

A BETTER WAY

# Our net zero carbon strategy



# Climate change is our greatest challenge



Alan Belfield  
*Chair, Arup Group*


Human activities are estimated to have already caused 1°C of global warming above pre-industrial levels and unless drastic action is taken, we will surpass the 1.5°C threshold in the next 30 to 50 years. The risks associated with global warming above 1.5°C represent significant risks to the systems upon which we depend.

Global emissions over the next few decades will shape our planet for centuries to come. As designers of the built environment, we have a vital role to play in both mitigating the impacts on these systems and enabling infrastructure and urban development to adapt to ongoing change. At Arup, we make a significant impact through our projects, but we have a duty to practice our advice to clients in everything that we do.

As a firm, we have made a commitment to be a net zero organisation by 2030 and to contribute meaningfully to the UN Sustainable Development Goals, creating shared value for our clients and our communities while safeguarding our planet.

Our Net Zero Carbon Strategy sets out how we will achieve the 1.5°C aligned science-based target for our full value chain emissions and compensate residual hard-to-decarbonise emissions with certified greenhouse gas removal. We will monitor progress and regularly revisit this plan to ensure we are on track to meet our net zero commitment by 2030.





“By setting targets that are grounded in climate science, Arup is showing that ambitious climate action and good, resilient business go hand in hand.”

Cynthia Cummis,  
*Director of Private Sector Climate Mitigation at World Resources  
Institute, one of the Science Based Targets initiative partners*

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“Our industry is responsible for 40% of global carbon emissions. It is our responsibility to reduce emissions and contribute to a sustainable future.”



Jo da Silva

*Global Sustainable Development Leader, Arup Fellow*



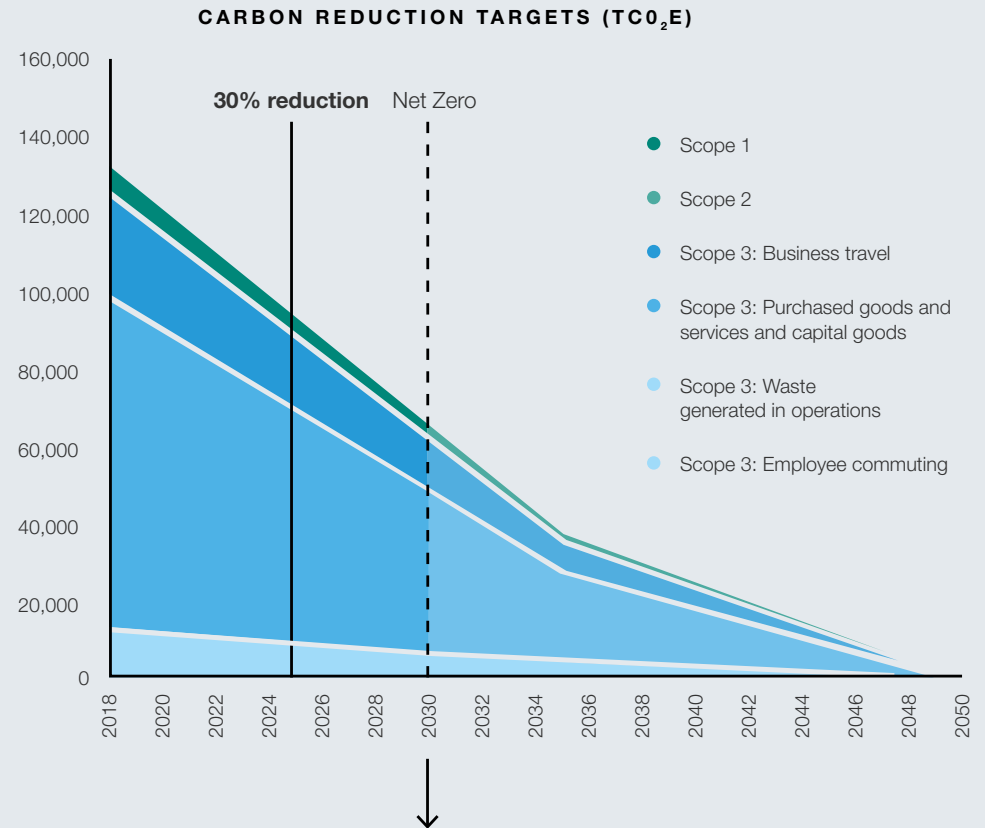
- # Our strategy

Arup has made a commitment to be a net zero organisation by 2030.



# Net zero carbon strategy

We will achieve this by pursuing an ambitious 1.5°C aligned science-based target for our full value chain emissions and compensating residual hard-to-decarbonise emissions with certified greenhouse gas removal.



**From a 2018 emissions base line:**

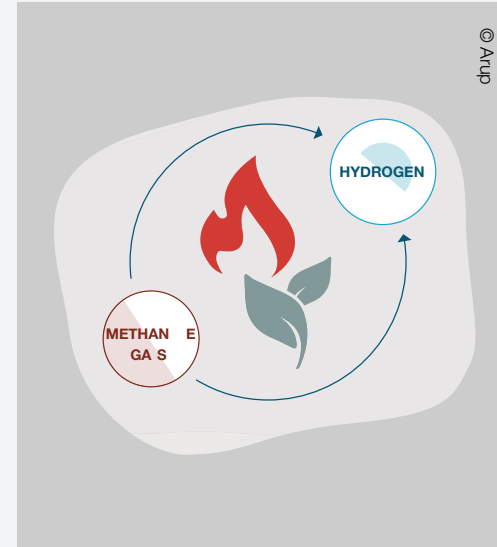
- + Reduce scope 1 and 2 GHG emissions 30% by 2025
- + Reduce scope 3 emissions 30% by 2025

# Our impact

Our project work has greater impact on carbon emission reduction than our own operations – but we are taking steps to reduce emissions in both contexts. By demonstrating our commitment through action, we can give better advice to our clients.



- **0.14 MtCO<sup>2</sup>E**  
Arup projects
- **1.21 MtCO<sup>2</sup>E**  
London infrastructure projects



© Arup

## HY4HEAT

The £25m Hy4Heat innovation programme, funded by the UK Government, is exploring whether it is technically possible, safe and convenient to replace natural gas (methane) with hydrogen in residential and commercial buildings and gas appliances. The Department of Business, Environment and Industrial Strategy (BEIS) is using the study to establish if hydrogen could be part of a plausible potential pathway to help meet heat decarbonisation targets. Arup leads Hy4Heat's Programme and Technical Management, collaborating with industry partners, specialists and experts to ensure delivery whilst engaging with relevant stakeholders.



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## BIRMINGHAM INTERCHANGE DESIGN CARBONISATION

Arup worked on the scheme design of the Euston and Birmingham Interchange stations as part of Phase 1. With a carbon management process integrated with the multi-disciplinary design development, the project teams identified significant carbon reduction opportunities across the whole life of the stations – both from capital and operational emissions.

