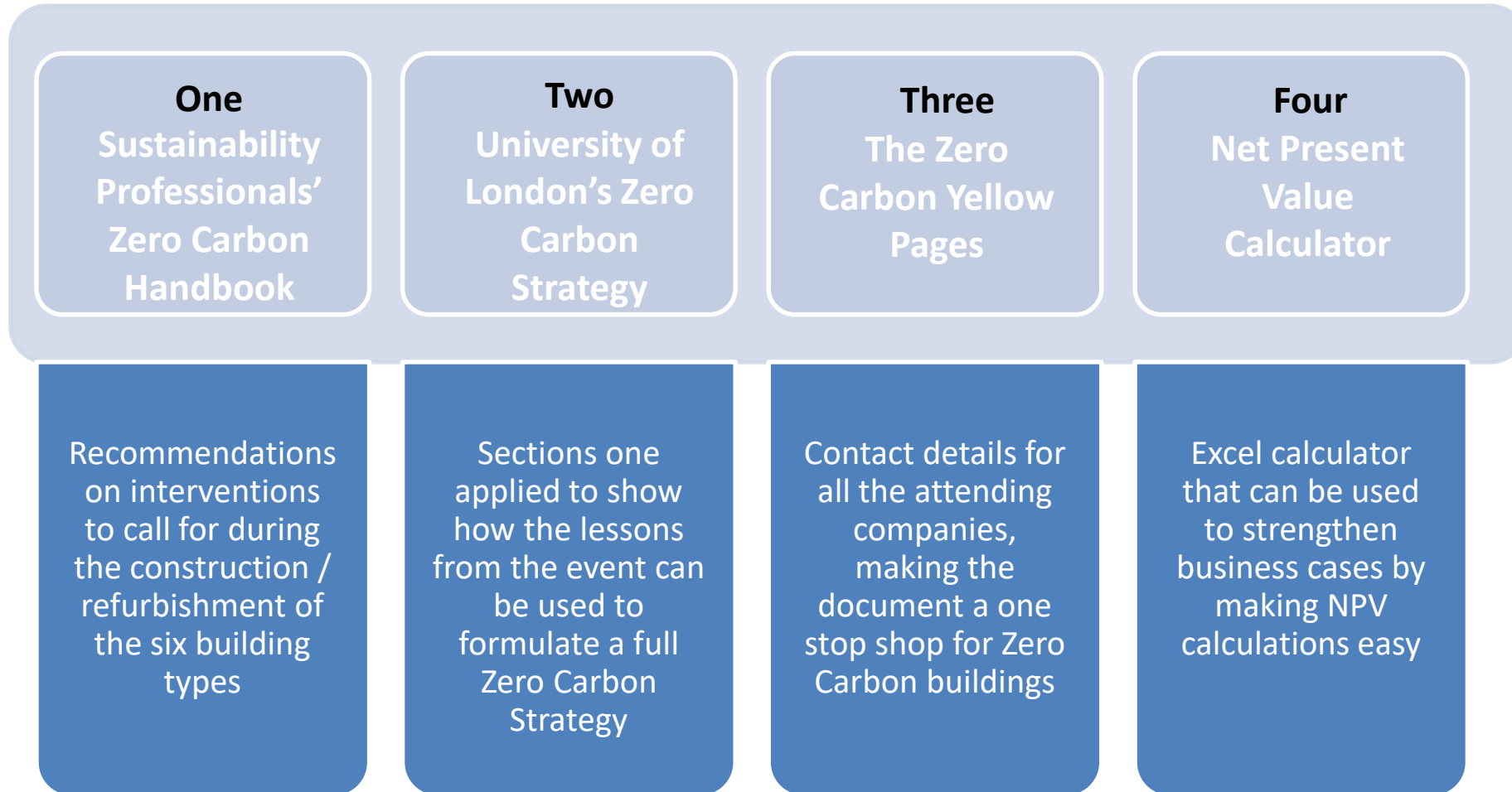


Zero Carbon Document

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Zero Carbon Coalition

PASSION LED US HERE

Zero Carbon Coalition

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10 minutes in groups answer the following questions or develop your own ideas.

