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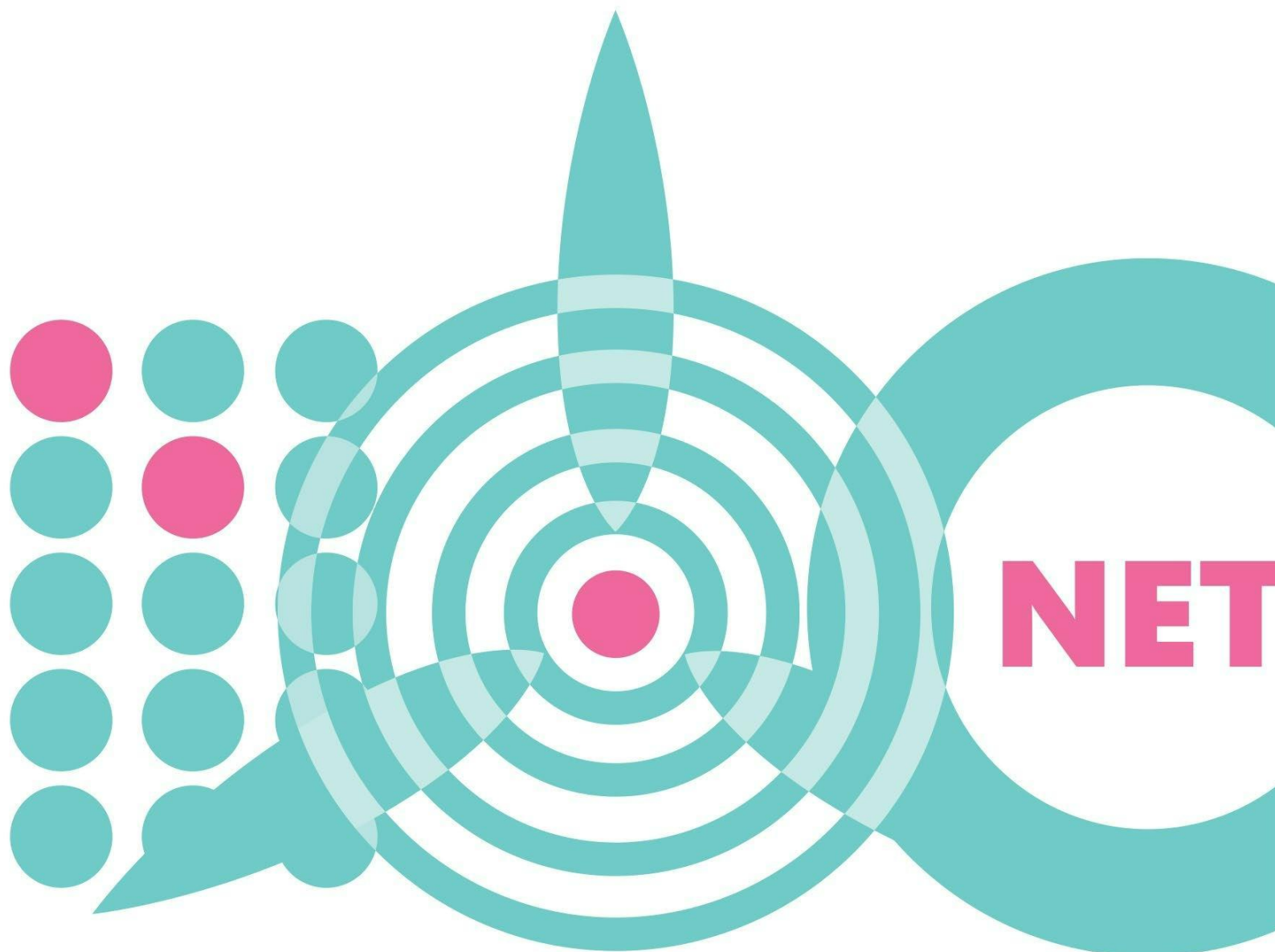
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# Is your organisation set up to deliver Net Zero: 16 considerations for public sector bodies



Observations and recommendations from Modern Energy Partners

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# 1. Executive Summary

## Context

This report provides a summary of the work undertaken between September 21 and March 22 researching the attributes that an organisation requires in order to be able to decarbonise.

This research project explicitly sought to build on the work already carried out by Modern Energy Partners (MEP), and capture further learning including by working with four public sector organisations with significant emissions (Ministry of Defence (MoD), Ministry of Justice (MoJ), National Health Service (NHS) and Department of Education (DfE)). A massive thank you must go to them for their participation.

## Modern Energy Partners

MEP (a programme, funded by the Science and Innovation for Climate and Energy Directorate (SICE) in BEIS, which operated between April 19 and September 21) researched innovative approaches to decarbonising complex public sector sites. It found that there were a number of barriers to be unlocked to enable decarbonisation to happen systematically and become business as usual (BAU).

The MEP Benefits Maximisation Project under which this report was created set out to further examine those challenges and better understand what organisational capability is required to decarbonise, using the concept of operating models as a research framework, and seeking to identify a “Net Zero Target Operating Model”.

