

What does a climate emergency mean for us?

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Overview

- The science bit
- From *Global* to *Local*
- What the emergency looks like for us
- Where do we start?
- Our elephants!



Higher mitigation





Lower adaptation



Lower mitigation



Higher adaptation

Influencing the future

Decisions made now impact on future climate adaptation

**We can't choose a
'no climate change'
future**

Higher Mitigation = Lower Adaptation

Lower Mitigation = Higher Adaptation

Global goal – Paris Agreement

... hold the increase in global average temperature to **well below 2°C** above pre-industrial levels & pursue efforts to limit the temperature increase to **1.5°C**

...rapid reductions in accordance with **best science**

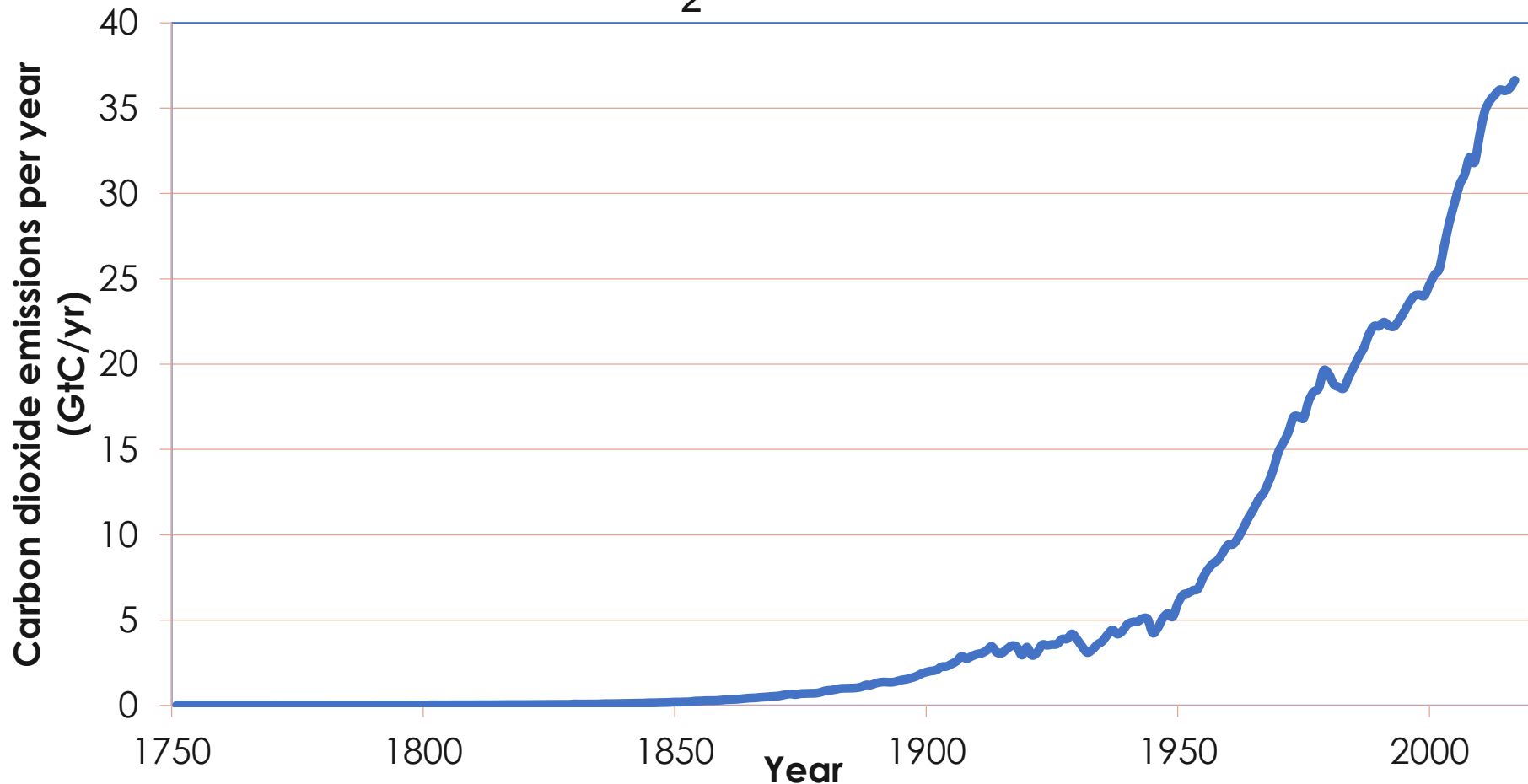
...on the basis of **equity** and efforts to eradicate poverty.



