

# DNZ | DELIVERING NET ZERO

## KEY THEMES FROM PUBLIC, PRIVATE AND THIRD SECTOR STAKEHOLDERS

### ANALYSIS OF ROUND 2 WORKSHOP RESULTS

PROJECT PARTNERS:



PROJECT FUNDERS:



---

## EXECUTIVE SUMMARY

The Delivering Net Zero (DNZ) project seeks to bring together and explore a range of cross-sector expert perspectives to identify where consensus does and does not exist on how the UK should deliver net zero. This has been achieved via the development and delivery of three rounds of deliberative workshops during 2021. The first round convened 42 leading academics from across the research community, identifying eight key themes explored in the Round 1 report, available [here](#).

This report explores the key themes to emerge from the second round of workshops, which brought together 40 participants from across the public, private, third and funding sectors to explore the barriers, opportunities and priorities for reaching net zero. Stakeholders were encouraged to consider both their own and broader sectors and given the opportunity to reflect on the themes from the Round 1 workshops to develop messages to deliver back the analysis to the research community. This report provides an overview of the initial themes to emerge from these stakeholder workshops. The first section provides an overview of the workshops and details the analysis approach and methodology. Section 2 identifies and discusses the broad, cross-cutting themes that emerged, which are also summarised below. Section 3 provides a summary and comparison of each workshop session, looking into the key discussion points for each group of stakeholders.

**AUTHORS: RACHEL CARR-WHITWORTH, ROBIN STYLES, OISIN WILSON, JOHN BARRETT, SAM BETTS-DAVIES, MIKE COLECHIN, EMILY COX, NICHOLAS PIDGEON, ANNA WATSON**

---

## EIGHT OVERARCHING THEMES:

### THEME 1: THE NEED TO IMPROVE PUBLIC ENGAGEMENT WITH NET ZERO AND WIDEN PUBLIC PARTICIPATION

Across the workshops, poor communication and a lack of public engagement were discussed as key barriers to decarbonisation. Participants discussed the need to widen public participation in decision making, both to ensure that there is consent for decarbonisation measures, and that they are done in a just way.

### THEME 2: THE NEED TO OVERCOME POLITICAL BARRIERS

Participants identified a range of political barriers to decarbonisation. This included the short termism of the political system, risk aversion of decision makers, a general lack of the necessary policy and incentives to facilitate change, and a lack of alignment between the goals of government across departments and scales.

### THEME 3: THE NEED TO FOCUS ON RAPID DEPLOYMENT AND 'LEARNING BY DOING'

There was a strong emphasis on deploying 'low regret' solutions as rapidly as possible. Participants also felt that there should be more focus on deployment in general, which was perceived as an iterative process in which some projects will fail but provide opportunities to learn from these mistakes.

---

## OVERARCHING THEMES CONTINUED

### THEME 4: THE NEED TO UPSKILL AND CAPACITY BUILD IN THE GOVERNMENT AND WORKFORCE

There is a need to upskill the emerging workforce required to deploy solutions and to build capacity in government. Local authorities in particular were seen as important agents of change in need of more funding and resources.

### THEME 5: THE NEED TO ENSURE A JUST TRANSITION

Participants put a strong emphasis on the need for a low carbon transition to be just. It was felt that there were strong opportunities to reduce social inequalities and to deliver co-benefits via this approach.

### THEME 6: THE NEED FOR APPROPRIATE FUNDING STRUCTURES AND BUSINESS MODELS

Participants felt that there is a need for a clearer understanding of how net zero will be funded, how to overcome the barriers to funding effectively, and how to rapidly re-direct flows of capital to align with delivering net zero.

### THEME 7: THE NEED FOR URGENCY

Largely, participants felt that there is a strong need to move more urgently and focused their priorities on the short term, expressing the dangers of relying on 'silver bullet' technologies. However, the speed and scale of change possible was somewhat contested by participants in the private sector workshop.

### THEME 8: THE NEED FOR A SHARED SENSE OF RESPONSIBILITY AND COLLABORATIVE ENDEAVOUR

Participants held different perspectives on who has responsibility to drive net zero. For example, the private sector and local authorities saw it as lying with central government and ministers, while third sector participants highlighted that there is no 'systems architect' and the need to take collective responsibility. Overall, there were common calls for better collaboration and cooperation across institutions, organisations, the government and internationally.

---

## CONTENTS

Executive Summary	2
Eight Overarching Themes	2
Contents	4
Introduction	5
Project Overview	6
Round 2 Approach and Analysis	8
Overarching Themes	10
Workshop Session Comparison	18
Opportunities	19
Barriers	21
Common Priorities in the Short and Long Term	24
Exploring the Round 1 Themes	27
Key Messages to the Research Community	30

---

## INTRODUCTION

Delivering Net Zero (DNZ) is a UKRI funded collaboration between the University of Leeds and Cardiff University, working with Cultivate Innovation to present a vision of what is required to deliver a net zero future in the UK, guided by the best available academic evidence. Using a series of structured deliberative workshops with leading members of the UK's research community and key stakeholders from the public, private, third and funding sectors, the project aims to outline a shared narrative for reaching net zero through measures which will have impact in the short term (up to 2030) and long term (following 2030).

The second round of workshops discussed in this report have been structured to explore the common barriers, opportunities and priorities of stakeholders from across these sectors, to help identify the urgent initial steps and a longer-term strategy for delivering net zero. They also explored the stakeholders' responses to the themes identified by the research community in the Round 1 workshops and clarified the main points that they would like the research community to address to help stakeholders better deliver net zero. This second round of workshops therefore provided an insight into what these stakeholders want from the research community and how research and collaboration can assist in accelerating cross-sector progress. Ultimately, the project aims to ensure that research funded by the UKRI Energy and Decarbonisation Programme has the maximum opportunity to inform and guide the response of UK decision makers to climate change.

This report provides an initial analysis of the second round of DNZ workshops which took place in June 2021. Section 1 provides a brief overview of the project, its timeline, and the methodology undertaken to conduct the analysis. Section 2 provides an overview of eight high-level, overarching themes which developed across all four workshops. Finally, Section 3 details and compares across the different sector-based group workshops, with sections on the four sessions of the day: opportunities and barriers, priorities and timeframes, exploring the Round 1 themes, and the key messages for the research community.



## SECTION 1: PROJECT OVERVIEW

The project consists of three ‘rounds’ of workshops, as depicted in Figure 1. Workshops were held online, facilitated, and recorded using Zoom and Mural software. Round 1, which took place in February and March 2021, consisted of two workshops involving 42 researchers across a range of disciplines, aiming to develop an initial narrative around net zero. The outcomes of these workshops are summarised in our report [‘Delivering Net Zero: Key Themes From The Academic Community’](#).

Round 2 workshops were carried out in June 2021, consisting of four workshops with groups of key cross-sector stakeholders. Workshops comprised 10 participants from the private sector, 12 from the public sector, 12 from the third sector and seven from funding organisations. Table 1 provides further details on the types of stakeholder organisations that participated. These workshops sought to build on the outputs of Round 1, whilst also gaining broader stakeholder perspectives on net zero. Round 3 of the project was carried out in November 2021, giving the research community an opportunity to build on the outputs of the project so far, explore enduring concerns in more depth and to develop key messages for UKRI.