## Target Operating Model Research

A Target Operating Model was defined as:

**A way of breaking down an organisational system into components, showing how it works, helping understand the whole.**

Furthermore, it was understood that breaking it down into components or attributes can help leaders identify problems that are causing under performance and help those making changes to transform an operation.

Using these expanded themes, a review of departmental Net Zero activity was carried out through review of current documentation and interviews with stakeholders from different parts and aspects of the sector.

## Findings

Through this research sixteen overarching conclusions were captured and are listed in the table below.

Further detail of the research approach and findings are provided within this summary report, with more detailed feedback provided directly to the departments.

**Through desktop research of known Operating Models (both for organisations generally and environmental operation specifically) four main themes and a number of supporting attributes were established. These were:**

- Leadership and purpose, capturing strategy and values
- Governance and process, capturing decision-making and internal reporting
- People and capabilities, capturing skills and capacity within the department, sector and supply chain
- Organisational structure, capturing the way the organisation is set-up and individuals and teams interact within it.



- 1** The Net Zero Target Operating Model attributes are likely to be relevant across all public sector organisations.
- 2** Whilst the attributes are relevant to all organisations, they will look different for different organisations.
- 3** Typically, stronger leadership at a more senior level promotes greater commitment across the organisation to support decarbonisation delivery.
- 4** Developing a high-level strategy which can be communicated across the organisation sets a clear statement of intent, however, a strategy should be backed up with detailed scaled delivery plans.
- 5** Linking decarbonisation to organisational values makes explicit its importance to departmental operations.
- 6** Incorporating carbon evaluation metrics into operational process, including business case development and approval, and other decision-making, will unlock and support scaled delivery of decarbonisation.
- 7** Enhancing existing information reporting systems with energy, cost and carbon related data will empower stakeholders through better and more timely knowledge.
- 8** Capacity needs to be built for scale and in the right places in the organisation, through mapping of the needs and requirements in each area of the organisation. Skills needs will vary dependent on the type of activity that each actor is going to fulfil.
- 9** If capacity is not available within the organisation then it should be sought from the supply chain, though care should be taken to ensure that consistent and high-quality support is obtained. Capacity will be needed to support delivery, from installation to onsite security escorting contractors.

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- 10** Improving general carbon literacy throughout the public sector will support better buy-in, wider adoption, and scaled decarbonisation.
- 
- 11** Having a clearly defined Net Zero organisational structure, that complements the overall organisational structure, will provide clarity to those across the organisation on roles and responsibilities. Attributing clear targets and goals to each group will support delivery.
- 
- 12** A high-level Net Zero strategy and its underlying delivery plans must consider how all the Net Zero Target Operating Model attributes will be fulfilled, to support decarbonisation at scale in line with relevant targets. This may mean a step change in current deployment plans.
- 
- 13** Trials and tests of technologies, process and decision-making, and different commercial routes must continue, but be more joined up. Knowledge from trials should be captured and shared more widely to help demonstrate scaled delivery models.
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- 14** Recording standard information for sharing amongst a community either within a sector or more widely would help others understand how they can deploy at scale.
- Departments and other public sector organisations need a committed multi-year budget to be able to start to deliver at scale.
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- 15** Clear direction on expectations for departments and other public sector organisations would support the development of scaled decarbonisation plans.
- 
- 16** More guidance and collaboration across Government, to support shared learning and speed of uptake efficiently.
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## 2. Introduction

### Context

Modern Energy Partners (MEP) was an innovation programme that was delivered by Energy Systems Catapult (ESC) for the SICE Directorate at BEIS, with an aim to pilot a scalable and replicable approach to decarbonising “campus-style” public sector sites. The final report for the programme identified that there were many systemic barriers associated with the decarbonisation of public sector estate. A summary of these barriers is shown in Table 1 below.

These areas indicated that to deliver scaled decarbonisation a shift is required in more than just the technical, across the whole organisation with Net Zero embedded in the operating model to enable success.

Building on the outputs of MEP, the Energy Efficiency and Local (EEL) directorate at BEIS then funded the MEP team at ESC to deliver the MEP Benefits Maximisation Project, to disseminate insights to the wider public sector and to research further the conditions, or organisational “Operating Model” that must be in place and the skills required to deliver it, in order that an organisation can reduce its emissions in line with Net Zero targets.

**This report covers a summary of the approach adopted to this research, the evidence found, and relevant recommendations.**





**Table 1: Summary of the systemic barriers to decarbonisation in the public sector estate identified through MEP**

<b>Governance</b>	<b>Capability and capacity</b>	<b>Delivery routes</b>	<b>Funding and planning</b>	<b>Better data monitoring and reporting</b>	<b>Technical thinking</b>
Further senior level commitment required	Increase specialist numbers	Restructure estates delivery frameworks for Net Zero	Ensure the cost of decarbonisation is understood	Gather and use data appropriately	Ensure portfolio planning adopted
More strongly integrated into the whole organisation	Improve general carbon literacy and ensure capability is in the right place	Standardise outputs through expected code of practice to get consistency and quality	Plan project deployment and cash flow for project bidding and deployment	Generate half hourly benchmarks to support design	Ensure that whole system used with consistent technical issues covered
Provide clear governance reporting framework	Empower challenge of supply chain	Select delivery route for best VFM and test out scaled deployment	Blend funding with other upgrading programmes	Generate code of practice for monitoring projects and delivery	Synchronise with maintenance and other capital programmes

## Scope of research

The research activities covered following core areas:

1. Evidence based research on Target Operating Models
2. Engaging with departments/ organisations to understand their current Operating Models (both overall and Net Zero)
3. Analysing the evidence gathered through literature reviews and interviews, assessing findings, drawing conclusions and presenting recommendations.