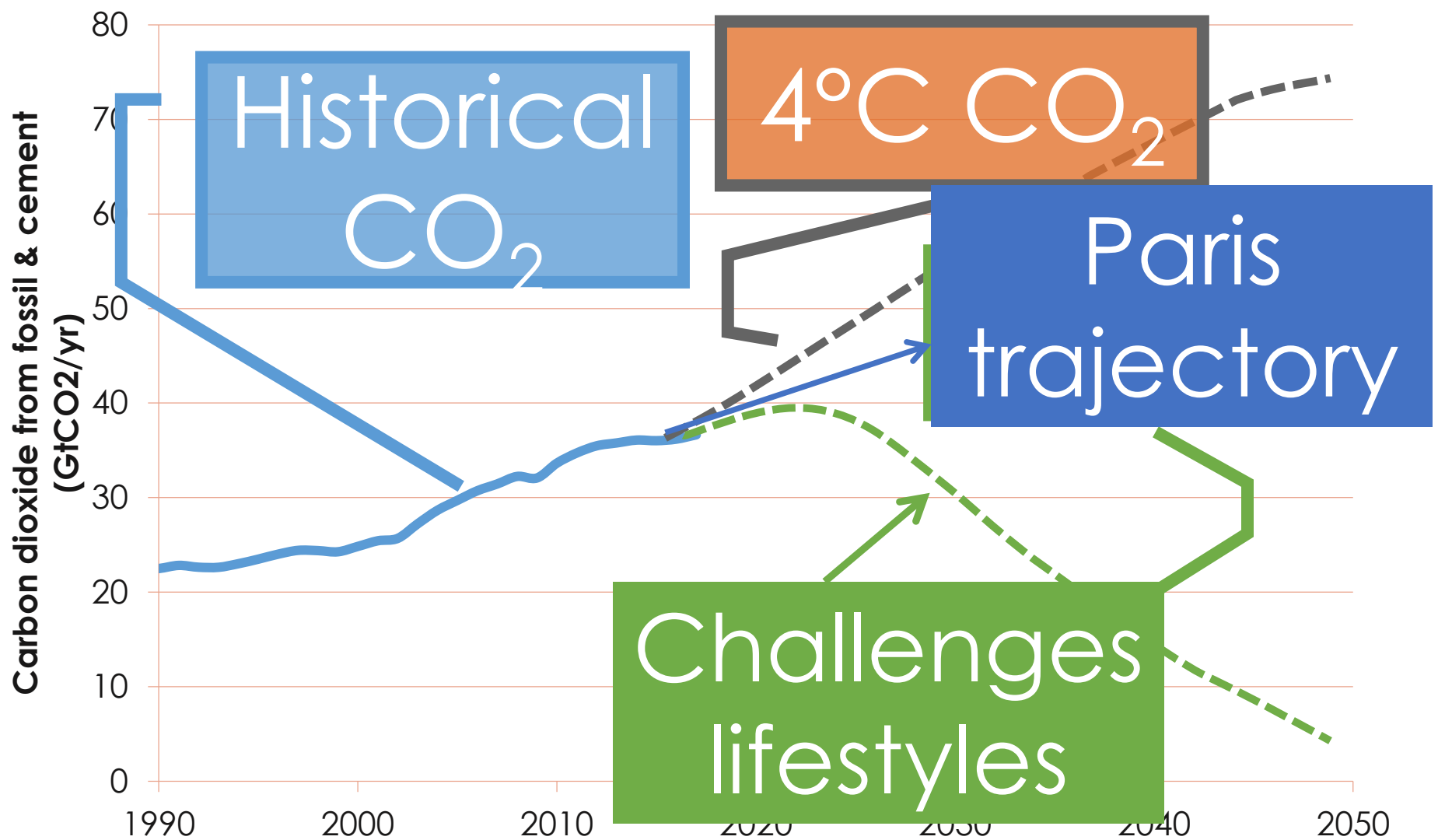
At 1 degree C



Global CO₂ emission trend



Data: Global Carbon Project update, 2014, Boden, T. A., Marland, G., and Andres, R. J.: Global, Regional, and National Fossil-Fuel CO₂ Emissions, Carbon Dioxide Information Analysis Center, Oak Ridge