**FIGURE 1 - Overview of DNZ project plan**



PROJECT OVERVIEW CONTINUED

Table 1 – Types of stakeholder organisations participating in Round 2

<b>Workshop C (Private sector)</b>	Housing retrofit supplier, energy network operators, industrial technology manufacturer, industry training provider, electricity and gas supplier, oil and gas company, car sharing company, heat pump trade association, engineering consultancy.
<b>Workshop D (Public sector)</b>	Government departments, non-departmental public body, local authorities, local energy hubs, devolved government.
<b>Workshop E (Third sector)</b>	Non-governmental organisations, industry body, trade union, non-profits, charities, trade association, independent statutory body.
<b>Workshop F (Funding sector)</b>	Government department, non-departmental public body, Research Councils, investor, sustainable banking.



---

## ROUND 2 APPROACH AND ANALYSIS

Participant selection for Round 2 involved a process of identifying a representative cross section of organisations with a stake in net zero from the listed sectors in the UK. Following the creation of a 'long list' of individuals working on net zero in those organisations, participants were selected based on the need to represent multiple sectors, also considering relevant equality, diversity, and inclusion (EDI) criteria. The workshops were designed to answer the following questions:

1. What are the key opportunities and challenges faced by your organisation around net zero?
2. What are the common priorities and time frames across your organisations?
3. To what extent do you agree with, and how would you prioritise the themes identified from the research community workshops?
4. What are your key messages for the research community?

This approach aimed to understand stakeholder perspectives of the net zero challenge, their future visions, and the constraints and opportunities they foresaw impacting their organisations, as a way to gauge their understanding of the challenge, the changes that are required, and how the research community can help deliver change. Further, we aimed to observe key points of either consensus or conflict that the stakeholders had with the research community; a general alignment would show where continued effort is desired to reach net zero. The project also aimed to identify more effective mechanisms for the research community to inform current decision-making processes, across sectors, thus gaining knowledge of how better interaction could be achieved between the research community and these other sectors.

In the sectoral groups listed above, participants were asked to discuss and reflect upon the opportunities, constraints and issues faced by their organisations, and to explore short-term (up to 2030) and long-term (after 2030) priorities, reflecting what each saw as most important for accelerating progress towards net zero. In the second half of the workshop, stakeholders were given the opportunity to respond to the themes from Round 1 workshops and consider what messages the stakeholders wanted the research community to reflect upon in Round 3.



---

## ROUND 2 CONTINUED

Following the workshops, the recordings of the sessions were transcribed and anonymised. At present an initial analysis has been carried out to provide a summary of the workshop outcomes to feed into the next stages of the project. This involved a process of note taking from the workshop recordings, structured around analysis criteria based on the following questions:

1. Overall, how did participants interpret the net zero challenge?
2. What opportunities does the transition to net zero present?
3. What are the key barriers to achieving net zero?
4. What are the common priorities of participants, both for accelerating short-term change and longer-term reductions?
5. How were the timescales considered?
6. How much agreement and consensus were there between participants?
7. How do their views compare to the views expressed by the Round 1 participants?
8. How did they agree or disagree with and prioritise the Round 1 themes?
9. How did they interpret the Round 1 themes?
10. Are there any key gaps participants identified from the Round 1 themes?
11. What were their key messages back to the research community?
12. Did the session run well and achieve its aims?

Using these criteria, notes and key quotes were taken and a summary was written for each workshop session and stakeholder group. These summaries were compared across groups, surfacing eight high level themes prominent across all four workshops. Whilst other smaller themes also emerged and sector specific debates occurred, this report focuses on the most important cross-cutting themes, which will be communicated back to the research community in Round 3. These themes were developed immediately after the workshops, to allow for the sharing of our initial findings, as well as for use in framing discrete sections of the following rounds of workshops. At a later stage in the project, a more detailed analysis of the data and process of each workshop and the project as a whole will be made available.



---

## SECTION 2: OVERARCHING THEMES

This section provides a summary of eight high level themes which emerged from the stakeholder workshops, workshops and groups.

---

### THEME 1: THE NEED TO IMPROVE PUBLIC ENGAGEMENT WITH NET ZERO AND WIDEN PUBLIC PARTICIPATION

Across the workshops, poor communication of net zero and a lack of public engagement were frequently mentioned as barriers to decarbonisation. Some participants commented that there is broadly a '*public mandate to move at pace and scale,*' yet this is lacking '*when it comes down to actually the crunchy measures that we need to do*' (Public Sector Participant). Participants felt that it was important for this to be overcome by widening public participation through citizen involvement in decision making processes. Whilst some felt that policy making should be '*interventionist*', others felt that there is a need for a more bottom-up approach to decision making:

*'You want people to not just be okay with it, you want people to lead and to have a really active voice in shaping that future, otherwise it's not going to work' (Third Sector Participant).*

In the third sector workshops, this was explicitly linked to the need for a just transition:

*'There's a need for wide participation in order to sustain public consent and permission for... the way we're heading on that systems transition. So, that sense of what I've been calling meaningful public consent. If you look at a number of different places, but particularly the UK Climate Assembly, [they] very forcefully said that the support for the policies that drive a transition are contingent on them being explicitly and obviously fair and just in terms of both the opportunities to participate, and also the way in which costs and benefits are done' (Third Sector Participant).*

The need to improve public engagement was also frequently linked to the need for localised, place-based solutions to decarbonisation. Net zero was seen as an opportunity for local governments to better engage with their communities, however it was felt that resources and capacity needed to be built within local government to do this.



---

## THEME 2: THE NEED TO OVERCOME POLITICAL BARRIERS

Participants identified numerous political barriers preventing government from adequately responding to the climate crisis. Short termism in politics was identified as a key barrier; for the private sector, this leads to a lack of confidence in long-term investments, impeding the development of sustainable supply chains and retraining of workers. For investors, it creates frequently changing funding priorities, preventing the funding of longer term, more systemic solutions to climate change. A lack of alignment between the priorities and targets of different government departments and devolved regions was also highlighted as an issue. Overall, many participants felt that there was a lack of steer and willingness to take risks in government, amounting to inertia in the response of political institutions to climate change:

*'Government does need to take a more active role and be brave with the decisions they make'  
(Private Sector Participant).*

In both the private and public sector workshops, participants called for a clear strategy for decarbonisation from central government combined with stronger regulation. Discussions of the need for more policy in the public and private sector workshops largely focused on the need for pricing mechanisms and financial incentives to facilitate the market to drive decarbonisation. This contrasts with some of the discussion of policy in the Round 1 workshops with the research community, where the ability of the market to drive rapid decarbonisation was questioned. Despite some contrasting perspectives regarding the respective roles of central and local government, there was a call for central government to set a strong agenda and provide local government with more power and resources to orchestrate change locally.

While calls for *'bold'* or *'brave'* policy were numerous across the workshops, some participants felt that there is a need to understand either the conditions which can deliver bold policy, or how to deliver change when this is lacking. These participants called for a better understanding, both among the research community, but also more broadly, of which conditions foster more rapid and ambitious political action.