The following sections provide more detail on the approach adopted.

## Approach to evidence-based research on known Target Operating Models

To establish the attributes that make up a Target Operating Model the methodology shown in the diagram below (Figure 1) was adopted, with the research being carried out from step 2 onwards.

## Figure 1 Approach to defining the Target Operating Model attributes

At the same time as carrying out this desktop research, departments were recruited to support further evidence gathering.

**Setting a framework against high-level attributes to build upon.**

**Identifying research sources (including traditional organisational Operating Model theories and those applied to environmental and carbon management).**

**Reviewing information sources against framework and capturing evidence of common attributes.**

## Approach to departmental research

The departments/organisations who agreed to participate in the research were MOD, MOJ, NHS and DfE. They offered up two forms of information to support the research: desk-based research and stakeholder interviews. Firstly, through a key contact, existing material in the form of published strategies, policies, standards and other relevant documentation was shared with MEP. This was reviewed in discussion with BEIS and the department to agree a specific area of their current Target Operating Model on which to

focus the research (this varied in each department). A high-level summary of the Target Operating Model for each department and a summary of the key findings for each is provided in each of the departmental sections.

Following this, a shortlist of key stakeholders for interview was drawn up based on recommendations from key contacts, and these stakeholders were contacted, and a meeting arranged. An average of 12 interviews were carried out across each department.

## Findings

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**The outputs from the desk-based research and the interviews were then analysed and written up, with the findings represented in this summary report and the more detailed analysis set out in the departmental subsections.**

**The following sections are broken down into:**

- The definition of the Net Zero Target Operating Model and its attributes
  - The conclusions set out against key Net Zero Target Operating Model themes
  - A cross cutting section covering key themes and patterns that emerged associated with being able to achieve Net Zero delivery.
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## 3. Definition of Target Operating Model used in this research

### What is a Target Operating Model?

Typically, an organisation is a complex system for delivering value through a service or a product. An Operating Model breaks this system into components, showing how it works. It can help different participants understand the whole. It can help leaders identify problems that are causing under performance. It can help those making changes check that they have thought through all elements and that the whole will still work. It can help those transforming an operation coordinate all the different changes that need to happen.

### Why is a Target Operating Model relevant?

Understanding how to optimise a Target Operating Model can enable organisations to maximise the effectiveness and efficiency with which they are delivering their strategic goals; in this case Net Zero.

Understanding the components or attributes that make up Operating Models in general and a Net Zero Operating Model specifically, can provide a framework to underpin guidance for public sector organisations on decarbonisation, covering organisational attributes like governance, people, and the capabilities and leadership of the organisation itself.

### Development of the proposed Target Operating Model attributes

From the initial review, four key areas/ attributes were identified that should be displayed within an organisation. These were purpose and leadership, governance and process, people and capabilities, and organisational structure. A summary of the interpretation of each is shown in the table below:



**Table 2: Proposed Target Operating Model attributes**

<b>Target Operating Model attributes and description</b>	
<b>Attributes</b>	<b>Description</b>
<b>Purpose and leadership</b>	Driven by clear leadership; desired outcomes and guiding principles are determined, communicated and understood at all levels of the organisation. A purpose and strategy for delivering the outcomes is set out. Progress is monitored and managed through an understanding of timelines, funding and overall cost for delivery and through a definition of what success looks like, detailing how it should be measured and reported, including defined KPIs, goals and initiatives.
<b>Governance and process</b>	How work is agreed, initiated, and overseen and related processes (for example assurance and approvals). It encompasses all the process levels (from design through to monitoring and reporting) necessary at each stage of delivering on Net Zero, and how they are connected and coordinated to create an end-to-end system. It sets out the governance framework, which defines the risks and controls for every process and sets decision-making procedures. Net Zero should be embedded in both elements of this component.
<b>People and capabilities</b>	<p>What individuals, skills and capabilities does an organisation need to deliver its Net Zero strategy. This covers all stages of delivering Net Zero, from objective setting, to planning, to project design through to procurement and delivery, with roles and responsibilities clarified and clearly allocated. Where the capability does not sit within the organisation, a model is provided for its procurement/employment.</p> <p>The role of technology to automate and streamline workloads is also outlined.</p>
<b>Organisational structure</b>	How are the relevant individuals organised into functions and teams within the organisation and how do these individuals, functions and teams align and interact into an organisational structure with shared goals that supports delivery of Net Zero.

### Detailed attributes

Further research was carried out to define these attributes in more detail, as shown in the table below.