# Towards net zero

Our aim is to reduce emissions by 30%, which is equivalent to 40,800 tCO<sub>2</sub>e.



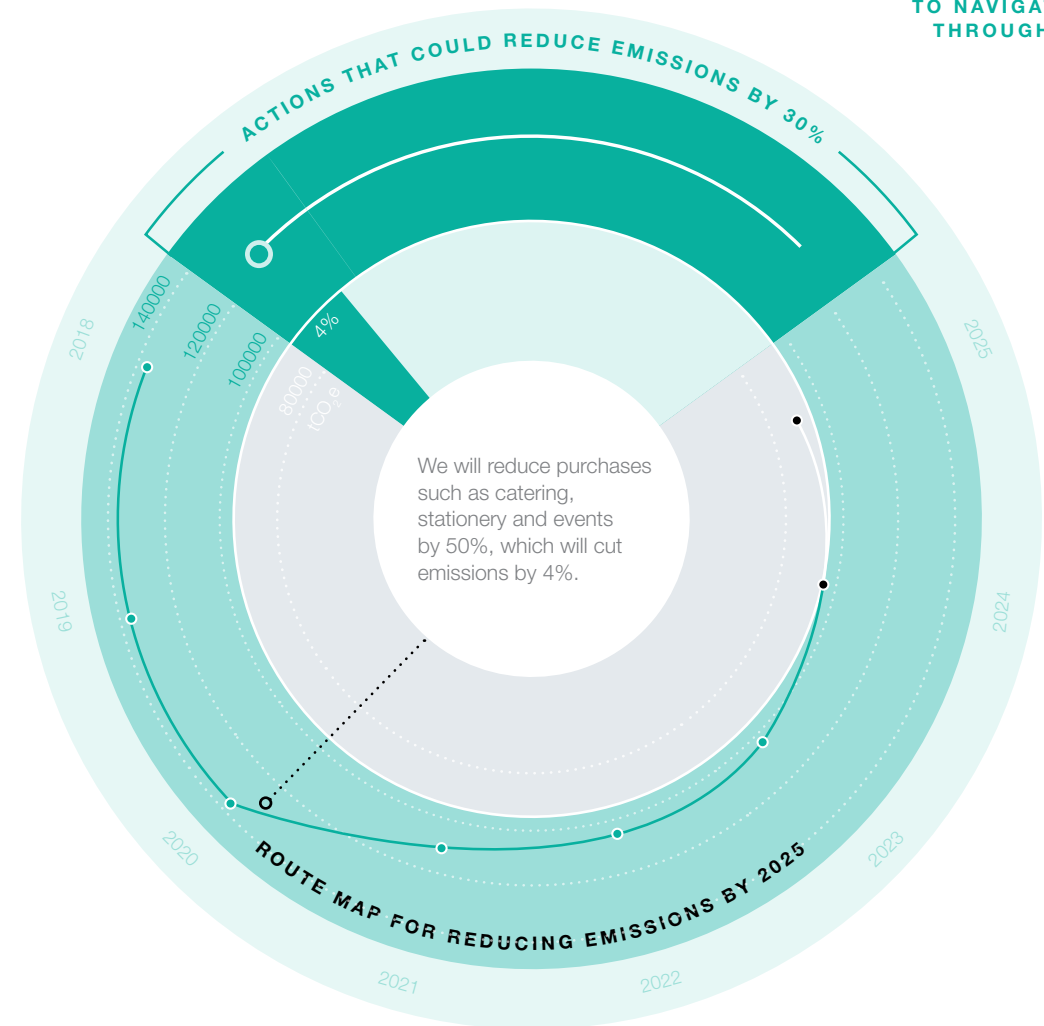


## Global targets

### Route map for reducing emissions

If Arup implements ambitious actions to meet the global targets, we could achieve greater than 30% reduction from our baseline emissions, in less than five years. This requires concerted and coordinated effort across our Regions to change behaviour and implement best practice in action areas; energy, waste, purchasing and travel. The cost savings associated with meeting the targets, particularly cutting business travel and reducing our purchase of goods and services, could save millions of pounds a year. We also need to maximise key opportunities - such as office moves - to make big changes.

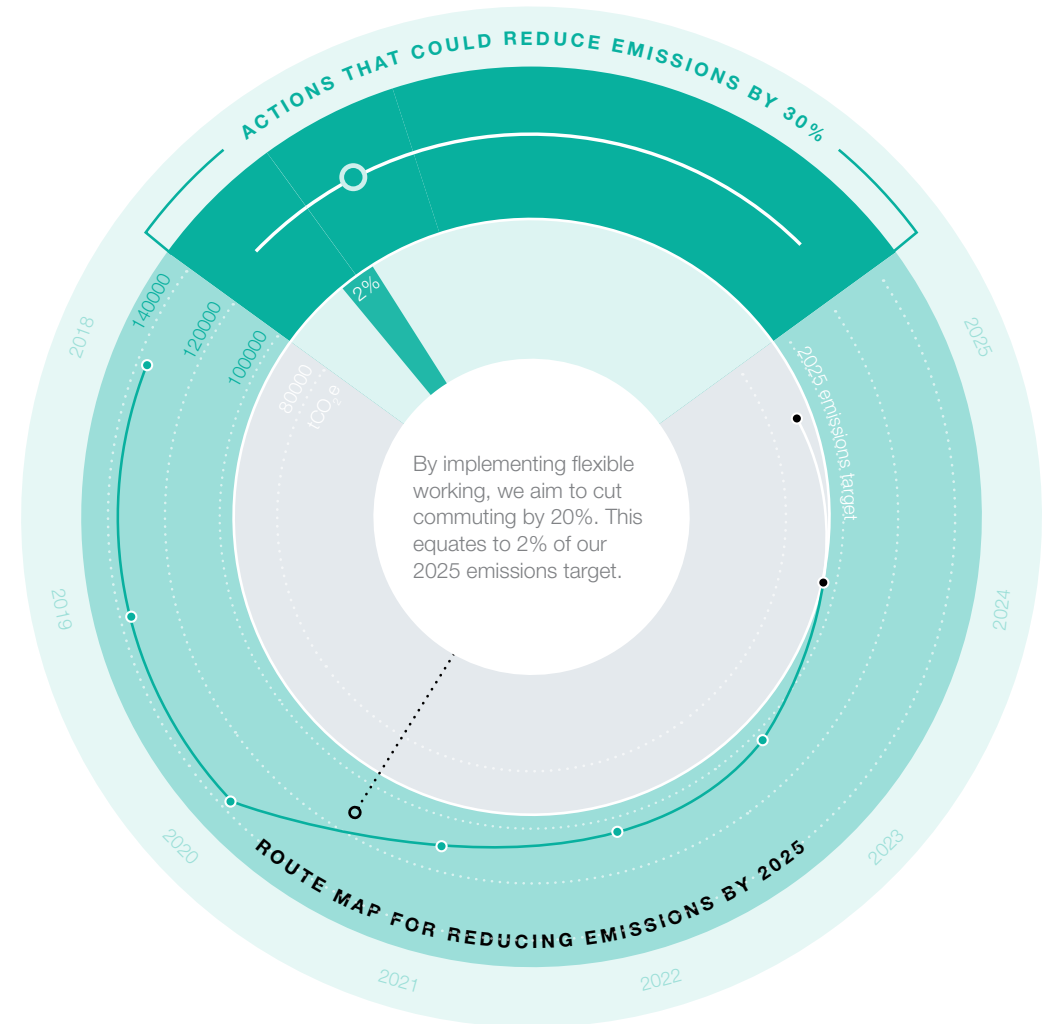
In addition to financial savings there are benefits from taking actions that go much wider than emission reductions. Factors such as social value, and health and wellbeing can see a marked improvement, for instance, from increasing active travel, reducing flying, and allowing people to work flexibly to meet other responsibilities.