---

### THEME 3: THE NEED TO FOCUS ON RAPID DEPLOYMENT OF EXISTING SOLUTIONS AND 'LEARNING BY DOING'

Stakeholders in all workshops identified a range of 'low regrets' solutions which required immediate deployment. This was discussed in relation to improving buildings efficiency, deploying heat pumps and district heating, electrifying transport, expanding public transport, nature-based greenhouse gas removal (GGR) techniques, and expanding the electricity system. The emphasis on immediately deploying solutions that are known to be essential to reaching net zero was highly similar to the Round 1 theme: *'The need to rapidly roll out 'ready to go' solutions and 'technologies'*. During the discussion of the Round 1 themes, the Round 2 stakeholders both agreed with and prioritised this theme highly.

As well as implementing low risk options, participants felt that more focus should be paid to deployment in general, as the urgency of emissions reductions means that it is necessary to be *'learning by doing'* (Third Sector Participant). It was felt that this should be an iterative process, with a greater acceptance of the risks of deploying solutions at speed and the potential for some projects to fail:

*'If we want to move forward at pace, you need to try lots of different things at different times and work out which ones work and acknowledge that probably in your first iteration, you're not going to get anything quite right; you're going to learn a lot of different things and you're going to iterate and move forward.'* (Private Sector Participant).

While recognising the risks of 'unintended consequences', participants highlighted that failure to rapidly reduce emissions represents a larger risk:

*'We need to be really careful that the "oh, it's all very complicated and everything affects everything" doesn't become a barrier in itself because people just think "oh, it's all so difficult" so that's an excuse for doing nothing, which I think is the risk'* (Private Sector Participant).

Some participants felt that the focus in the research community has often been on creating new solutions, and that greater attention is needed to understand where and why projects succeed and fail, to learn from historical mistakes and support more effective deployment at the later stages of innovation.



## THEME 4: UPSKILLING AND CAPACITY BUILDING IN THE GOVERNMENT AND WORKFORCE

Building the capacity within government, particularly in local authorities, to more effectively respond to climate change was a key theme during the workshops. Several participants identified *'a lack of funding at a local level'* and a *'lack of expertise and knowledge'* within local authorities as a barrier to decarbonisation. Many were enthusiastic about increased collaborations and partnerships between researchers and authorities but emphasised that there was still a need for more resources from central government. Some participants framed this around the idea of a *'local green deal'* providing greater access to longer-term funding, to enable authorities to develop stable local supply chains and deliver programmes of decarbonisation themselves, such as buildings retrofit.

Capacity building in local authorities was also linked to improved communication and public engagement. Participants recognised that local authorities could be highly effective at engaging their local community, but the capacity to do this was not equally shared across different authorities:

*[Larger local authorities such as Greater Manchester have] 'put resource in... [to] deliver on that engagement piece and that collaborative discussion to bring the citizen with you. But that doesn't exist, I would argue, in the smaller local authorities, the capacity to be able to do that, or even the level of ambition to do that.'* (Public Sector Participant)

Participants also identified a *'massive skills gap'* (Third Sector Participant) in the workforce acting as a key barrier to the acceleration of change. Upskilling was a common short-term priority, where across the workshops it was recognised that *'there's a huge requirement for just labour and skills'* (Public Sector Participant).



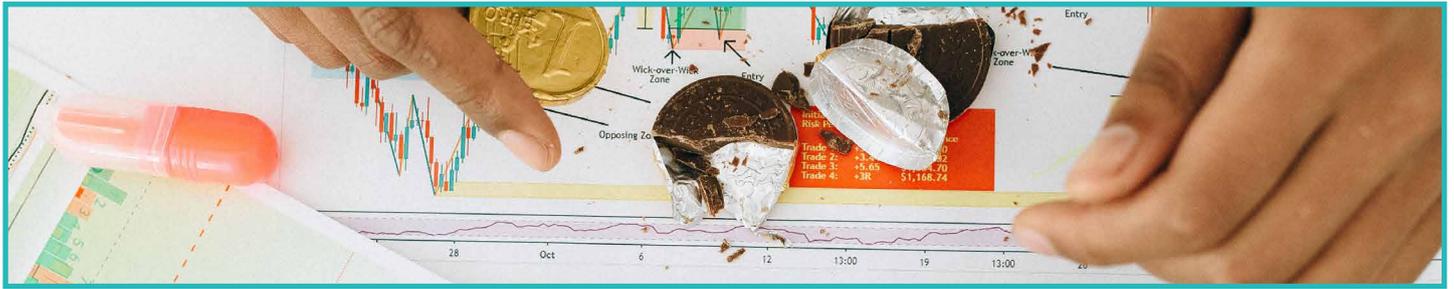
## THEME 5: THE NEED TO ENSURE A JUST TRANSITION

It was felt that there is a need for greater emphasis on a just transition to net zero, which was largely understood as needing to ensure that the pathway of reducing emissions also reduces, or at least does not exacerbate, social inequalities. In creating a just transition, many participants also identified opportunities to produce co-benefits, including the potential to reduce fuel poverty through improved housing, the potential to improve public health and to create new jobs.

A just transition was linked to the need for effective public engagement with local communities, particularly in areas where the economy is dependent on the fossil fuel industry. Participants felt that there was a need for *'democratic accountability, particularly in communities where climate action might result in jobs or income leaving those communities'* (Third Sector Participant). Others noted that justice and co-benefits can be a more effective way of engaging publics on climate change than more distant concepts like *'energy reduction'*.

In the third sector workshops, participants emphasised that there is a need for governments to provide a clearer articulation of the macro-distributional impacts of the transition, including where green jobs are created, who is expected to pay for the transition and whose behaviour will have to change. Overall, they felt that the transition to net zero should look beyond just reducing carbon emissions to creating a more socially and ecologically sustainable society in the long term, and this was described by some participants as *'net zero plus'*:

*'It has to be net zero plus; it can't just be a straight decarbonisation story; it has to be a social equity story... one could construct a pathway to net zero which is brilliant from a 'carbon metrics' perspective, but absolutely terrible from a social equity and social justice perspective'* (Third Sector Participant).



## THEME 6: THE NEED FOR APPROPRIATE FUNDING STRUCTURES AND BUSINESS MODELS

Participants articulated the need for appropriate funding structures and the importance of demonstrable and viable business cases for net zero innovation. They identified a raft of barriers related to the financing of net zero. Investment cycles are rigid, meaning that there is often a small window for projects to receive funding, and funding incentives are structured towards low risk, short-term gains, meaning there is a failure to invest in more long-term, systemic solutions:

*'There's this constant challenge of the longevity of our funding, we end up... funding a three-year programme - well that's a really piecemeal approach to a much bigger, longer-term problem which does need investment in longer term demonstrator projects... three years is not going to cut the mustard' (Funding Sector Participant).*

This is compounded by political short termism, where funding priorities often change with a change in government. Financial incentives are still geared towards fossil fuel industries, which prevent low carbon technologies from becoming financially viable. There is also a notable lack of access to finance for low-income individuals to reduce emissions in their homes, such as installing heat pumps and buildings insulation. Participants felt that both in the private sector and for the public, there is a need for the government to provide access to low-cost finance:

*'Across the board, there's a need to provide access to low-cost finance... if the government viewed this challenge as a national infrastructure issue and used the Green Bank to help drive the availability of access to capital, that would really help to solve the [problem]' (Third Sector Participant).*

In the private sector, participants felt that a focus on innovation is key, and highlighted the potential for economic benefits and the opportunities for the private sector to lead on innovating new business models. However, others noted the challenge of aligning the financial sector with net zero:

*'The big urgent priority that hasn't come up just yet... how do we rapidly re-direct flows of capital and the economy? So, it's already beginning to happen with divestment of investors from fossil fuels, but is it happening fast enough set against a backdrop of relentless pressure on short-term profit maximisation which then stops the private sector from investing in longer term plans which are aligned with net zero?' (Third Sector Participant).*



---

## THEME 7: THE NEED FOR URGENCY

The urgency of rapidly reducing emissions was expressed more prominently by participants in the stakeholder workshops than in the workshop with the research community. Particularly in the third sector workshops, participants felt that *'the timelines that we have at the moment aren't aggressive enough'* (Third Sector Participant), and there is a need to accelerate the speed of deploying solutions, which was reflected across the workshops in an overwhelming focus on what can be done in the short term.