Throughout the four attribute areas, flexibility and ability to adjust and alter course was seen as important. These attributes have then been used as a baseline in the research on the departmental Target Operating Models.

**Table 3: Summary of attribute areas identified through desk-based research**

Tier 1	Tier 2	Tier 3
Purpose and leadership	Clear and visible leadership	Who is responsible
		How frequently they are involved
		Who will be involved
		How leadership is made accountable
	Strategy and embeddedness	Net Zero strategy
		Level of organisational adoption/ integration
	Desired outcomes (defined, communicated, understood)	Emissions targets; agreed boundaries and scopes 1, 2, 3; exclusions
		Timeline
		Interim targets
		End target(s)
		Target alignment
	Guiding principles (defined, communicated, understood)	Type or reporting method used
		How decarbonisation will be delivered
		Overall timeline for delivery
Organisational capacity needed for delivery		
Values		
Behaviours		
	Business as usual predictions/ cost of inaction or failure	



Tier 1	Tier 2	Tier 3	
<b>Governance and process</b>	Governance framework	Approval, sign-off, decision-making	
		Carbon pricing	
		Consulting and informing stakeholders	
		Delegated authority	
		Risks	
		Risk mitigation and control	
	Planning and tracking progress	Defined processes and workflow	Capacity to operate at scale
			Planning for future budgeting
			Funding
			Cost for delivery
			Planning spend
			Emissions measurement
			Emissions forecasting
			Internal reporting
			Measurement
			Delivery focus
			Definition of success
Communication		Funding and budget control	
		Timelines	
		Publication of strategy	
<b>People and capabilities at all stages of Net Zero delivery</b>	Skills and capabilities	Progress reporting internally	
		Progress reporting externally	
		Internal capacity to deliver at scale	
		Training and development of personnel	
	Technology to streamline workload		Empowerment, authority, and delegation
Procurement of capacity			
<b>Organisational structure</b>	Clear roles and responsibilities	Speed of capability development	
		Engagement	
		Defined and understood	
		Team targets for Net Zero	
		Individual targets for Net Zero	
		Alignment of targets with high-level targets and strategy	
		Targets aligned with delivery of Net Zero	

## 4. Net Zero Target Operating Model research conclusions

### Overarching conclusions

#### **Conclusion 1:**

**All Net Zero Target Operating Model attributes were found present in each organisation.**

**The Net Zero Target Operating Model attributes are likely to be relevant across all public sector organisations.**

Each organisation was found to display the attributes identified in the researched Net Zero target Operating Model.

#### **Conclusion 2:**

**Whilst the attributes are relevant to all organisations, they will look different for different organisations.**

Whilst the attributes were present in each of the organisations, they were not exactly the same. It was found that this was because the overall Operating Model of each organisation is different. The table below summarises the differences between the overall organisational Operating Models.



MOJ	MOD
Operates centrally with one body developing strategy and deploying/commissioning work.	Operates as one organisation, with Finance and Military Capability (FMC) setting strategy, and then split into (Top Level Budget) TLBs responsible for their own strategies and budgets, deploying funding through a centralised Defence Infrastructure Organisation (DIO) body.
NHS	DfE
Operating a central policy team NHSE&I, working through seven regional hubs, 42 Integrated care systems (ICSs) to commission healthcare (per unit funding) and set metrics to influence how circa 220 trusts, and small entities <sup>1</sup> , deliver.	Operating a central policy team. Funding is offered per pupil for education through multiple different routes by trust, by Local Authority (LA) or religious body.

<sup>1</sup> Small entities within the NHS, for the purpose of this report have been defined as GPs, opticians, pharmacists and dentists

It was found that the Net Zero Target Operating Model attributes were often applied in different ways and with differing emphasis. For example, in summary:

**Leadership and purpose**

- Leadership for overall operating is always displayed within a central body, however delivery of services is then arranged differently, to meet need. This also applied to Net Zero skills and capability.
- All the organisations had or are developing a Net Zero strategy to state purpose, which cover similar metrics. However, follow up delivery or implementation plans look and feel different, to fit into their existing frameworks.



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**Governance and process**

- Each organisation is likely to deliver decarbonisation in a different way, through different business processes and governance models.
- Decision-making is different in each, though the evaluation metrics in the future ought to be similar, to enable consistent progress.
- All require reporting processes to track progress, but each will need to be formulated differently to work with existing data collection and information systems.

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**People and capabilities**

- Similar skills are required overall to understand the technical needs of projects, but people are likely to be resourced in different ways and as a result need different individual skill profile.
- Carbon literacy should be applied across the board.

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**Organisational structure**

- The Net Zero organisational structure and the delegation of responsibility will be different, reflecting on the needs of the existing structure.



## Purpose and leadership

### Conclusion 3:

**Senior leadership and commitment are essential to the delivery of a successful decarbonisation plan.**

**Typically, stronger leadership at a more senior level would promote greater commitment across the organisation to support decarbonisation delivery.**

### Conclusion 4:

**Developing a high-level strategy which can be communicated across the organisation sets a clear statement of intent, however, they should be backed up with detailed scaled delivery plans.**

### Conclusion 5:

**Linking decarbonisation to organisational values makes explicit its importance to departmental operations.**

The research on Target Operating Models showed that strong leadership was one of the key attributes to a successful Target Operating Model.