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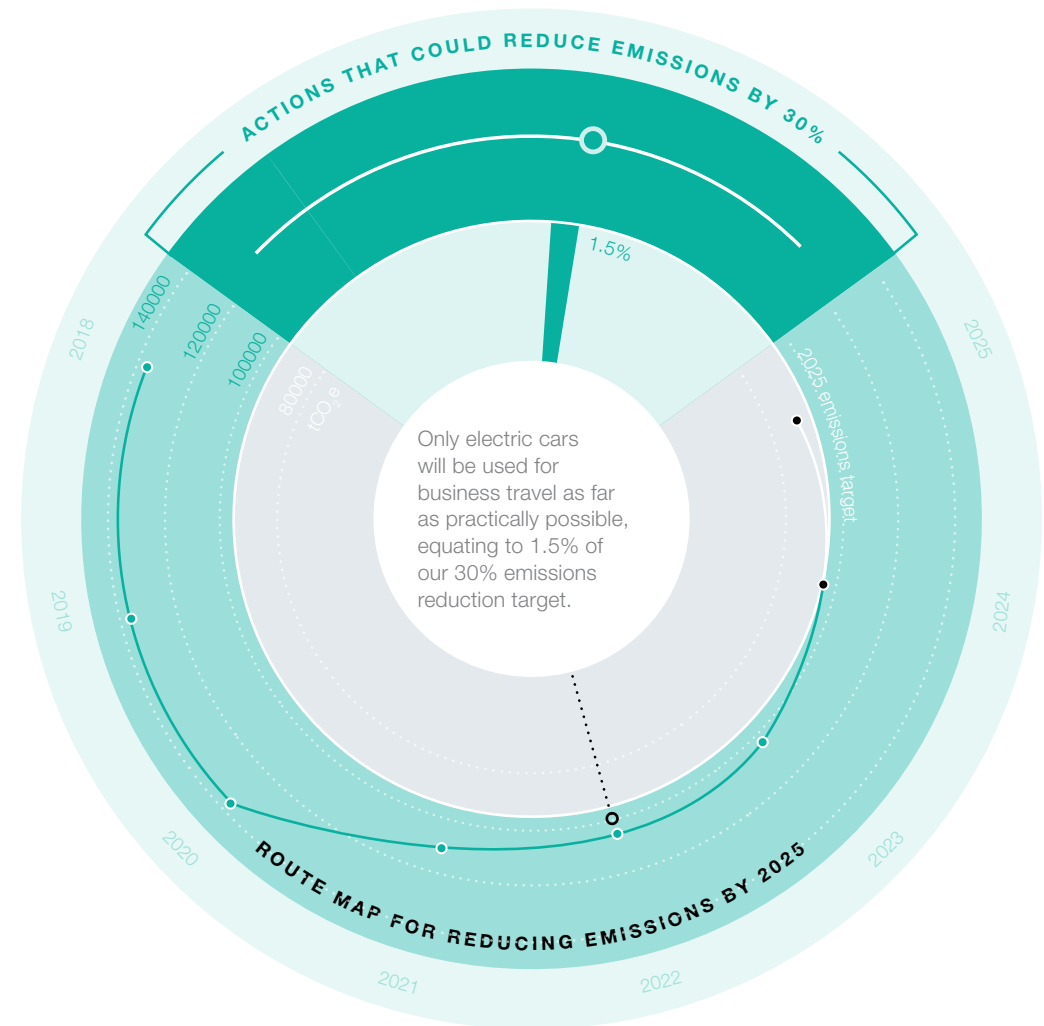
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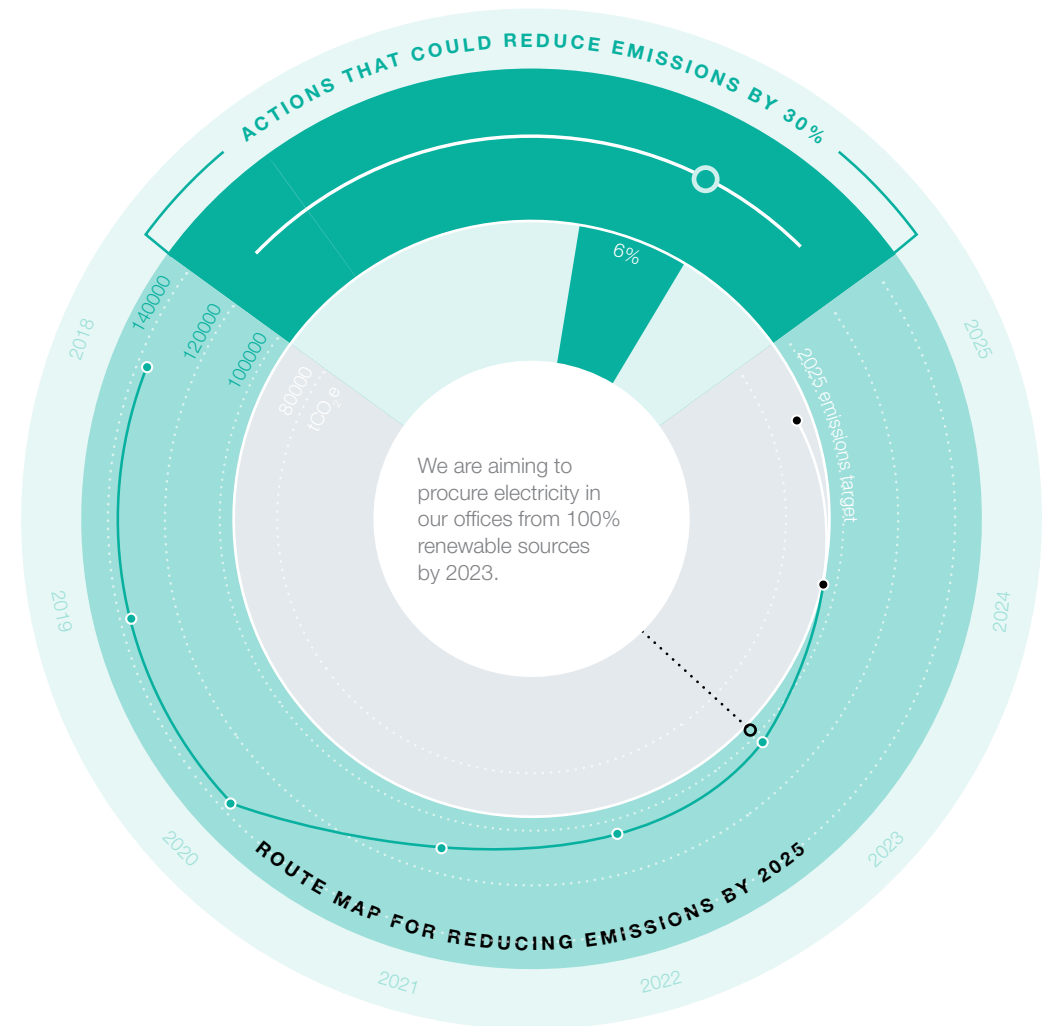