- What should the group be called?
- How should we structure the coalition?
- Which topics and areas should we prioritise?
- Which platform should we use to communicate? (e.g. email, LinkedIn etc.)

Zero Carbon Challenge

2019

Ben Stubbs
Sustainability Manager
University College London

Developing a site on the Olympic Park
125 bn capital programme
7% carbon reduction in opex/ on track for CH2 target of 15% by 2020

We are here today to Collaborate to push the boundaries

Niam Fierem
Building programme manager
University of Cambridge

How to reduce absolute carbon emissions whilst increasing the size of the estate?

Capital targets: 15% reduction by 2020, 35% by 2030, 50% by 2050

Helen Colles
Enterprise & Sustainability Project Officer
University of Manchester

Were here to share our experience (as each what not to do) and would love to learn from everybody else

Environmental Sustainability Senior Framework
Our Net Zero Strategy

James Dixon-Saich
Sustainability Manager
University of Leeds

How to sell carbon reduction to senior management?

35% carbon reduction
Goal by 2021

Our best buildings can make change difficult.

Mark Gatewell
Programme Director
University of Bath

Campus of the future...
Space need to be conducive to work & learning...
Acknowledge impact of socio-economic & Cultural factors in management of campus...
Quality and children have different comfort preferences!

Ahanti Dandey
Environmental Manager
Birmingham University

CAPITAL PLAN - £120 million development at large campus
90% student bedrooms
multi-story car park

CARBON REDUCTION PLAN
Target: 55% reduction by 2020/21 (carbon)
25% reduction in date

Let's build the business case for zero carbon!

Partha Mukherjee
Energy Lead, Student - Shared Economic Concept for Sustainable Energy

A Shared Economy for Sustainable Energy

possible scenarios...
£2M (1 year) → £50-10M (10 years)

Living Labs
imagine the value of Shared Living Labs of Universities across the UK

John Bootland
Passivhaus Trust Chief Executive

Building emissions are slowly reducing
but we're not going to meet our targets with current policies

55% lower energy use in Passivhaus
Triple pane double low-e glazing
VENTILATION SYSTEM with HEAT RECOVERY
Ground HEAT EXCHANGER

FOCUS ON EVIDENCE
NOT JUST HOUSING ALSO
INTEGRITY methodology
Research & Development

Ben Humphries
Energy Director
University of York

A Showcase of sustainability
Building a 100 year design life campus

Client Souths
Senior Building
University of York

Adding Performance
Encourage energy monitoring
Delivering a holistic approach
The sustainable targets early

Joel Gustafsson
Maximising the net zero development at Cambridge University

mechanical ventilation with heat recovery
insulation
photovoltaics
Under-floor heating with ground source heat pump

Understanding existing fabric metabolism...
interstitial by thermal gradient
moisture monitoring (MAM)

MUFI MODEL
Moisture is significant factor
Vapour area / closed installations

25 TR CARBON PAYBACK
LOW EMBEDDED CARBON
Use of Timber Segregation Low Carbon
Natural Materials
Selective use of high energy materials
minimised transport
RENEWABLE ENERGY
BIPV
B10 Tool CRP

Joel Gustafsson
Maximising the net zero development at Cambridge University

mechanical ventilation with heat recovery
insulation
photovoltaics
Under-floor heating with ground source heat pump

Understanding existing fabric metabolism...
interstitial by thermal gradient
moisture monitoring (MAM)

MUFI MODEL
Moisture is significant factor
Vapour area / closed installations

David Morley Architects
Juritz and Jennifer

1. UNDERSTANDING Character and Significance
2. UNDERSTANDING why the Building works
3. CONSERVATION and RESTORATION
4. PASSIVE DESIGN
5. EFFICIENT CONTROLS & CONTROL SYSTEMS
6. INTRODUCE Renewable ENERGY
7. LOW CARBON design
8. CONSERVING RESOURCES

Everything CONNECT
SMART GRIDS for Zero Carbon
Self efficiency

BE BRAVE
Need clear brief from client
Get an industry standard for zero carbon
Get management round the table...
MAKE A DIFFERENCE TOGETHER!