However, throughout the research interviewees consistently suggested the ownership shown at the top of the organisation could be improved. When probed to explain why, interviewees often linked senior level commitment to the organisation:

- being unable to commit funding, preventing the ability to prioritise, commit or deliver Net Zero

- not having clarity of the targets it must deliver against.

MEP's understanding of public sector decarbonisation targets is as follows:

- The GGCs (Greening the Government Commitments), but these are understood to be only government departments and their arm's-length bodies (ALBs); i.e. excluding hospitals and schools etc. Furthermore, the level of ambition shown by the targets varies by organisation, with targets set through negotiation with the department's sustainability leads.

- The organisations involved in this research have set themselves targets which have been included in their own strategies.
- Other reporting frameworks outside the departments (in addition to GGCs) include Strategic Asset Management Plans (SAMPs), which offer a mechanism to ask for details of action, but it is understood that these again only cover government departments and their ALBs.

Without this improved ownership and funding commitment throughout entire organisations, intention and purpose is not sufficiently clear.

This uncertainty wasn't however reflected in the leadership and ownership demonstrated by the central sustainability teams or like-minded individuals that were spread across the organisations. In all cases leadership was shown, and an understanding of the current strategy known.

High-level strategies to decarbonise existed (with the exception of DfE, where this is expected in April 2022 subject to approval), however the underlying detail for their delivery was still evolving.

The more detailed delivery plans that are in development were not reviewed, but the ambition was described by those interviewed. The MEP team consistently observed that there was not consideration of the required step change to widespread scaled delivery.

Another observation was that the strategies being published were high-level and didn't come with funding for delivery. This meant that it was hard to understand how they could be implemented. Linked to this, interviewees from all departments flagged disappointment with their related CSR bids. Specific impacts include:

- MOJ has a strategy which is approved but not funded, so unlikely to be successful.
- MOD's Facilities Management Contractor (FMC) can't set out a more detailed prioritisation plan for Top Level Budget departments (TLBs) as they don't have the funding to back it up, and without funding TLBs are unlikely to act upon it.

The research showed that a successful Net Zero Target Operating Model included clear organisational Net Zero values. All the studied organisations had such values, but it was observed that they were not clearly communicated or understood across the whole organisation, and instead were only really understood by the NZ focussed teams.

MEP also observed that if values were linked back to the organisation's own operating values then overall decarbonisation was likely to be more successful.



## Governance and process

### Conclusion 6:

**Incorporating carbon evaluation metrics into operational processes, including business case development and approval, and other decision-making, will unlock and support scaled delivery of decarbonisation.**

### Conclusion 7:

**Enhancing existing information reporting systems with energy, cost and carbon related data will empower stakeholders through better and more timely knowledge.**

MEP observed key differences in the way that operational governance and process was applied in the different organisations:

- For MOJ and MOD (where the organisational structure and control over estates is more centralised) process was embedded into day-to-day tasks and was interlinked with delivery
- For the NHS and DfE the process and governance were often applied for specific activities to award funding and encourage adoption of certain actions.

Governance processes were often complex, time-consuming and very financially focused. Cost was often the leading decision-making factor, though whole life cost was often considered, not just capital investment.

It should also be recognised that governance and process often evolve over time to enable each department to support their core services. Rapid incorporation of decarbonisation into those processes to meet Net Zero targets is likely to be needed.

In places, current processes or mechanisms to set standards are unlikely to fit the decarbonisation needed, and additional processes may need to be developed. Examples of where this was observed include:

- Schools and smaller entity healthcare are funded on a per pupil or per patient basis. It is down to the school, the GP, or other to determine how that funding is spent against minimum standards that must be met. At present there are no Net Zero standards or expectations. Other minimum standards for building and health and safety do exist.

- For other areas, relevant requirements exist but the mandate to meet them isn't included in the governance structure to ensure that targets are met. For example, the NHS has Net Zero targets for Trusts, but they aren't mandated in any of the normal commissioning routes.

Decision or process making is currently not set up to enable quick evaluation of projects to decarbonise. There are some exceptions:

- For large projects for Trusts, the NHS has gone some way, however for the small entities, e.g. GPs, this is not the case
- For new schools through DfE and hospitals Net Zero is a requirement.

From a carbon perspective:

- HMT's Green Book and the carbon appraisal of projects has not been fully adopted. Simplifying this or automating an assessment would enable metrics to be generated more readily (and support the skills challenges below). This simplification could be generated centrally for consistent assessment
- A carbon valuation of every option in a business case is not included making it difficult to compare the

options being presented in a way that recognise the costs and benefits of decarbonisation and make an evidence-driven decision on the best approach.

Process can be used as a way to encourage adoption or can become a barrier. Current process and governance were observed as acting more as a barrier due to the lack of integration of carbon emissions evaluation within the governance process.