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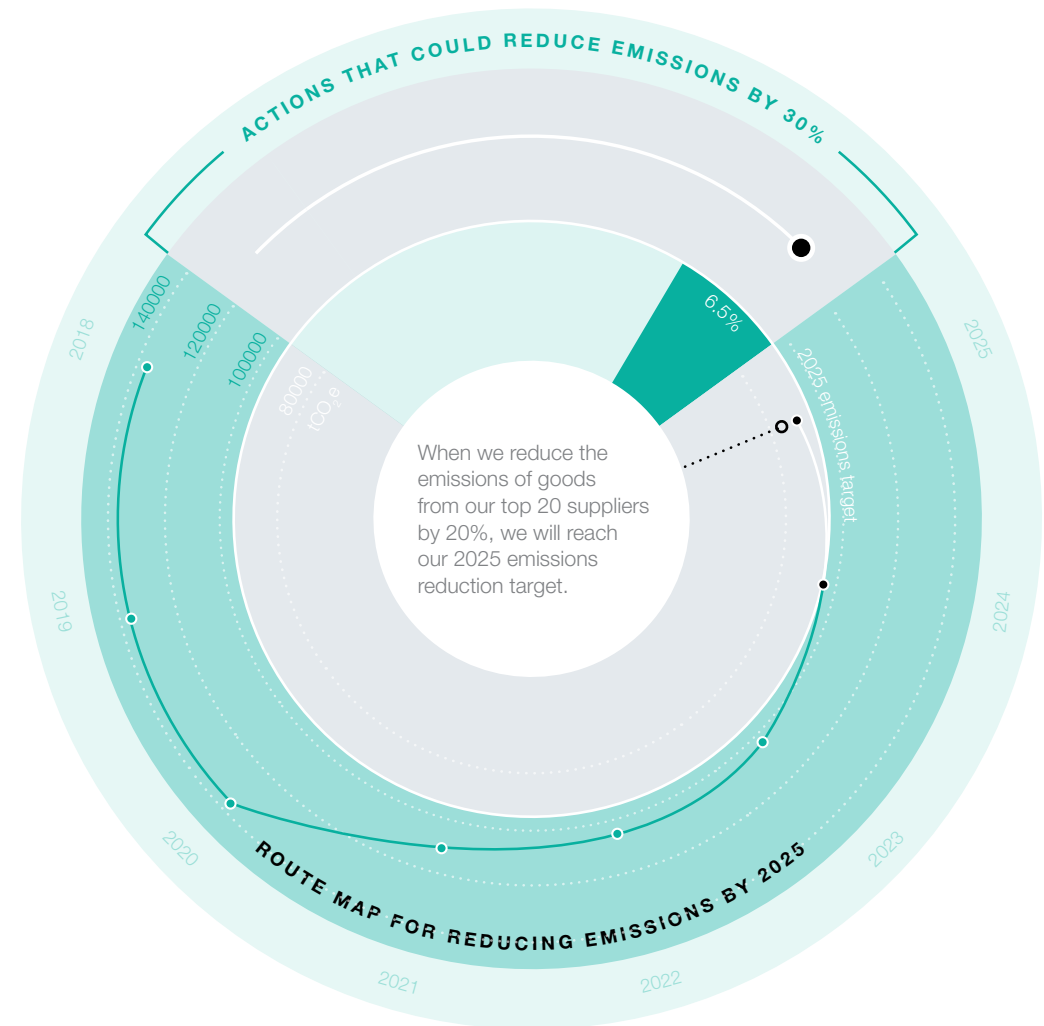


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## Arup Carbon Fund

To achieve net zero by 2030, our primary focus is to reduce our emissions.

For residual, hard-to-decarbonise emissions, we propose to compensate by investing in initiatives to reduce greenhouse gas in the short-term and remove in the long-term.

We are applying a carbon levy of \$40/tCO<sub>2</sub>e on all our flights, setting up the Arup Carbon Fund to offset our travel at market rates and investing in other efforts to decarbonise.

### CLIMATE-FRIENDLY COOKSTOVES IN KENYA

Since September 2017, Arup has supporting the funding of more sustainable cooking practices for 100,000 people in Kenya, by providing 20,000 lower emission cooking stoves. The programme has already helped Kenyans avoid 42,000 tonnes of carbon emissions, as verified by our partners Climate Care.