In the private sector, there was less agreement around the speed and scale of change available and preferable, reflecting the range of different industries that participants were representing. Participants representing 'incumbent' industries preferred an 'evolutionary approach', citing that: *'We talk about transformative and radical solutions, but the realities and chances of them being delivered are really low'* (Private Sector Participant). On the contrary, participants from 'disruptor' industries emphasised that: *'We've tried the evolution and it's not working, and I think we do need a bit more of a revolution'* (Private Sector Participant). Some participants also noted that urgent change is in conflict with the interests of many powerful actors, whose lobbying activities are acting as a barrier:

*'What I see at the moment is quite a lot of activity from people who have got a very strong interest in that faster path not going ahead quite so readily because of their own existential threats, but that's not being cut off or pushed back to the extent it would be if people really understood that [urgency]'* (Third Sector Participant).

Similarly, several participants raised concerns about the discourses around net zero relying on 'silver bullet' technologies or solutions. This was reflected in the discussion of the Round 1 Themes: *'Current and future technologies can deliver the majority of necessary emissions reductions'* and *'Systemic social and political change is necessary including urgent changes to social practices'*. Some participants emphasised that *'I just don't think technology is going to be the answer to everything'* (Private Sector Participant), while some felt that it was unclear what systemic change would entail. Others felt that these themes were not antithetical to one another:

*'I feel really strongly that it's socio-technical... trying to trade off the innate social-behavioural-cultural against the technical... I think it's really important that we bring them together'* (Funding Sector Participant) .



---

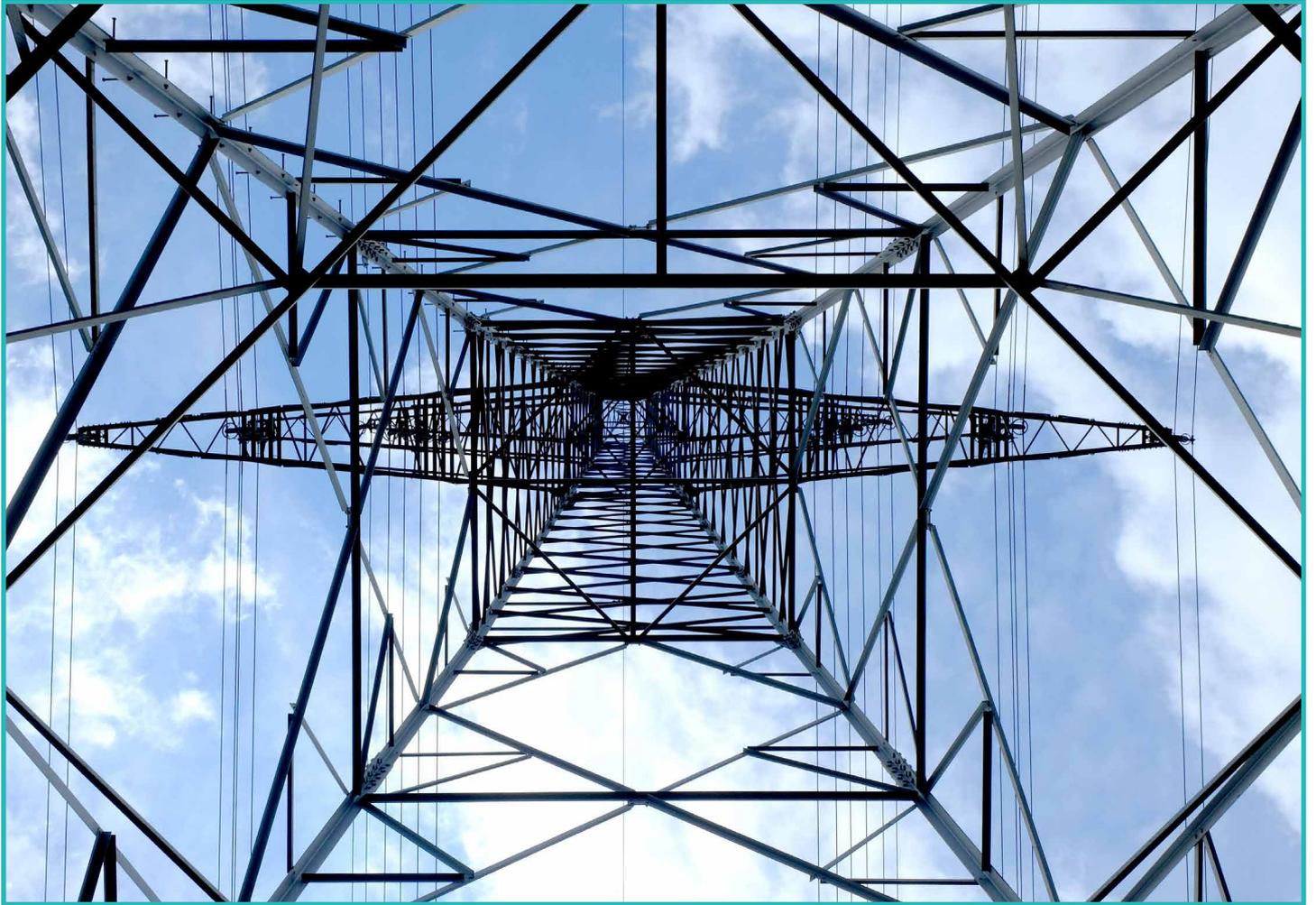
## THEME 8: THE NEED FOR A SHARED SENSE OF RESPONSIBILITY AND COLLABORATIVE ENDEAVOUR

Participants called for a greater sense of shared responsibility and collaborative endeavour. This was expressed at a range of scales, from the local to the national and international levels. In terms of responsibility, in the public and private sector workshops an onus was placed on central government and ministers to lead in taking action. However, in the third sector workshops, participants emphasised that there is no *'systems architect'*, and instead there is a need to take collective responsibility for the shift towards a net zero society. Overall, there was a call for greater collaboration across scales of government and for policy to be developed at a whole systems level. There was also a call for more collaboration between industry, government, and academia:

*'Tackling the net zero challenges is one of the few issues that requires a sort of whole place type approach where you need all the different institutions and organisations and entities of a place working with a shared purpose in common' (Third Sector Participant).*