Systems used to monitor emissions baselines and reduction progress for the estate as a whole, and specific sites and projects, were observed as evolving rather than operational. The Operating Model research demonstrated that ensuring all stakeholders have a good grasp of relevant data from information systems ensures that progress is monitored and drives awareness, both of which unlock action.

Current information systems were limited to providing small groups of stakeholders with high-level reporting. The data is being used externally for reporting frameworks such as the SAMPs and GGCs.

It was considered that information systems would also support realistic planning of delivery timelines for overall decarbonisation.



## People and capabilities

### Conclusion 8:

**Capacity needs to be built for scale and in the right places in the organisation, through mapping of the needs and requirements in each area of the organisation. Skills needs will vary dependent on the type of activity that each actor is going to fulfil.**

### Conclusion 9:

**If capacity is not available within the organisation then it should be sought from the supply chain, though care should be taken to ensure that consistent and high-quality support is obtained. Capacity will be needed to support delivery, from installation to escorting contractors.**

### Conclusion 10:

**Improving general carbon literacy throughout the public sector will support better buy-in, wider adoption, and scaled decarbonisation.**

It was very apparent from the interviews that across each sector there were individuals and teams who understood the challenges and were working very hard to effect decarbonisation. They were often in specific sustainability or Net Zero roles, not part of the wider Operating Model of the organisation. The teams were looking to build strategy, and at the same time deliver small-scale projects.

Across all sectors it was felt that there was not enough capacity in the right place to be able to support future widespread scaled decarbonisation. Gaps in capacity and skill were

particularly noted around the practical application of projects or/and energy monitoring at site level. Identified skills gaps were:

- Onsite energy management for MOJ and MOD
- Net Zero awareness and action within subsets of schools, particularly Single and Multi-Academy Trusts (SATs and MATs)
- Net Zero awareness and action at GPs and other small entities in the NHS.

Much of the lack of skills and capability was put down to tightness of resource and funding, or change in overall governance; for example, MOD used to have site energy managers and where schools were linked to LAs in the past there would have been central resource.

Many comments were made around the lack of specialists and that generalists were often trying to fulfil the role. General carbon fluency and literacy amongst the wider audience was also considered low.

Even when carbon metrics are incorporated into processes and information systems, there will be a need for those scrutinising or approving to understand and be able to appraise what they see. Therefore, up-skilling of core delivery staff is required in all departments. Consistent terminology and guidance incorporated into training would support this cross-government.

In smaller entities such as schools or GP practices, supporting time-short individuals is probably best done through handholding and generating simplified packaged solutions. This could be developed by one department or cross-department, and many other departments and agencies are likely to have similar small buildings being operated – DWP and Job Centres as an example.

A wider appraisal of the skills requirements and the differing types of government estate would help identify some “archetype” training/ skills or support solutions that could be deployed. This could be linked to further improvements of the OGP Career Framework.

## Organisational structure

### Conclusion 11:

**Having a clearly defined Net Zero organisational structure, that complements the overall organisational structure, will provide clarity to those across the organisation on roles and responsibilities. Attributing clear targets and goals to each group will support delivery.**





The research on Operating Models demonstrated the need to have a strong organisational structure with clear expectations laid out for those within the delivery teams. Expectations can be set as team or individual targets.

It was found that the same applied to a Net Zero Operating Model, particularly where a department or organisation was complex and made up of multiple bodies or organisations.

Through the departmental research it was found that often those taking responsibility for sustainability or Net Zero were in different parts of the organisation and were not sufficiently organisationally linked. All save the MOJ had multiple parts of the department or organisation working on Net Zero independently. This led to two different outcomes:

- Separate, sometimes overlapping, initiatives and duplication of thinking
- Gaps forming between areas of coverage leading to disjointed working.

The relationship between Net Zero and overall operating structures should be mapped and analysed to ensure and demonstrate that the two are coherent, and particularly that the Net Zero operating structure can work with the grain of the overall operations of the organisation.

This has to be applied with flexibility according to the organisation it applies to, for example there were clear differences in the organisational structures and the related governance and process between the centralised departments of the MOJ and MOD, and the less centralised NHS and DfE.

Setting targets and performance metrics for a team or individual across an organisational structure requires the responsibilities and governance to be clear. A route to set targets or metrics through the organisation structure must be present.

The MOD offered this organisational route through the setting of priorities annually, the NHS through its requirement for Trusts and ICSs to submit Green Plans. It was seen as harder under the current organisational structure to set targets for GPs, and schools for the DfE.

Without the structures that enable targets to be set it is hard to embed individual responsibility, action and empower authority. The limited setting of targets for individuals and teams is seen as linked to leadership. If a Net Zero operating structure was drawn up it would make the application of Net Zero targets much easier.

## 5. Delivering to achieve Net Zero

As well as looking at the key attribute areas of a Net Zero Target Operating Model the MEP team also identified a number of cross-cutting themes that should be taken into account when planning delivery of Net Zero.

### A step change in scale

#### Conclusion 12:

**Following on from Conclusion 4 (Developing a high-level strategy which can be communicated across the organisation sets a clear statement of intent, which should be backed up with detailed scaled delivery plans), a high-level Net Zero strategy and its underlying delivery plans must consider how all the Net Zero Target Operating Model attributes will be fulfilled, to support decarbonisation at scale, in line with relevant targets. This may mean a step change in current deployment plans.**

Each participating organisation has published a high-level Net Zero strategy, explaining ambition. However, the research showed details for delivery are at early stages of development, yet to be published.