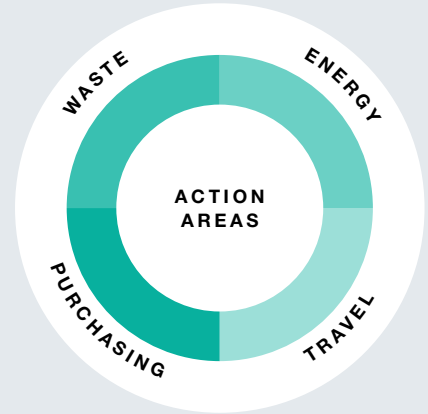
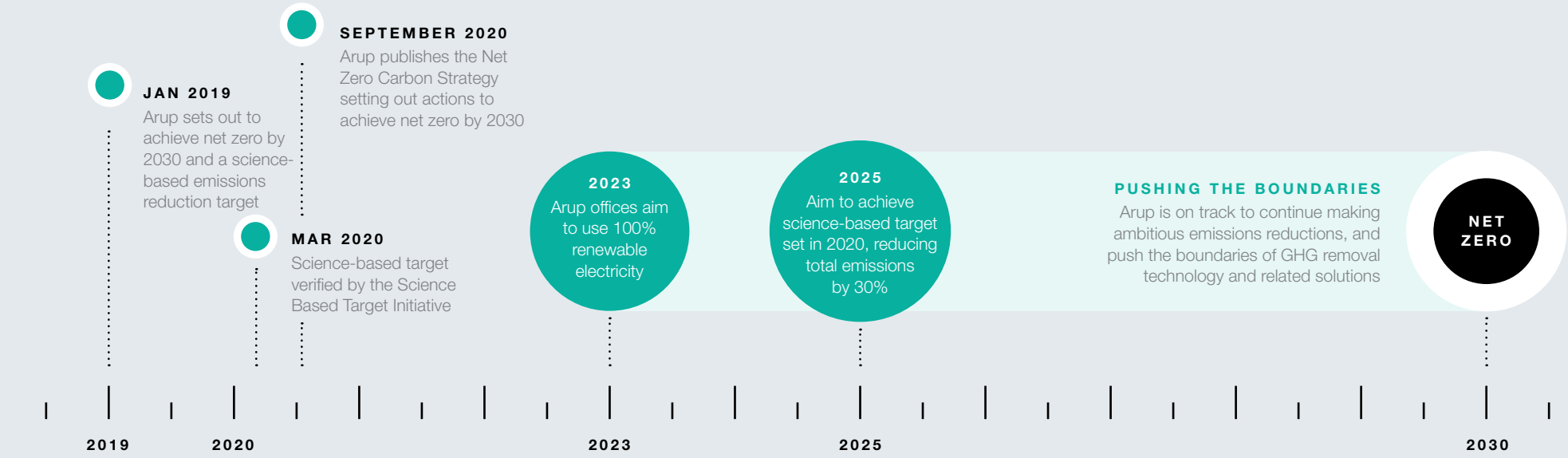


Our journey so far  
Our steps to reduce  
carbon emissions  
across the firm.





# Our journey to net zero



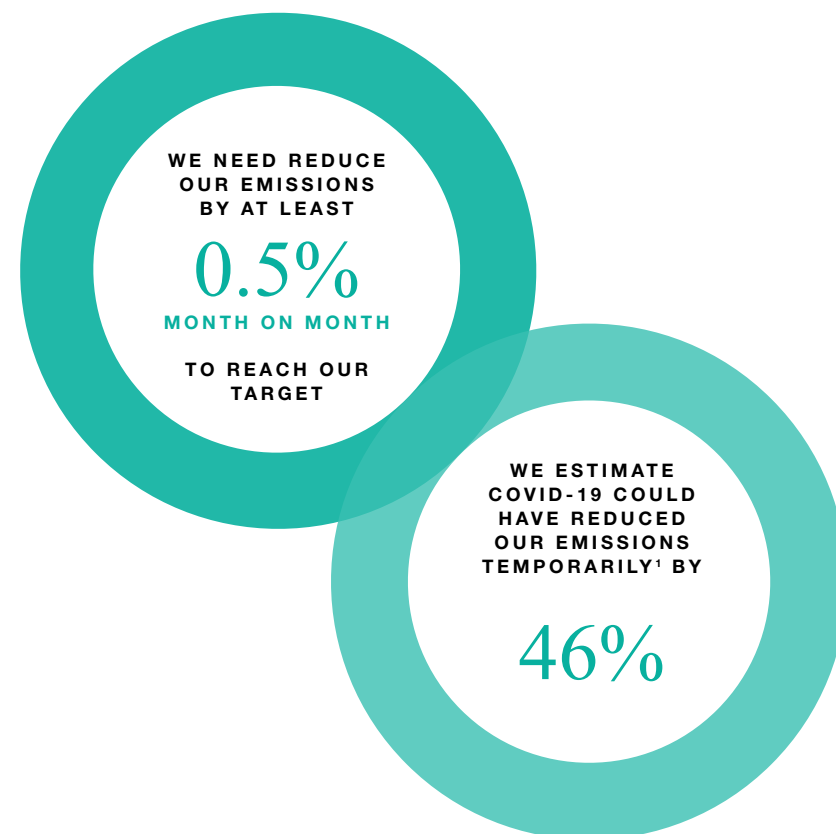
**JAN 2020**  
Arup baseline emissions report published (this will be periodically revisited as we learn more about our 'real' emissions)

Continuous and transparent emissions reporting tracking progress towards our targets

# How has COVID-19 affected our actions and targets?

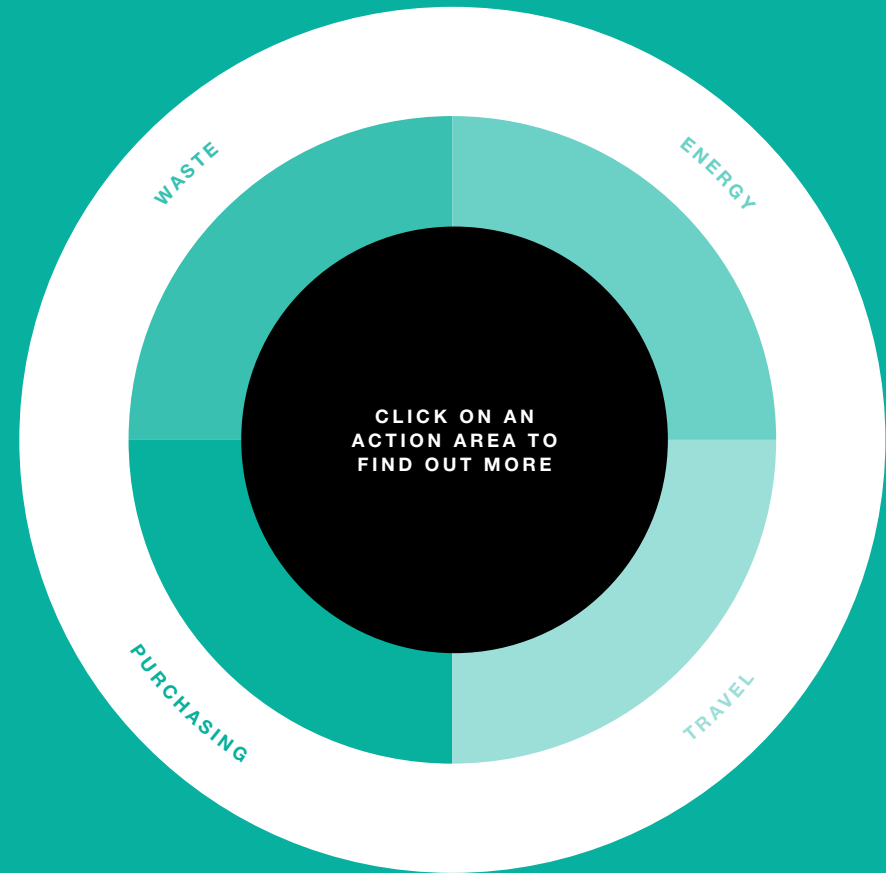
The impact of COVID-19 was felt across the business, significantly reducing business travel and reshaping our business operations. Our aim is to align our business recovery strategy, and the advice we give to our clients, with emission reductions to keep consumption low and sustainable.