Internet of Things
High resolution to monitor room following

Partnerships with industry
Future proof infrastructure

Vehicle to grid

Zero Carbon REPAIRS
Buildings Hardware
People Software
Collaborative to buy new tech
Collaborative to buy new tech
Collaborative to buy new tech

Zero Carbon RESEARCH SPACES
Research culture
Research culture
Research culture

Be Brave
Need clear brief from client
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MAKE A DIFFERENCE TOGETHER!

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Do we consider OFF-SITE RENEWABLES?
A wide variety of green
Generate Zero carbon ENERGY

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Generate Zero carbon ENERGY

Kat Thorne
Head of Sustainability
Kings College London

Let zero carbon by 2025
Carbon reduction progress
38% reduction (location based) by July 2018
55% (Market based)

The Challenge
Continued GROWTH of estate and significant part of estate in PARTNERSHIP WITH THE NHS

Liz Harris
Environment Officer
Birmingham University

77,000 m² Existing estate
4000 additional students over 40 years
70% residential
35,000 m² additional area
E 40 MILLION to E100 spend
Business Case for Carbon
Risk Management of delivery
Embodied Energy
ROLE of BEHAVIOUR CHANGE

Debbie Ray & Prathana Jayaprath
MORIS BAGOT

Learning happens everywhere

Learning on...
Multimedia Hubs

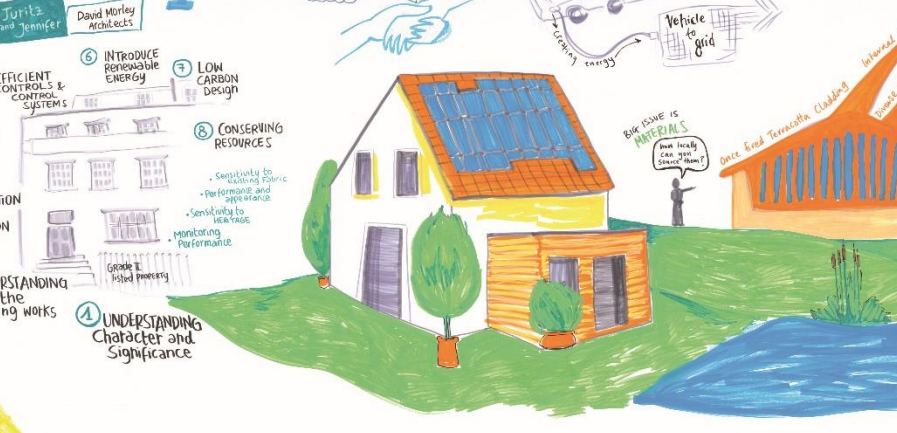
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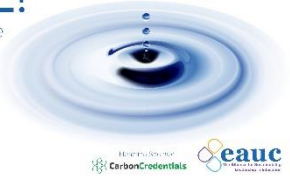