In terms of leadership, participants saw an opportunity for local authorities to play a stronger role in the transition. They thought that it was important not to take an overly centralised approach, and felt that if granted more powers and resources, local governments have the *'momentum and ambition'* to drive forward decarbonisation at a faster speed. In developing solutions to climate change, participants noted that there were opportunities for enhanced long-term collaborations across different sectors and geographies. Finally, in the third sector workshops there was an overarching reflection on the historical and colonial legacy of the UK, and a call for the UK to assume a leadership role, to acknowledge its privileges, and to support poorer nations on the path to decarbonisation:

*'I wonder if there's somewhere that we can also reflect on the international role of the UK and the role of UK policy and research community in taking responsibility as a major emitter, as an industrialised country, as an ex-colonial power... and the responsibility that the UK has to support particularly global south decarbonisation' (Third Sector Participant).*



---

## WORKSHOP SESSION COMPARISON

This section provides a comparison of the different workshop sessions and each group of stakeholders' key points of discussion. The workshops were divided into four main sessions. Firstly, participants were invited to discuss what they saw as the main opportunities and barriers faced by their sector in reaching net zero. This section of the report first compares these opportunities, followed by barriers, in turn. Second, the report looks at the next workshop session, in which participants were asked to explore their common priorities as a group and consider the time frames at which these priorities could be achieved. Third, the report turns to the afternoon sessions of the workshop, in which participants were presented with the 'key themes' which emerged from the Round 1 workshops with the research community. Using a ranking exercise to encourage discussion and debate, participants chose which themes they agreed or disagreed with, and which they saw as the greatest priorities. Finally, the report compares the last workshop session, in which participants developed key messages for the research community.

---

## OPPORTUNITIES

### CO-BENEFITS

During the first workshop session, participants were encouraged to explore opportunities and barriers to net zero. All workshop groups identified opportunities to bring significant co-benefits during the transition to net zero. This was largely discussed in regard to opportunities to improve public health, reduce fuel poverty, reduce social inequalities, and create new job opportunities. Indeed, some participants were keen to shift the narrative around net zero to one of opportunity:

*'The challenge is outlook and mindset... the prevailing narrative has been about what we have to lose by not addressing climate change whereas it should be about what do we have to gain' (Public Sector Participant).*

Several participants felt that in ensuring that net zero is a just transition, there are opportunities to reduce social inequalities and 'help people live flourishing, sustainable lives' (*Third Sector Participant*). Some emphasised that net zero can act as a 'political driver' to tackle 'existing inequalities... with customers in vulnerable situations' (*Third Sector Participant*), such as fuel poverty.

All groups also identified economic opportunities; in the private sector, participants felt that there were opportunities for businesses to innovate new solutions and technologies and to develop new business models. It was also recognised that net zero presents an opportunity to improve the long-term resilience of businesses and organisations. Participants from local authorities saw opportunities to invest in their local areas and develop local supply chains and skills markets for deploying climate solutions. In the third sector, a combination of the need for investment into the economy following COVID-19, and the need for a large investment into green infrastructure to reach net zero was seen as a substantial opportunity to create programmes of green jobs. Some participants noted that in particular there were opportunities to create jobs for young people, who want to align their work with pro-environmental values, whilst also retraining workers in high carbon industries.

### IMPROVED PUBLIC PARTICIPATION

Participants in the public and third sector workshops identified opportunities to widen public participation through citizen involvement in decision making processes:

*'If you design the transition in a really participatory way where people get to shape what happens in the community and their workplace, in the context that kind of matters to them... then you're both going to be more successful' (Third Sector Participant).*

For local authorities, improving community engagement and involvement in decision making was seen as a key opportunity. Participants noted that funding for participatory processes such as citizens juries on climate change could provide an opportunity for authorities to experiment with new types of citizen engagement, which could be transferrable to other issues. In the third sector, it was noted that the introduction of a net zero target has presented an opportunity to shift the public debate away from whether net zero should happen, and towards how it should happen and how fast changes can occur.

---

## OPPORTUNITIES CONTINUED

### IMPROVED COLLABORATIONS

Several participants discussed opportunities to improve collaboration across different organisations, sectors, and geographies. In the funding sector, the cross-sectoral, systemic nature of climate change was seen as necessitating improved communication between funding groups, which in turn can lead to a 'more joined up and cross-sector set of solutions' (Funding Sector Participant). In the public sector, net zero was recognised as an opportunity to build collaborations between local authorities, the private sector, and other organisations. Participants in the public sector also felt that net zero, and particularly the ambitious net zero targets of some local authorities, present an opportunity to drive decarbonisation with 'momentum and ambition' (Public Sector Participant) at the local level. They called for a 'generalised steer' from central government, and the empowerment of local authorities to make locally specific decisions.

### OPPORTUNITIES FOR LEADERSHIP

A final common opportunity identified by participants was the potential for the UK to position itself as an international leader on climate change. For funders, it was recognised that if the UK funds and develops new solutions to climate change, it can provide these to an international market. In the third sector workshops, participants felt that if the UK accelerates emissions reductions, it can provide 'lots of expertise' and 'a vision' (Third Sector Participant) of how net zero can be achieved to the rest of the world.

---

## BARRIERS

### POLITICAL BARRIERS

During the first workshop session, participants were also asked to identify barriers and challenges in their sector to achieving net zero. All groups identified a range of political barriers. Short termism and lack of stability of policy was seen as a key barrier for the private and funding sectors. In the private sector, this causes a lack of confidence in long term investments:

*'Short-term policy making is making [it] incredibly difficult... at the moment the funding streams for retrofit are 12 months and trying to deliver innovation within live projects that have end dates - that's incredibly challenging' (Private Sector Participant).*

Similarly, for funders, political short termism means inconsistency and changes to funding priorities, which prevents the funding of long-term, more systemic solutions to climate change. Across the workshops, many participants felt that policy making was not currently *'bold'* or *'brave'* enough to accelerate emissions reductions. In the third sector, participants noted that the substantial installed capital base of transport and energy infrastructure acts as a barrier to change, and a movement away from this this will not occur without strong regulation. In the private sector, it was felt there is not enough clarity around the government's preferred pathway to reach net zero, and this uncertainty creates a barrier. Similarly, some public sector participants from local authorities called for *'simplicity, clarity of purpose'* (Public Sector Participant) from central government, in communicating to local authorities the government's overarching strategy to guide the steps local authorities need to take.

In the private sector, participants called for regulation and incentives from government to facilitate investment and deployment of climate solutions. Largely, they felt it was government's responsibility to set an overarching framework to orchestrate the transition to net zero. Some saw government's role more as a *'facilitator'* and called for adjustment to taxes and incentives to allow the private sector to lead on developing and deploying low carbon solutions, whilst others felt that government needed to *'take a lead'* in deploying infrastructure to drive more rapid and far-reaching changes than the market can deliver on its own. Some private sector participants also identified that lobbying by the private sector, particularly by the oil and gas and automotive industries, is upholding the status quo and preventing more rapid decarbonisation.

Outside of the private sector, several participants felt that the *'siloed'* government approach to decision making, which lacks consistency across departments and devolved regions, is a barrier to delivering the whole systems approach needed for decarbonisation. Some participants identified public procurement as an opportunity to align the operations of public sector institutions with broader net zero goals.