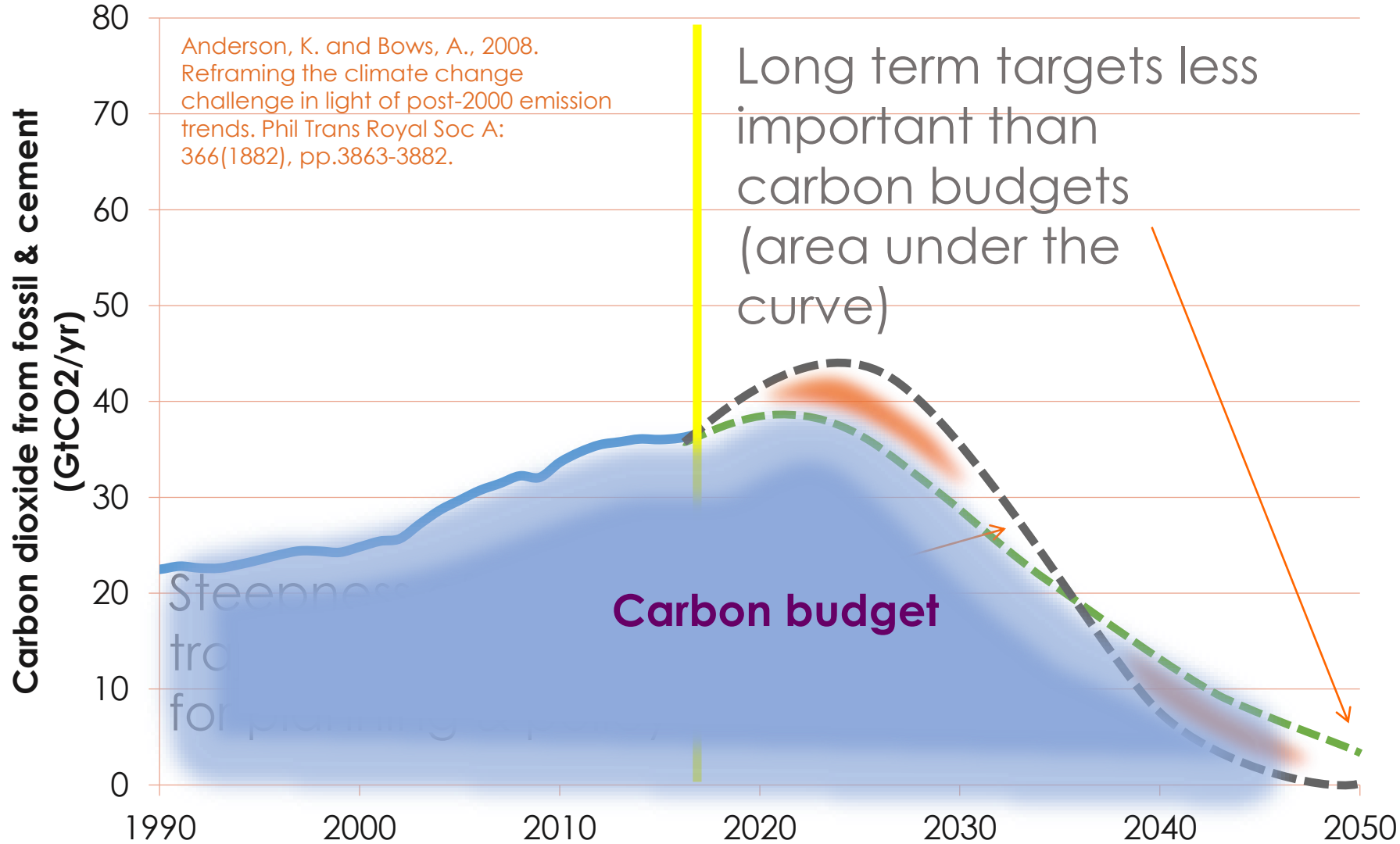


Current context on climate change

- Paris Climate Agreement – 2 & 1.5 degrees
- Net zero 2050 commitment UK level
- Calls for more urgent transformation after slow progress now pervasive – Bank of England to School Strikes
- Over half of UK local authorities have declared 'climate emergencies'
- Extinction Rebellion, School Strikes, National Citizens Assemblies. Organisations wanted to set science based Paris aligned targets.

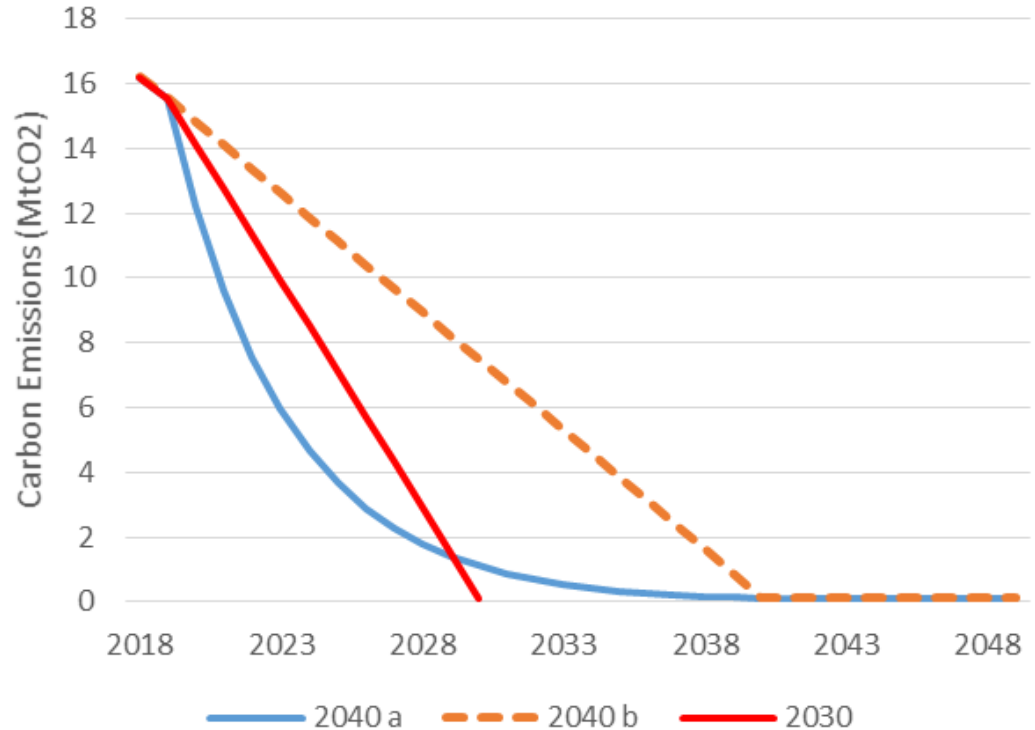
Scientific context

- The primary driver climatic change in coming decades is CO₂
- Global temperatures are directly linked to increased cumulative CO₂ emissions from human activity (primarily from energy use)
- Global temperatures have already risen by around 1°C
- Significant loss of ecosystems and biodiversity, increased human health/economic impacts at 1.5°C, impacts considered to be 'dangerous' at 2°C
- Urgent and transformational wide scale change in the energy sector is needed
- Carbon budgets are used to inform strategies limiting CO₂ emissions inline with meeting climate change goals