Zero Carbon Challenge 2019

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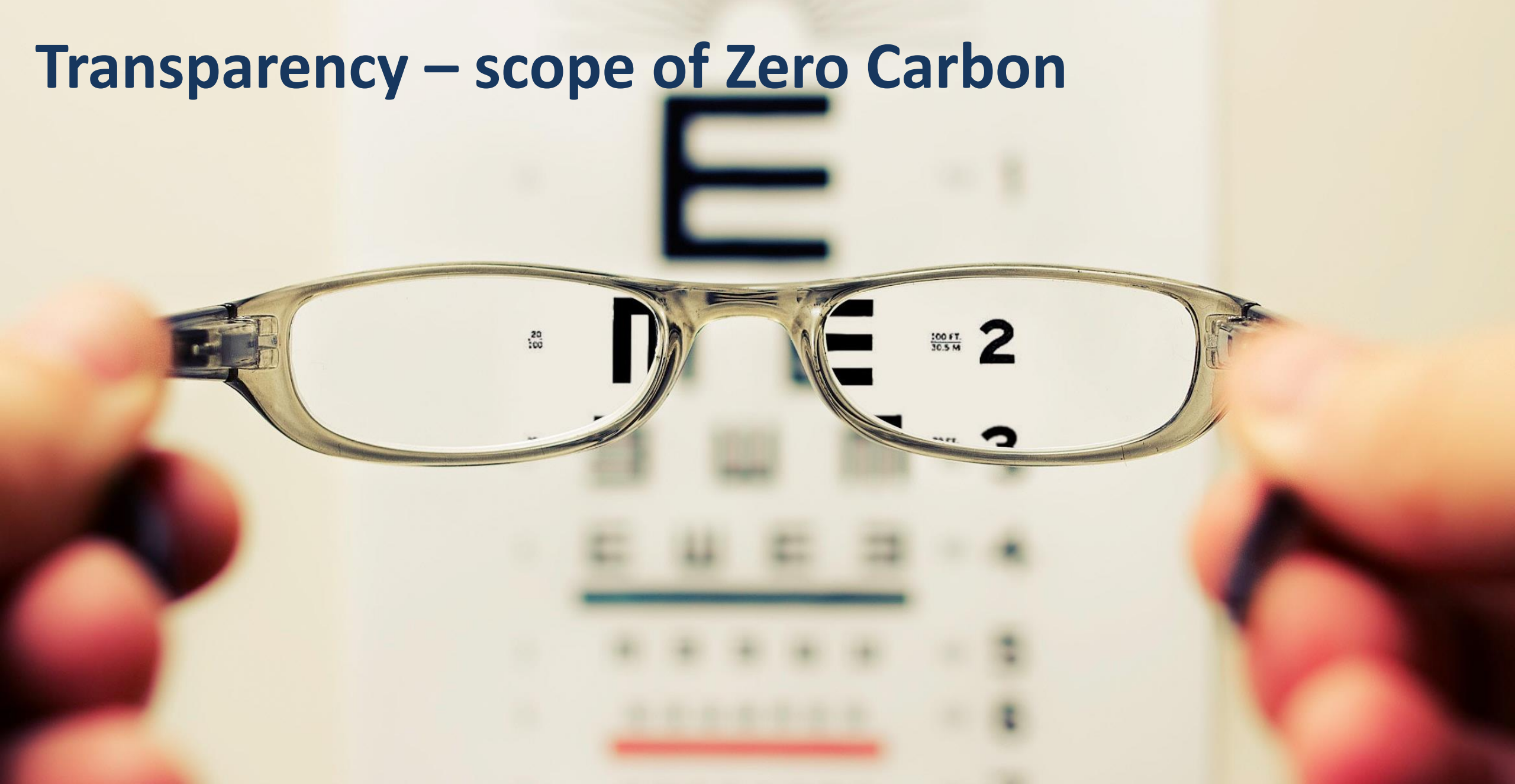
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5 minutes in groups answer the following questions or develop your own ideas.

- What were the strengths and weaknesses of the 2018 event?
- What topics would you like covered in a 2019 event?
- Where should the event be held?
- Would you be interested in hosting / collaborating on the event?

Transparency – scope of Zero Carbon

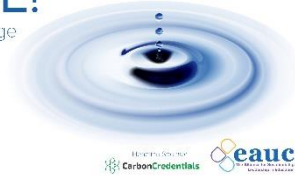


Scope of zero carbon targets

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Current challenge: What's in target - Existing net zero carbon targets have differing scopes across the sector

=lack of transparency and potentially missing reduction opportunities

10 minutes to discuss and record in groups

- In groups list all the different activities and processes that occur in universities which produce CO₂e emissions (scope 1, 2 and 3)
- Should we expect a one scope fits all approach or each university has individual but transparent scope of zero carbon e.g. an included/excluded list as developed for the sector?

thanks!

Tombow
ABT
Acid Free

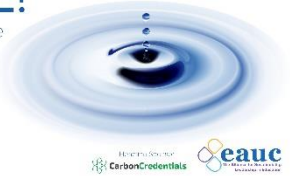
N15

The SDG Accord

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CarbonCredententials



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The Alliance for Sustainability
Leadership in Education

End extreme poverty, inequality and climate change
www.sdgaccord.org



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