The formulation of delivery plans is crucial to the way that Net Zero is adopted and will influence the speed of deployment and the overall cost of delivery.

2032 is only a decade away, and for the aggregate target of a 50% reduction in direct emissions from public sector buildings to be met, individual organisations need to decarbonise

as ambitiously as possible and a step change in the pace and scale of delivery is required, including changes in the following:

- The funding available, with sustained funding for projects to be deployed over multiyear programmes
- The way projects are delivered, with large delivery programmes and contracts agreed with the private sector, driving scale and cost reduction
- The level and number of skilled individuals both in the public sector and supporting organisations.

Through the interviews with the centralised departments it became clear (though delivery plans were not fully shared) that plans were being formulated around delivering multiple projects, rather than coherent programmes. Save a few examples, most considered Net Zero would be met by delivering many small site-based projects.

For the more dispersed sectors such as health and education, the challenge of scale was also a concern from a similar

but different perspective, particularly around the ability to deliver at scale and get the best value for the public purse. This was linked to the availability of a network of advisors and installers.

Widescale delivery programmes could involve multi-site installations, with efficient procurement of large volumes of standardised equipment that will give access to low-cost products for the dispersed organisations, such as schools or smaller NHS entities, and enable faster deployment.

## Trialling out technology and delivery routes

### Conclusion 13:

**Trials and tests of technologies, process and decision-making, and different commercial routes must continue, but be more joined up. Knowledge from trials should be captured and shared more widely to help demonstrate scaled delivery models.**

**Recording standard information for sharing amongst a community either within a sector or more widely would help others understand how they can deploy at scale.**

Throughout the interviews MEP heard many technology trials described, often with different commercial routes. It was found that trials were repeated in different organisations without learning from others' experiences: the end of a technology trial often led to the end of a project and information and learning was then lost. Trials weren't always then moved into mainstream delivery, just repeated in small volumes.

Similarly, the trials described were around "innovative" technology rather than how to deliver "no regret" measures at scale to accelerate technology. Both of these are seen by MEP as equally valid.

Departmental budgets for Net Zero were seen to be small, and often expended upon the trials, or small projects with no further work then done in the area once complete.



## Funding and finance

### Conclusion 14:

**Departments and other public sector organisations need a committed multi-year budget to be able to start to deliver at scale.**

Overwhelmingly, funding or lack of money was the most quoted barrier to success. This applied across each organisation but manifested itself in different ways.

For all organisations the lack of surety of funding to plan and deliver a sustained programme over multiple years was cited as reason for organisational leaders not committing to deliver.

It was expressed that a sustained funding programme would enable commitment, planning and then delivery against a rational, efficient and coherent plan. PSDS was seen as a scheme that led to ad-hoc projects rather than programmes being deployed. There was also frustration that the timing of the application process prevented strategic planning from happening. In more detail:

- MOJ and MOD were unable to respond or deliver within the timelines set by the scheme. A longer-term scheme for MOD and MOJ would enable them to be able to successfully deploy projects
- For MOJ it was also difficult to meet the abatement levels set due to additional costs: a higher level of abatement would be needed for

prisons to be able to decarbonise at the same rate as the rest of the public sector

- For DfE there was concern that SATs and MATs were unable to access or even unaware of the scheme and therefore not responding. It was suggested that a funding route that enhanced an existing scheme understood by SAT and MAT schools should be used to enable better adoption.

Conflicting priorities for funding were also often cited as a barrier for access to organisational budgets: the poor condition of the estate requires substantial investment, which limits BAU budgets. Decarbonisation projects are often not seen as viable against other delivery options where the costs are more than the BAU replacement, with long paybacks.

Small funding budgets are available within some organisations for trials, which demonstrate that organisations are still in the learning phase rather than ready for wider deployment. Funding is not available to be able to design and action a widescale decarbonisation plan.

## Wider support and collaboration

Throughout Section 5, the opportunity for wider Government support has been highlighted. The following pages provide a summary of related points:

### Conclusion 15:

**Clear direction on expectations for departments and other public sector organisations would support the development of scaled decarbonisation plans.**

Comments were often made by those being interviewed around the wider responsibility of organisation such as BEIS, OGP and HMT. Suggestions included:

- Setting really clear departmental targets for the most senior person in each department to own
- Providing (more comprehensive than SAMP and GGC) annual reporting requirements for departments to encourage more detailed thinking around how Net Zero is going to be delivered. This should incorporate an explanation of:
  - o Organisations which are responsible for others (central government departments and ALBs, DfE and schools, etc) are going to stimulate and incentivise them to decarbonise.
  - o How better data and information will be generated and shared with each of the stakeholders within the Net Zero structure
- Providing funding for the departments over a time period but only on the provision of an implementation plan



## Conclusion 16:

### Wider guidance and collaboration across Government, to support shared learning and speed of uptake efficiently.

Sharing knowledge and information across government was consistently seen as a good thing, with interviewees suggesting “practical support”.