If we continue to operate flexible home/office working, we will also need to consider other factors, such as the displacement of emissions. For example, increased energy use in employee homes due to greater heating or cooling needs and increased electricity use to enable home working. On this basis, we will revisit our emissions boundary within the next year to account for the displacement of emission.



1. taking a snapshot of emissions at a single point in April 2020 and estimating the likely impact of a reduction in various activities and operations e.g. travel, catering, commuting, office supplies.

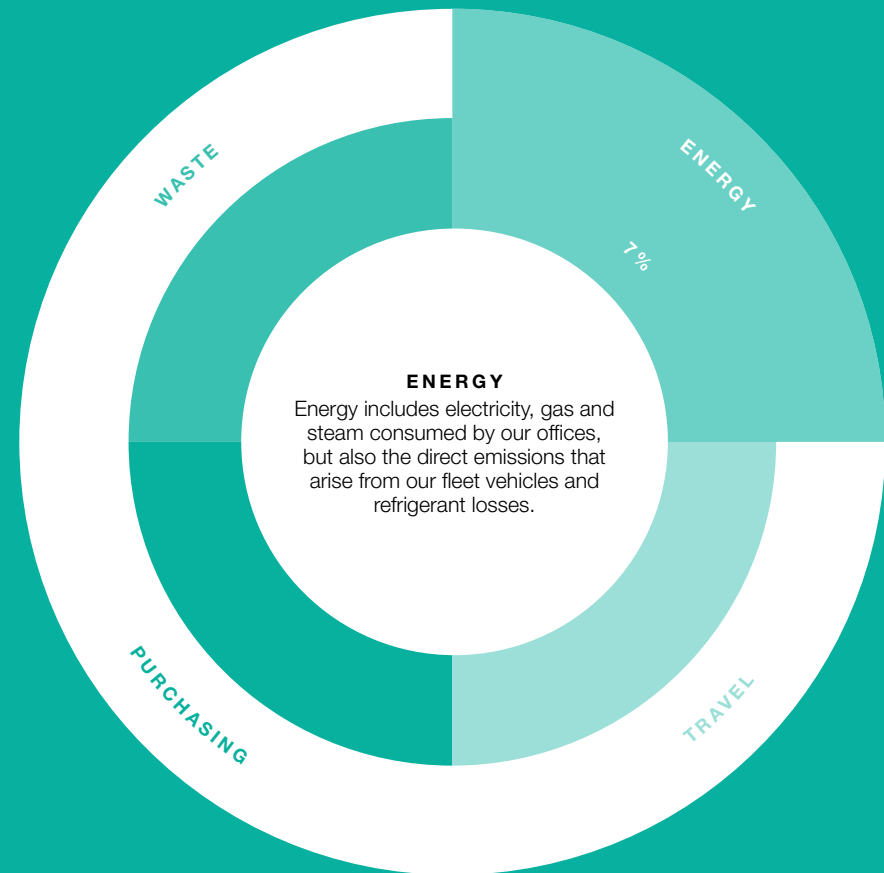
Action areas  
How to  
reduce carbon  
emissions across  
our operations.



# Action areas

## How to reduce carbon emissions across our operations.

CLICK ON THE ACTION AREA TO FIND OUT MORE

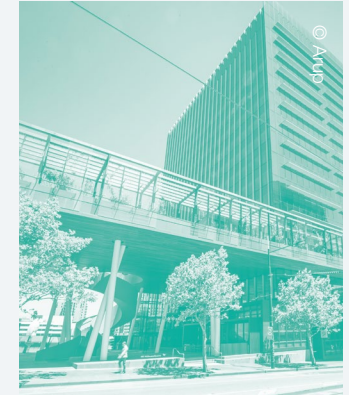


## Energy accounts for 7% of our 2018 baseline global emissions

Arup commits to occupying buildings with only the highest sustainability ratings, ensuring that the portfolio's performance improves over time. Alongside this, we make a commitment to careful monitoring and continuous improvement, showing reductions in energy consumption on a like-for-like basis, year-on-year.

Some Arup offices already procure renewable electricity and we aim to make this the case for all of our offices. The selection of offices for priority renewable electricity procurement will depend on multiple criteria, including existing supply (or lease) contract duration and availability of optimal renewable power.

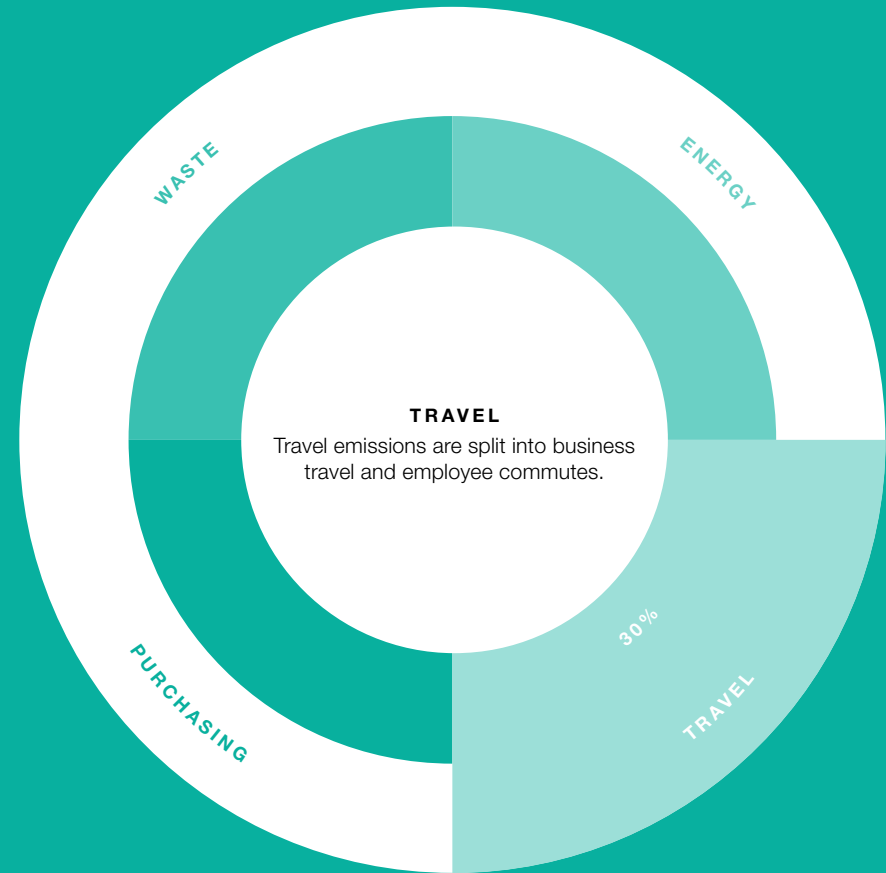
The option to procure renewable electricity, as well as the energy performance of the building, must be factored into decisions on renewal of leases and new office procurement.