---

## BARRIERS CONTINUED

In the third and funding sectors, some felt that an unwillingness to take risks, and focus on accelerating change rather than future targets, amounted to *'inertia'* among decision makers. However, it was also commented that there is a lack of understanding into how the barriers created by current political systems can be overcome:

*'It's a political science question - under what conditions would politicians be 'brave' or do some of these things', and 'what do we do in a world where politicians aren't as brave and decisive?'* (Third Sector Participant)

These participants called for a better understanding, both in the research community and more broadly, of which conditions foster more rapid and ambitious political action.

## FUNDING BARRIERS

In the funding sector workshop, participants identified several barriers specific to funding, which they felt were compounded by the aforementioned political barriers. Alongside political short termism, funding incentives are structured towards low risk, quick wins rather than long term goals, which impedes investment into more systemic solutions. Similarly, investment cycles are rigid, meaning there is often a short window for projects to receive funding. Participants discussed the challenges of prioritising where to spend a limited amount of funding and the need to unlock larger streams of finance, for example, having to choose between funding initiatives in sectors with the largest amount of emissions, or in those which are most challenging to decarbonise.

A lack of access to finance was also raised as a barrier more broadly by other workshop participants. In the third sector, participants noted that *'across the board there's a need to provide access to low-cost finance'* (Third Sector Participant), both for the private sector to accelerate reductions in their emissions, and for the general public, where there is a need for loans and grants for actions like retrofitting homes. In the public sector workshop, participants felt that a lack of resources and funding for local authorities was acting as a barrier. They called for longer term, more stable access to funding to build supply chains and deliver projects. They noted that in the past, funding has been *'stop-start'* and too short term to deliver outcomes effectively. For example, the Public Sector Decarbonisation Scheme for heat decarbonisation in public buildings had *'a very short time scale to get applications in'* meaning that *'a lot of authorities didn't apply for it'* (Public Sector Participant). Others felt that there is a need for new models of finance for the public sector, including through building relationships with the private sector, noting that the use of government grants for local authorities can lead to them competing against one another. Some felt that there is a mismatch between the ambitions of local authorities and their ability to execute them due to a lack of power and funding. Concerns were raised about a lack of *'urgency around replanning our cities for heat'* (Public Sector Participant), where local authorities lack the power to regulate and the resources to build infrastructure such as heat networks.

---

## BARRIERS CONTINUED

### KNOWLEDGE, COMMUNICATION AND ENGAGEMENT BARRIERS

A lack of specialist expertise and knowledge was raised as another common barrier, both in local authorities, to understand ‘how decisions they are making have an impact on climate change’ (Public Sector Participant), and in the private sector, where there is a lack of specialist knowledge within organisations around how they should decarbonise. Many participants also felt that there is a failure to communicate the implications of net zero more broadly, and this is particularly related to poor public engagement. In the public and private sector, in the terms used by the stakeholders, this was seen as leading to a lack of knowledge around the need for ‘behavioural change’ and an inability for people to make informed choices around how best to reduce emissions. In the third sector workshops, some participants felt that poor public engagement meant that there is a lack of public consent for certain decarbonisation measures, and strong public engagement is needed to avoid a public backlash towards strategies to reduce emissions which affect people’s lives, citing the ‘gilet jaunes’ protests in France and protests in the UK against low traffic neighbourhoods (LTNs). In both the public and third sector workshops, it was emphasised that there is a need for ‘bottom-up’ public engagement to happen in local communities, to align measures to reduce emissions with public values and local contexts, which was seen as critical for delivering a just transition. However, participants from the public sector also felt that the ability to engage communities effectively was not equally shared across local authorities.

*[Larger local authorities such as Greater Manchester have] ‘put resource in... [to] deliver on that engagement piece and that collaborative discussion to bring the citizen with you. But that doesn’t exist, I would argue, in the smaller local authorities, the capacity to be able to do that, or even the level of ambition to do that.’ (Public Sector Participant).*

Whilst the third sector called for a stronger role for citizens and local authorities in decision making, some participants also felt that government needed to provide a stronger articulation of the ‘macro distributional impacts’ (Third Sector Participant) of net zero, including where green jobs are created, who is expected to pay for the transition and whose behaviour will have to change, with an emphasis on justice and fairness.

### DEPLOYMENT BARRIERS

Participants recognised the complexity of deployment, and the challenges of balancing the urgency to move at speed with the risk of ‘unintended consequences’ (Public Sector Participant). They raised a number of barriers relating to deployment, including a lack of market maturity for many key technologies, which equates to undeveloped supply chains and high price points, a lack of skilled professionals to install technologies, and a lack of consumer demand to drive the market forward. They emphasised that this complexity in developing new supply chains can lead to ‘huge bottlenecks’ (Third Sector Participant) unless supply and demand for technologies are accelerated at the same time. Some participants felt that there is a lack of consensus around which technologies should be used for deployment. While some felt there is a need to ‘keep options on the table’ (Third Sector Participant), in the likely need for a ‘hybrid approach’ to heat and electricity decarbonisation, others also warned of the ‘danger of red herrings’, meaning a reliance on technologies such as CCS being able to ‘fix everything’ (Third Sector Participant).

---

## COMMON PRIORITIES IN THE SHORT AND LONG TERM

In the next workshop session, participants were asked to identify areas of common priorities and agreement in what actions need to occur in both the short (up to 2030) and long term (after 2030). Across all workshops, priorities were highly concentrated into the short term, with participants expressing that *'whenever we talk through the policy needs for reaching net zero, it all needs to happen in the next 10 years'* (Third Sector Participant).

### DEPLOYMENT AND SCALE UP OF 'LOW REGRETS' SOLUTIONS

With this emphasis on urgency, participants from all stakeholder groups identified a range of 'low regrets' solutions in need of rapid scale up and deployment. Many of these discussions focused on prioritising transport decarbonisation, heat decarbonisation and buildings efficiency. In the private sector, participants emphasised the short-term importance of electrifying transport and expanding public transport options, improving energy efficiency in homes, rolling out district heating networks in urban areas, programmes to install heat pumps, and building low carbon social housing. They felt that the UK lags behind other countries in heat decarbonisation, and there is a need for large scale demonstrator projects in this area. Similarly, in the public sector workshops, retrofitting homes, decarbonising heat sources with district heating and heat pumps, and decarbonising transport infrastructure were seen as *'things which just need to be cracked on with'* (Public Sector Participant). Alongside buildings retrofit, new buildings standards and the electrification of transport networks, third sector participants also prioritised the use of public procurement and widely adopted emissions accounting standards to reduce emissions. They felt that there was an urgent need to develop and deliver a strategy for land use, which *'you need to get going now, but there is a lag effect before the sequestration benefits kick in'* (Third Sector Participant). In the funding workshop, participants identified similar areas in need of short-term investment: transport decarbonisation, buildings efficiency and land use change. They also recognised the need to invest in energy demand reduction measures, decentralised renewable energy systems, and GGR technologies. Overall, participants emphasised the need to focus on the rapid deployment of existing solutions, and some commented that further research is needed to better understand what leads to successful deployment and positive public perceptions of deployment.