Centralised guidance, case studies and information were also seen as useful to save duplication. This included:

- Generating centralised information and guidance or tools on:
  - o a reporting framework that departments are asked to apply, including to produce better information
  - o wider guidance or information resources
  - o a simplified calculation tool for generating information for business cases (building upon the HMTs Green Book approach)

- Supporting the appraisal of skills against archetype needs for the different types of stakeholders managing different types of property
- Forming of a cross-government practical working group on deployment of:
  - o Technical solutions
  - o Commercial deployment at scale
- Providing guidance and case studies/ examples to support learning
- Forming of cross-government working groups for smaller entities led by DfE and NHS.



## 6. Annexes

## Annex 1: Research questions

The departmental evidence gathering, and analysis part of the research focused on the BEIS-commissioned questions listed below. The interview questions set out in Annex 2 were specifically developed to gather information which related to these research questions. BEIS provided two sets of research questions which within the table have been combined to avoid duplication of answers. These combinations are reflected in the numbering systems where some have two numbers.

Focal area	Research question
Current Net Zero operating model	2.1a) What are the Current Operating Models in organisations for reducing their own emissions in line with Net Zero?
	2.1b) Is this model sufficient to enable / plan / deliver the action required to reach Net Zero?
	2.2) What components of the Current Operating Model work well?
Target Net Zero operating model	3.1a) What is the recommended Net Zero consistent Target Operating Model for each organisation?
	2.6) and 3.1b) What are the organisation's views on the definition of Operating Model / Target Operating Model proposed as part of Work Package 1, and does it fit with their understanding of their own organisation? Are there areas for refinement / redesign based on this? Is it a one size fits all model?
Gaps and transition	3.3) For each organisation investigated, what are the differences between the Current Operating Model and the Target Operating Model? (This should highlight gaps in knowledge / skills, challenges and barriers.)
	2.4) and 3.6) What components of the Current Operating Model could be improved within the organisation? What strategic recommendations and insights can be made by ESC to facilitate a transition from current to Target Operating Models, at an organisational level?



Maturity and scale	3.4) What is the level of maturity in organisations surveyed, both in terms of Operating Models and tasks they have undertaken / their overall preparedness to decarbonise their estate? Are there any identifiable trends and if so, what is driving them? This should feed into the development of an assessment method / framework for organisations to continue in the future to self-assess their position against the target state - how does it feed in?
Skills and capacity	2.3) What skills and expertise do organisations currently have and where are they within the Operating Model?
Barriers to success	2.7) and 3.5) What are the barriers to implementation? What, if any, additional support do organisations feel would be required to address barriers, especially relating to capacity and capability, in their progression to the Target Operating Model? If needed, how would this support be best delivered? What, if any, systemic barriers exist that sit outside the organisation and need to be addressed? This should map the systemic barriers onto the Operating Models to identify where the issues arise.
Wider Government support	3.2) and 2.4) For any groups of organisations, should there be consideration given to the Wider Government Target Operating Model? What components of the Current Operating Model could be improved on a wider Government level (i.e. at a cross-central government level for government departments, or at an NHS-wide level for hospitals, etc)? What strategic recommendations and insights can be made to facilitate the transition at the wider Government level?
	2.5) What additional support have organisations had through programmes such as MEP or similar capacity and capability initiatives to fill gaps in the Current Operating Model, and how has this impacted the ability of the organisation to deliver?



## Annex 2: Interview questions

The following interview questions were developed to answer the research questions set out in Annex 1 as efficiently as possible. They were developed with support of social research expertise within BEIS.

Area	Question
Introductions	
General	Initial statement about the purpose of the work, the reason for carrying it out and what specifically the dep/org is going to get from it - plus what BEIS gets
	Name and role of individual
Check of knowledge	Level of engagement question, e.g. What do you think about delivering NZ within the department / and associated bodies? See if they know timelines - particularly 2032 target!
If applicable to role	Ask about if they a) have a view on PSDS
	Ask about if they a) have a view on LCSF
	Ask if they knew about the MEP programme.
	Have you used any materials from anywhere? E.g. OGP property portal? Or Hubs?
TOM	Intro main questions: throw away question - asked gently. Do you understand what a TOM is?
	Do you know how it is applied in your organisation? And in particular NZ (NZ bit only if applicable).
	Is it ever amended? Are there any changes planned at the moment?
	Explain our TOM attributes and see if they agree with what they have in their organisation
Strategy	In terms of NZ within the organisation is there a clear strategy? And has it been communicated well?
	Is it also written in the overall department strategy?

Delivery	Can you see that it is going to be delivered?
	Do you know how it will be funded and approved?
	What barriers can you see stopping it from working?
Leadership	Who is ultimately responsible for its delivery?
	Have they shown commitment to do so? How does that work in reality with governance?
Personal	Do you think you will be asked to do anything in your department / team? (Re-phrase for NZ departments.) What do you think that will be?
Skills	Do you think you or your team have the right knowledge or skills?
	If more are required, how would you seek them? (Internal or external?)





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