### ONE MELBOURNE QUARTER

The Arup office at One Melbourne Quarter sets a new benchmark for leading workplace design. Designed by HASSELL with Arup, the three-level office embodies the principles of sustainability, wellness, connectivity and flexibility. The 13-level building targets a six star Green Star rating and five star NABERS energy rating. It also features an airtight building envelope, 200 kW PV roof array with a white roof to reduce the urban heat island effect and a rainwater capture system.

Action areas  
How to  
reduce carbon  
emissions across  
our operations.



## Travel accounts for 30% of our 2018 baseline global emissions

Sustainable travel is about making the best choices in line with the travel hierarchy. The first step is reducing travel across all modes. Beyond which choosing active or low carbon transport are preferential. There are numerous health and wellbeing co-benefits of reduced and otherwise active travel.

To encourage the most sustainable modes of travel this hierarchy must be embedded in travel plans, travel assistance and behaviour to encourage and enable our staff, and clients, to make the best choices about travel – for both commuting and business purposes.

Each of our offices will develop a holistic travel plan for commuting, visitor travel, travel to clients and other business travel. This should include setting targets and monitoring progress.

Actions to reduce the need to travel will be of greatest priority. Where travel is necessary, steps will be taken to ensure that sustainable options are selected as frequently as possible.



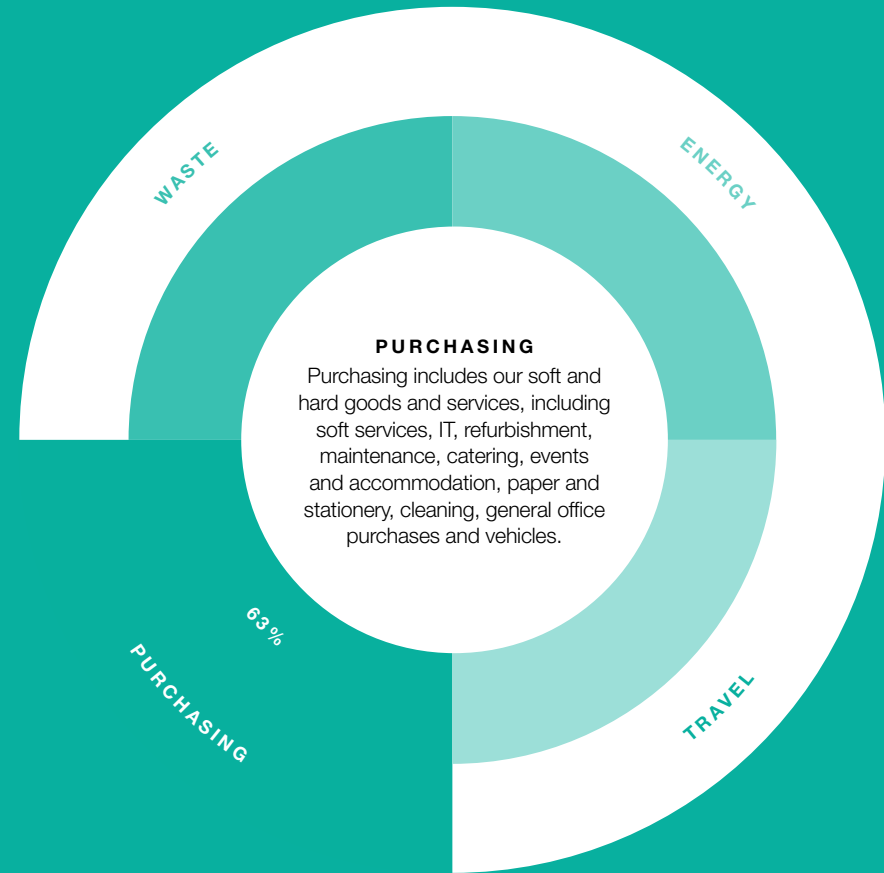
### ◀ ELECTRIC VEHICLES

Arup's Cardiff office provides an electric car for staff to use for the purpose of business travel. The car sits in our undercroft car park where it is charged over night. For now, the car is for short distance meetings and cannot be kept overnight as it is exclusively for business travel.

This car not only has carbon benefits, but also benefits for health and safety.

# Action areas

## How to reduce carbon emissions across our operations.





# Purchasing accounts for 63% of our 2018 baseline global emissions

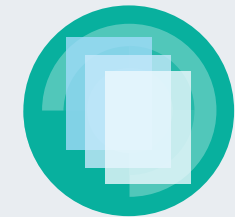
We rely on a supply chain to help us complete our projects and this includes goods we use, such as IT and food, and services we depend on, from legal support to cleaning. As we depend on these things to run our business, it is important for us to recognise the carbon impact of the things we buy. Understanding this has previously been difficult, as many companies don't know or can't tell us the carbon impact of their products or services.

However, as more companies respond to the climate emergency, it is becoming easier to collect data on the carbon impact of products, as well as to use the data to inform decisions on spend.

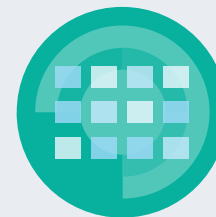
We will take a consistent approach to procurement and engagement with our suppliers, for example, by requiring our suppliers to set their own carbon emission reduction plans. We will implement a phased approach to receiving better emissions data on our procured products and services and prioritise this information as part of the decision for strategic purchases.