### GOVERNMENT STRATEGY AND POLICY

In the private, public and third sector workshops, a common short-term priority for participants was the provision of a clear strategy from government on how key sectors will be decarbonised, supported by relevant policy mechanisms. Participants called on government to *'provide a long-term signal for sectors where there is not one at the minute'* (Third Sector Participant). While participants from local authorities emphasised the importance of local authorities retaining the autonomy to orchestrate significant parts of the net zero transition locally, some also felt that an overarching strategy should be provided by central government:

*'We need to see the government's net zero plan and understand how that gets translated and what's missing'* (Public Sector Participant).

---

## COMMON PRIORITIES IN THE SHORT AND LONG TERM CONTINUED

To support the transition, they called on *'additional policies or regulation'* (Public Sector Participant), tax incentives and investment. This was also linked to repeated calls to better align the goals and targets of agencies and departments of government.

### BUILDING CAPACITY IN LOCAL AUTHORITIES

A priority for many in the public and third sector was ensuring an equal capacity and provision of resources to local authorities, *'because in a lot of cases, they've been gutted out'* (Third Sector Participant). Participants recognised that local authorities need *'urgent funding'* and a *'local green deal'* (Public Sector Participant) for infrastructure projects and programmes such as retrofit. There is also a need to provide greater stability and longevity of funding. Local authorities are currently unable to develop the supply chains to deliver projects as the timescales for funding are too short for industries to invest in the necessary skills and establish themselves. More broadly, upskilling was raised as a priority in the public, third, and funding sector workshops, where it was also felt that there is a need to improve equality, diversity, and inclusion (EDI) across industry and among decision makers.

Capacity building was also linked to the need to improve collaborations between local authorities, the private sector, and other organisations, to improve access to expertise and locally specific knowledge, to deliver *'place-based'* solutions. For the third sector, a key priority was seen to be:

*'Trying to demonstrate how institutions, places, different entities, need to co-organise and co-create the pathway to net-zero'* (Third Sector Participant).

## FINANCE

In the third sector, an urgent priority was seen to be *'how do we rapidly-redirect flows of capital?'* (Third Sector Participant). A key contradiction was recognised between the goals of the private sector in *'short-term profit maximisation'*, and the need to urgently reduce emissions. It was felt that there was a lack of clarity and attention given to the huge flows of capital going into *'energy hungry'* sectors and technologies, and how to reverse this. In the funding workshop, a similar issue was raised relating to the capital in the fossil fuel industry. Participants raised the need to disincentivise the holding of *'bad'* fossil fuel assets by finance firms. However, the role of the fossil fuel industry was contested, and some participants felt that despite it running contrary to a just transition, it may be a more effective way to reduce emissions to provide a role for fossil fuel incumbents by repurposing their skills where possible and even funding them to keep assets in the ground.

---

## COMMON PRIORITIES IN THE SHORT AND LONG TERM CONTINUED

### PUBLIC ENGAGEMENT

Again, a top priority across the workshops was the need to improve public engagement with net zero. In this section, participants discussed the idea that increasing knowledge and engagement among citizens about net zero is important both to increase acceptance of decarbonisation measures and to help initiate social changes. Some participants also felt that education has a strong role, both so that young people have a strong climate education in schools and can access careers guidance to understand what net zero aligned jobs and workspaces could be. Others felt that it was important to engage the public with concepts like just transition, warm homes, and clean air, rather than 'climate change, energy reduction' (Third Sector Participant) which are not as relatable or meaningful. In the third sector it was felt that a priority should be improving public confidence in low carbon technologies, through consumer information and improved consumer protections. In the public sector, public participation was seen as an important part of local area energy planning, to utilise a local knowledge base and ensure that local people have a say in how net zero is implemented in their local area. It was suggested that the research community has a role in developing methodologies to do this that are transferrable across localities.

### EMISSIONS ACCOUNTING

In both the public and third sector workshops, issues related to emissions accounting were raised during this session. Some participants felt that there is a need for widely adopted emissions accounting standards that can be used to track embodied emissions, and more broadly, the need to address embodied emissions and resource consumption was highlighted. In energy supply, it was felt that there is a need for improved carbon accounting methods, with the current use of Renewable Energy Guarantees of Origin (REGO) Certificates seen as inadequate for making effective decisions around energy system flexibility and storage.

### LONG TERM PRIORITIES

While the majority of priorities raised by stakeholder participants focused on the short term, some longer-term priorities were also discussed. This included defining the role of carbon capture and storage and delivering a long-term strategy for greenhouse gas removal (GGR), scaling up solutions internationally, solving system integration issues, and addressing broader environmental issues beyond climate change.



---

## EXPLORING THE ROUND 1 THEMES

During the afternoon sessions, participants were presented with an overview of the themes which emerged from the Round 1 workshops, to discuss and feedback their perspectives. Prior to the workshop, they were provided with a copy of the Round 1 report to familiarise themselves with these themes. Then, in a period of lone reflection, participants ranked the themes according to their level of agreement (strongly agree to strongly disagree) and prioritised them according to which they saw as most important to the delivery of net zero. They then discussed their rankings with the group. It should be noted that some of the themes presented to participants involve a slightly different wording to those in the Round 1 report, to present them as statement which could be agreed or disagreed with. In analysing this session, the data used was the qualitative discussion, rather than the rankings. The ranking exercise had been included as a facilitation device to promote discussion and debate and many participants expressed different interpretations of what the statements meant. Table 2 provides an overview of the responses to each Round 1 theme in the stakeholder workshops.

## EXPLORING THE ROUND 1 THEMES CONTINUED

Table 2 – Overview of stakeholder responses to the Round 1 themes

Theme	Stakeholder response
<b>The need to establish greater social legitimacy for an ambitious decarbonisation pathway</b>	<ul style="list-style-type: none"> <li>- Many participants agreed with this quite strongly</li> <li>- <b>Third sector:</b> agreed with the importance of this theme but felt that the legitimacy language is too top-down and highlighted the need for a participatory approach.</li> <li>- <i>'You want people to not just be okay with it, you want people to lead and to have a really active voice in shaping that future' (Third Sector Participant)</i></li> <li>- <b>Private sector:</b> some participants agreed with the need to <i>'bring people along with us'</i>, others felt that governments do not always need social approval to act.</li> <li>- Some participants also suggested a division of the Round 1 themes into overarching goals and enablers, with this theme being a primary motivator. They suggested that the themes around upskilling, rolling out 'ready to go' solutions, and investing in technologies were themes that essentially enable the broader goal of establishing social legitimacy for an ambitious decarbonisation pathway.</li> </ul>
<b>The need to rapidly roll out 'ready to go' infrastructure and solutions</b>	<ul style="list-style-type: none"> <li>- Participants agreed with and prioritised this theme highly</li> <li>- <b>Third sector:</b> There is a need to do this in an iterative process by <i>'learning by doing'</i>.</li> <li>- <b>Public sector:</b> Prioritised this statement, recognising that this is because much of their work is focused on the need to <i>'deliver impact'</i> and meet short term targets.</li> </ul>
<b>The need to improve readiness of solutions and roll out infrastructure for the long term</b>	<ul style="list-style-type: none"> <li>- This theme was largely uncontroversial, but many participants gave it a lower priority.</li> <li>- Some saw actions relating to the longer term as less important due to a lack of urgency.</li> <li>- Others recognised the risk of failing to plan for the long term and the scale up of solutions.</li> </ul>
<b>The need to upskill and capacity build in the workforce, government, and civil service</b>	<ul style="list-style-type: none"> <li>- There was broad agreement with this theme, although many prioritised it lower, partly because some participants characterised it as an enabler of other themes.</li> <li>- <b>Public sector:</b> Not yet clear what exactly what skills will be needed, but there are some obvious <i>'no-brainer'</i> areas.</li> </ul>