Carbon Limits & Target Years

- The same end point target can have different climate change implications.
- Earlier 'zero' year can have more CO₂
- CO₂ emissions in the **red** scenario are 20% higher than in **blue**



We are rapidly 'spending' the
remaining carbon budget

CO₂ mitigation policies need deliver change in the ***short-term*** because emissions accumulate

What does the climate emergency
look like for us?

From Global to Local

Translating global temperature targets into local CO₂ budgets



SCATTER project

Setting

City

Area

Targets and

Trajectories for

Emissions

Reduction

- BEIS project to produce evidence-based climate change targets for UK cities
- Collaboration with

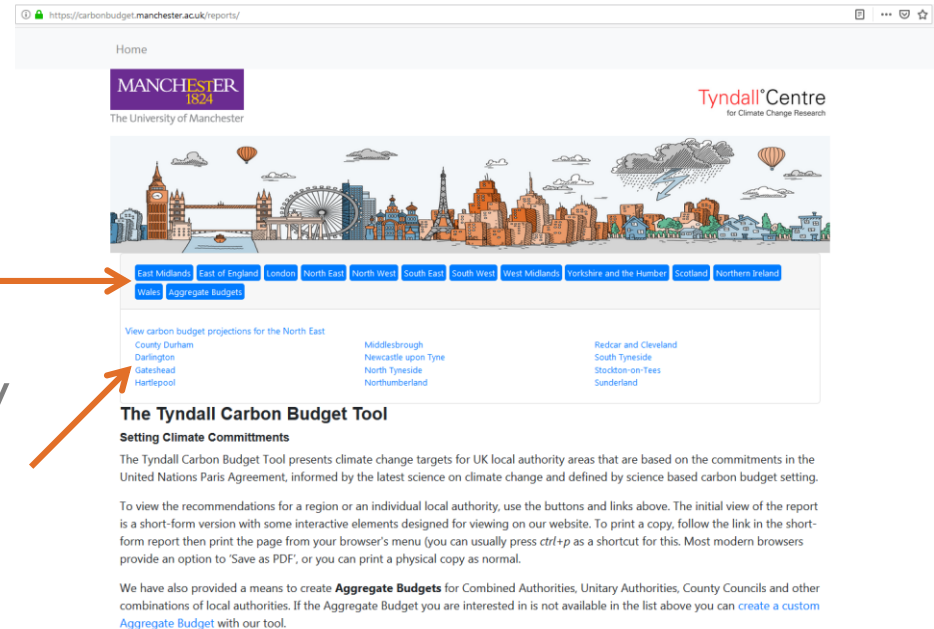


Carbon Budget Setting Tool

- carbonbudget.manchester.ac.uk/reports/

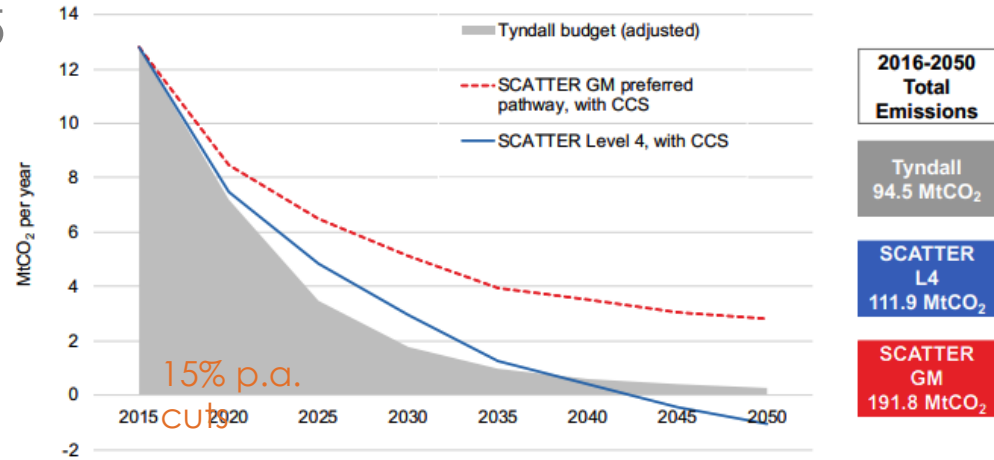
- Select the region

- Select Local Authority



GM approach – collaboration and innovation

- GM identified actions for their 5 Year Environment Plan
- Net zero in 2038; 15% pa cuts
- Clear call to all stakeholders to collaborate
- Don't yet have a pathway to zero - focus on delivering near term action
- Innovation 'gap' – social, political, financial, regulatory, technology
- Opportunity to extend this – Tyndall network & COP26



All institutions will struggle with the *scale*
of this *challenge*
– where do we start?

University of Manchester Commitment

The University of Manchester believes that Manchester should stay within a science-based carbon budget that is aligned with the Paris Agreement and set 2038 as the target date to become a zero carbon city.

The University of Manchester believes that all organisations and residents in Manchester need to be part of a collective effort to meet our targets and commits to contribute by:

- **Acting now**, including accelerating our existing decarbonisation activities, wherever possible.
- **Taking responsibility** for the CO₂ emissions from our business activities and working to reduce them to zero by 2038.
- **Supporting and influencing** our customers, residents, suppliers and other stakeholders to take action.
- **Defining the support we need and proactively asking for it**, including asking politicians for policy changes wherever relevant.

Direct & Indirect ?

Scope 1, 2 & 3 ?

Mandatory or Moral ?

Much much more than infrastructure

Hierarchy of action

1. Reduce energy needs: question the what
2. Reduce energy needs: question the how
3. Improve energy efficiency: investing in technology
4. Decarbonising supply: onsite generation

Where else can we influence *now*?

- **Buildings, infrastructure & facilities**

e.g. enhanced maintenance programme, net zero new builds, carbon as KPI in all refurbishment, onsite & offsite generation, facility upgrades, procurement etc.

- **People & community**

Disrupting norms around commuting; academic conferencing; field work & research practice; student exchange; life-long learning; on-campus behaviours

- **Education & student experience**

Curriculum; campus biodiversity; staff-student networks; societies; halls

- **Leadership & experimentation**

Capacity building in research; financial decision making; divestment; governance & connections; living labs

How?

- **Reframing investment decisions**

Taxing energy use; thinking beyond annual accounts; challenging dominant financial approaches; new business models

- **Developing new policy & procedures**

Choice editing procurement; providing alternatives; behaviour change programmes; CO₂ impact indicators in proposals; linking influence to accounts

- **Identifying & sharing where knowledge & finance gaps exist**

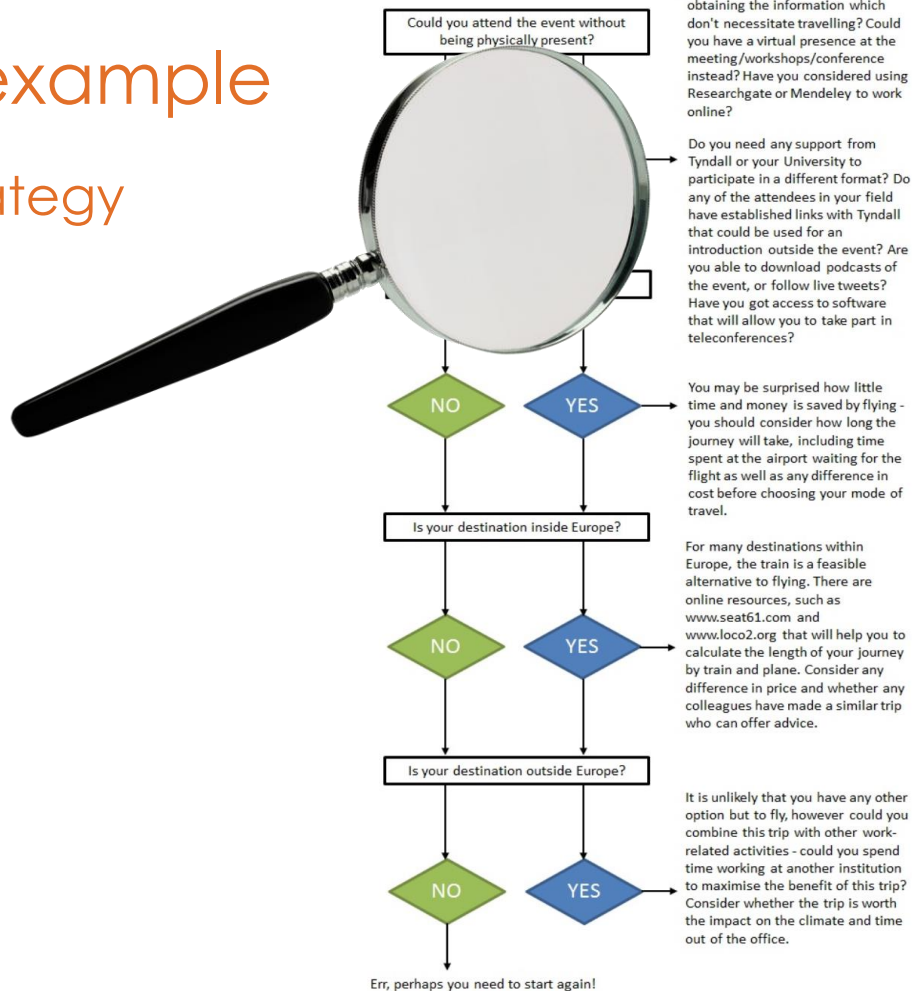
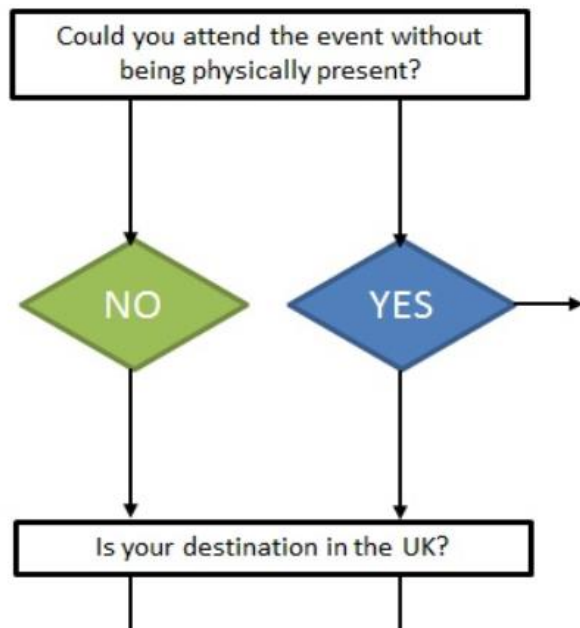
University networks; collaboration; civic connections; steering funders

Example – Tyndall Travel Strategy



Tyndall travel strategy example

<https://tyndall.ac.uk/travel-strategy>



Think creatively

- Decision trees for meetings
- Think about needs & synergies
- Think about opportunities



University influence extensive

- Students - capacity building
- Staff – harnessing capability
- Stakeholders & partners – sharing & learning

Our ‘climate change’ credibility rests on changing our estate and our supply chain

Our elephants

Academic & researcher connectivity

Student mobility & international student numbers

Research that maintains our fossil fuel lock-in

Life-long learning if it is to increase mobility

Our opportunities

Understanding the scale of the challenge

Our people – seeking solutions

Our living lab – testing & experimenting

Our short & long-term influence: staff, student, civic

Thank you

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