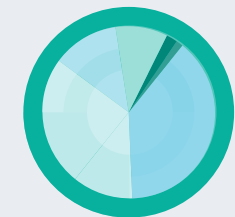
**THEMES**  
Decide what is important  
ie. A Better Way



**POLICY**  
Embed in policy e.g.  
NZ policy, sustainability  
procurement policy



**PRIORITISATION**  
Prioritise focus area



**BASELINE**  
Understand the impact  
and collect better data



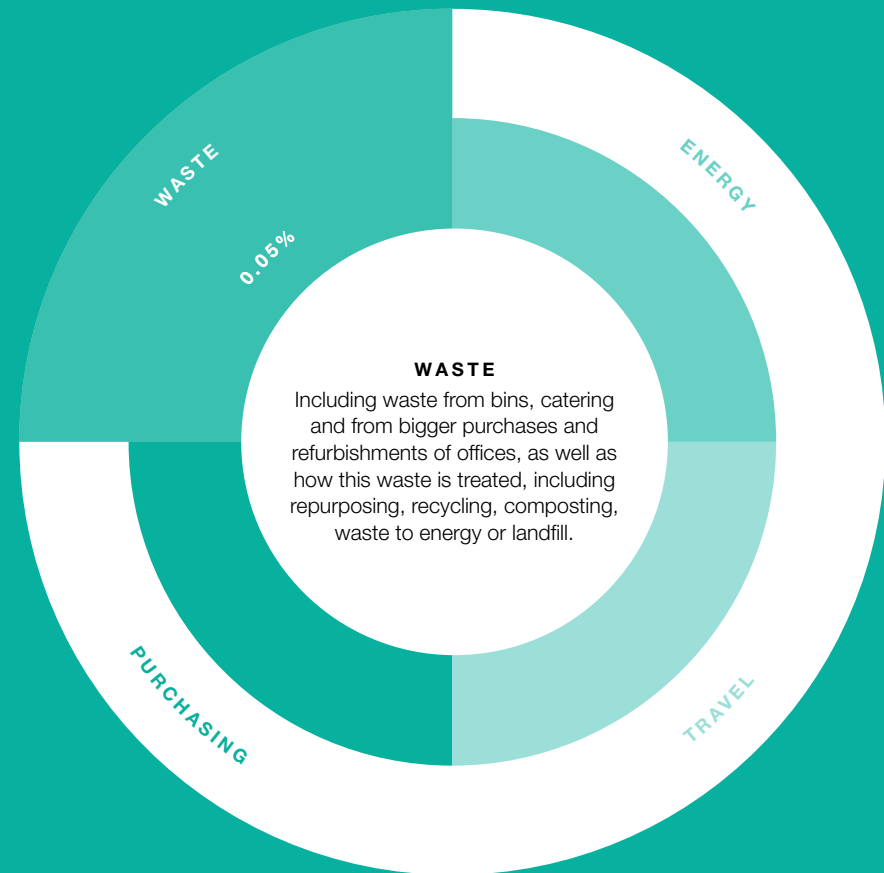
**PROCESS AND QUESTION SELECTION**  
Ask the right questions at the  
right time



**EVALUATION AND MONITORING**  
Choose the best suppliers  
and measure improvements

# Action areas

## How to reduce carbon emissions across our operations.

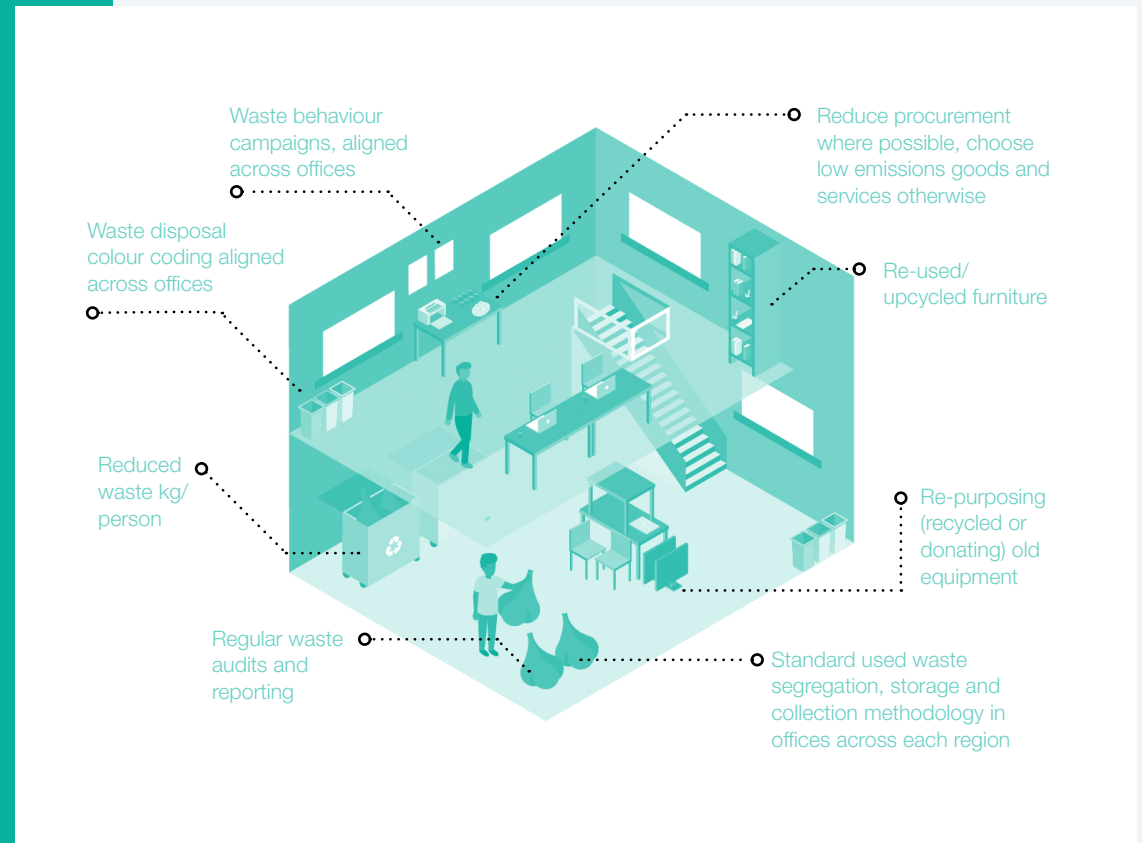


## Waste accounts for 0.05% of our 2018 baseline global emissions

The first principle of reducing waste is not to purchase things in the first place. This is strongly linked to embedding a procurement strategy which incentivises sustainable and circular procurement options. A resource management strategy is key to the waste that still inevitably occurs. The key components of this are to understand the resource streams generated and the potential value optimisation opportunities that would increase reuse or repurposing of the resource and therefore minimise the waste generation in each office location.

We will set region-specific targets for waste to match local legislation, policy, guidance, and infrastructure availability, and monitor and report data and progress more widely to enable understanding of behavioural impact.

We already have processes in place for our IT equipment. In the UK and Europe many of our old computers are donated to charities, our remaining e-waste (including laptops, monitors and other e-waste) is sent to recycling plants in Scotland and Amsterdam.



Time to act  
Prioritising  
science-based  
decarbonisation  
and adaptation  
across our projects.



## Arup service offer

At Arup, we are committed to making a positive contribution to the world, so sustainability is at the heart of our work. We believe that delivering sustainable outcomes for both current stakeholders and future generations will make our business stronger in the long run. Our expertise across carbon, water, waste and energy, economics, and planning and management help us realise solutions at any scale to help shape a better world.

To find out more, please contact:



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We shape a better world