## EXPLORING THE ROUND 1 THEMES CONTINUED

Theme	Stakeholder response
<b>Systemic social and political change is necessary including urgency change to social practices</b>	<ul style="list-style-type: none"> <li>- Participants' views were more split around this theme.</li> <li>- <b>Third sector:</b> participants felt that social change is clearly necessary, but many felt that this theme was too vague.</li> <li>- <b>Public and private sector:</b> Some participants ranked this lower as they were concerned about the length of time it may take in relation to the urgency of climate change.</li> </ul>
<b>Current and future technologies can deliver the majority of necessary emissions reductions</b>	<ul style="list-style-type: none"> <li>- Participants also had split opinions on this theme.</li> <li>- Some agreed as they felt that we largely have the technologies needed to reach net zero.</li> <li>- Others disagreed because they felt that it is dangerous to rely on <i>'silver bullet'</i> technologies, which can undermine the need for behavioural change, the need to act rapidly, and the potential costs of relying on future technologies.</li> <li>- <b>Funding sector:</b> This theme should not be viewed as the antithesis of the theme above; they need to happen together.</li> </ul>
<b>The need for a more active and interventionist policy approach</b>	<ul style="list-style-type: none"> <li>- Some saw this as highly necessary; others disliked the way it was framed.</li> <li>- <b>Public and third sector:</b> several participants disliked the term <i>'interventionist'</i>. They felt that it was too top-down, and there is a lack of trust in politicians to do this effectively.</li> <li>- <b>Private sector:</b> prioritised this theme, but they identified a <i>'chicken and egg'</i> problem, with industry and government each looking to one another to initiate change.</li> </ul>
<b>The need for continued investment into new, potentially disruptive technologies and solutions</b>	<ul style="list-style-type: none"> <li>- Overall, this statement had general agreement, but many ranked it a lower priority than other statements.</li> <li>- Unsurprisingly, there was most agreement for this in the private and funding sectors.</li> <li>- <b>Third sector:</b> there was a lower priority for this theme as it was felt that money could be better spent on implementing existing solutions than innovating new ones. However, others did recognise that innovation is still necessary in areas like carbon capture and storage (CCS).</li> </ul>

Participants also identified a number of gaps that they felt were key areas missing from these themes. The most prominent of which were the need for a just transition, including the UK's responsibility to help other countries decarbonise, and questions of funding and how to demonstrate viable business models for net zero innovation. Also discussed were issues of how to manage rebound effects, design policy to improve resilience and adaptability to climate change, and how to take a whole systems approach to net zero.

---

## KEY MESSAGES TO THE RESEARCH COMMUNITY

In the final workshop session, participants were asked to discuss any messages they have for the research community, in relation to what is needed to deliver net zero, and how researchers can effectively engage with stakeholders.

### VALUE OF COLLABORATIVE RESEARCH

Participants extolled the virtues of collaborative research; with industry, third sector organisations, policy makers, and local communities. For industry, participants expressed a desire to play more of a partnership role in research, as opposed to just a funder, which can make research more valuable for industry partners when they have been involved in its development.

*'Collaborative research programmes are incredibly powerful because industry's already putting their money where their mouth is which is often part of the challenge...it's a really good way of demonstrating that buy-in is there' (Funding Sector Participant)*

Participants discussed the positive role of academia in bringing forward the next generation of engineers and social scientists and praised the success of secondments and years in industry. Co-produced research with local authorities in local communities was also seen as highly important, particularly where local authorities are in need of support and expertise. In the third sector workshops, participants raised the idea of 'civic universities', in which universities act in partnership with local communities delivering research for the local area and encouraging broader participation in research including citizen science. The Climate Commission model was discussed as a successful example of this. They felt that it was important for researchers to partner with impacted communities and those experiencing environmental injustice, as 'Universities have the power to ensure that redistribution of power and accountability that we're looking for' (*Third Sector Participant*). Similarly, the third sector noted opportunities to co-produce research around practical implementation, where they have strong expertise, however they noted the need for better ways to bring in funding for external organisations so they can participate fully. In the funding sector workshop, participants also called for greater collaboration and greater interdisciplinary research across research councils.

### ACCESSIBILITY AND DISSEMINATION OF RESEARCH

Participants expressed a desire to improve access to research findings and expertise. It was felt that decision makers would benefit from having easily accessible summaries or 'bite-sized' outputs. Some felt that there is a need for a mechanism or 'targeted resource' for practitioners to translate academic findings, as they often lack time and resources to read academic papers. Some participants also called for a greater focus on open access and an accessible central repository for data.

More broadly, participants identified a lack of mechanisms in academia to incentivise researchers to disseminate their findings to wider audiences. They understood that the structures of academia often meant that academics do not have the time, resources, or incentives to communicate their work more broadly.

---

## KEY MESSAGES TO THE RESEARCH COMMUNITY CONTINUED

*'How can we make really effective use of the knowledge and research base that exists in a semi-nontechnical way... how do we translate it very quickly, effectively to the point of which practitioners can use that information?'* (Public Sector Participant)

They also noted that good communication between policy makers and academics is key, and that UKRI strategic priority funds can deliver impactful research, but this is dependent on successful communication between researchers and policy makers which is often lacking. Overall, it was felt that effective engagement and dissemination with civil society should be valued and rewarded more.

## REPRESENTATION AND INCLUSION

Participants identified a series of barriers that currently impede multidisciplinary research. They posed the following questions: How do we get people to apply and join on research that is cross-sector, and multidisciplinary? How do we get people to apply for funds not just from their own Research Council? There was a general concern that research groups and funding bodies were compartmentalised, and that this led to a lack of collaboration and interdisciplinary research.

*'How do we get the research community to worry less about who their home research council is and how do we get them to engage more with those sort of deployment projects and demonstration projects'* (Funding Sector Participant)

Tied to this idea was a larger concern about the lack of representation and inclusion in the sector. Participants argued that investment and funding should not all be circling around the same demographic of researchers. They questioned how to give more funding to researchers from minority groups and ensure that diversity is central to funding. Overall, they articulated an overarching need to address a lack of diversity in access to research funding and to improve access across the board.

## AREAS FOR FUTURE RESEARCH

There was a strong emphasis on the need for more interdisciplinary social science research, particularly around public engagement, a just transition, co-benefits, and consumption-based emissions, particularly the inequality of consumption.

In general, participants felt that there is the need for more research around the behavioural science of net zero. Some commented that research funding has historically favoured 'big shiny things' (Public Sector Participant) over how to enact behavioural change and how to effectively engage people, and that this imbalance should be redressed. They also commented that there has been a tendency to focus on innovation over how to implement existing solutions in the best way and felt that there are important knowledge gaps around how best to deploy various existing solutions. There needed to be a consideration of distribution and inequality, and a more detailed understanding of the knowledge and skills gaps that would need to be filled as we transition to a net zero economy.

# DNZ | DELIVERING NET ZERO

---

PROJECT PARTNERS:



PROJECT FUNDERS:

