

Place-based business support towards net zero: enabling through the place-policy-practice nexus

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Abstract: The prevailing approach of policymakers to the design and delivery of net zero business support remains focused on financial economic growth. This approach limits the role of businesses in leading societal transformation towards a sustainable future. Although opportunities for businesses to transform so that they remain financially viable and resilient may emerge, support and policy innovation are needed to enable businesses to navigate the net zero transition. Place-based policies are one way of ensuring localities, cities and regions respond effectively to the economic and social challenges of the transition. Despite *place* being identified as one of five foundations of national and local industrial strategies, business support provision across the regions remains largely ‘place-blind’. Support programmes are often generic in their design, scope and delivery mechanisms, and downplay the challenges businesses face when engaging with the net zero transition. This article critically reviews the policy articulation and the state of net zero business support from the place-based perspective. By applying *place-policy-practice nexus* thinking, gap analysis of net zero support is undertaken, and resolutions are offered. The article calls for a deeper reflection of place characteristics in policy discourse, local strategies and policy mixes. This requires concerted efforts from the government, support agencies, universities and businesses to develop a shared understanding of the growth opportunities and risks of the net zero transition relative to place. This includes the development of representative net zero governance mechanisms and addressing the growing demand for net zero skills.

Keywords: Business support, net zero transition, place-based, policy mixes, place-policy-practice nexus, gap analysis, net zero skills, governance.

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1. Introduction

The UK has significant potential to become a leading net-zero economy of the 21st century according to the independent review of net zero, *Mission Zero* (Skidmore 2023). Amongst the many conditions necessary for such a potential to flourish is the availability of business support that would enable the net zero growth aspirations of businesses to be realised. Such aspirations include decarbonisation of processes and systems; rapid and scalable innovation; and adaptation of new net zero products and services (McKinsey 2021). They must not be limited to domestic markets and must prepare business to act on opportunities presented by rapidly developing global markets for net zero products and services with an estimated value of annual sales of more than \$12 trillion by 2030 (McKinsey 2022a).

Net zero skills are critical to the net zero transition; they are a prerequisite for financial growth and are essential for managing the upcoming changes in the job market in the UK and globally. It is estimated that 200 million jobs could be created and 185 million jobs could be lost worldwide by 2050 as a result of the transition (McKinsey 2022b). In the UK alone, 500,000 jobs could be created as a result of decarbonisation efforts across a wide range of sectors and localities by 2050 according to the Department for Business, Energy and Industrial Strategy (BEIS) (Vivid Economics 2019). UK sectors where job creation is expected are offshore wind; electricity networks and smart technologies; and retrofitting buildings and the construction of new builds in the UK. Job losses are expected in fossil-fuel extraction, production and fossil-fuel power generation; and livestock and feed-related jobs in agriculture. Sectors where the demand for upskilling and job mobility is predicted to intensify are automotive; heating and cooling, circular economy and resource efficiency, oil and gas (BEIS 2021).

Businesses need to be prepared to navigate such tidal changes in the job market to ensure competitive success and business resilience. They need skills to support decarbonisation efforts as well as to create the next generation of products and services capable of contributing towards carbon neutrality to secure positions in fast-emerging green market niches nationally and internationally (*Economist* 2022). Businesses must have sustained access to talent in order to innovate, to compete and to work in partnership to deliver net zero solutions with stakeholders in the locality and beyond. A lack of access to skills and talent is one of the key constraints preventing businesses taking advantage of the opportunities presented by the net zero transition (CCC 2023).

In the context of net zero challenges and opportunities, business support plays a critical role in preparing businesses for effective engagement with the net zero transition. Alongside realisation of financial income growth ambitions, support

provision has the potential to build local capacity and address net zero skills shortages regionally and nationally. Effective net zero business support mechanisms bring together multiple stakeholders to strengthen the local entrepreneurial ecosystem, and to contribute to the sustainable and inclusive economic growth of a place.

The paper proposes the application of the *place–policy–practice nexus* in the design and operationalisation of business support towards the net zero transition. The significance of *place* in the design and implementation of business support interventions is emphasised to address calls for the enterprise support ethos towards a closer reflection of location specificity (CCC 2022). These calls put an emphasis on place leadership and a deep understanding of the characteristics of a place in order to strategise and implement effective policy mixes. In such efforts, a place-based approach (Barca *et al.* 2012) is a useful point of reference. With its focus on place in the configuration of business support, it bears the promise of bringing an enterprise and its place closer, with the natural environment and local community at the forefront of place definition (Shrivastava & Kennelly 2013).

This paper proceeds with an introduction to the place–policy–practice nexus and the framing of nexus gap analysis for the design of net zero business support. Business support is discussed in the context of the net zero policy landscape and the challenges of the net zero transition. It moves onto a research overview and analysis. The paper culminates in identification of gaps in the net zero policy and practice support and offers solutions to accelerate the scale and pace of transition through policy mixes and support mechanisms. Conclusions and recommendations for policy, business support providers and businesses are drawn.

2. Place–policy–practice nexus in enabling the net zero transition

The recognition of the role of a place-based approach in the success of building capacity and capability for the net zero transition nationally and globally is well overdue. It speaks pragmatism and gives hope for the net zero transition to be transformational for communities across the UK. It puts the emphases on local buy-in and locally driven solutions to building a critical mass of skills, expertise and talent to fuel the UK's global net zero ambition. At its core, such an approach parallels the sustainable development ethos and paves the way for the achievement of Sustainable Development Goals (UN 2015).

The place-based approach in policy-making is viewed as a major alternative to top-down, supply-side, 'one-size-fits-all' quick fixes that often lead to unbalanced and unsynchronised policies incapable of delivering sustainable development

(Pike *et al.* 2016a). Barca *et al.* (2012) argue there are two fundamental aspects to the approach: first, the significance of the geographical context, whereby the context is understood in terms of its social, cultural and institutional characteristics, for effective policy-mixes. Second, the place-based approach focuses on the issue of knowledge in policy interventions. This is linked to the readiness and capacity of policymakers to access, generate and apply new knowledge based on evidence-based data and emerging socio-economic trends in the locality. The place-based approach promotes collaborative working across multiple stakeholders to build thriving communities in a defined geographic location. It is often associated with partnering and shared design, shared stewardship and shared responsibility for outcomes and impacts (Beer *et al.* 2020).

Although well recognised in the policy literature, a place-based approach often treats *place*, *policy* and *practice* as separate but complementary domains (McCann & Rodríguez-Pose 2011; Bailey *et al.* 2023). These domains are represented to a varying degree in many Local Industrial Strategies and Strategic Economic Plans and are treated as foundations of regional economic development (Beer *et al.* 2021). Despite policy, practice and place connections being reflected in the policy discourse, there is a lack of consideration of strategies and synergies to deliver the best value for local communities. To address this challenge, nexus thinking is deployed in framing relationships between policy, practice and place.

Nexus thinking is gaining prominence in environmental, policy and social sciences as a way of tackling interconnected and interdependent sustainability challenges (Biggs *et al.* 2015, Liu *et al.* 2018). The nexus approach allows for an exploration of the links between the nexus elements and identification of the gaps in the alignment of the elements. The relationships between the nexus elements become a focus as well as their contribution to addressing nexus challenges. For example, in environmental studies the nexus of water–food–energy is a well-established framework in problematising the interdependencies of a socio-ecological system, including resource constraints, local disparities in food consumption and food shortages, supply-chain issues and climate change concerns (Mercure *et al.* 2019). A recent study explores the role of business in sustainable development through application of the nexus concept in corporate governance and policy-making (Dalhmann & Bullock 2020). The deployment of the place–policy–practice nexus in a critical review of enterprise support towards led to identification of gaps and the development of policy implementation interventions (Baranova *et al.* 2020).

In the context of business support towards net zero, the place–policy–practice nexus is useful for (a) framing the complexity of business support challenges; (b) emphasising the importance of place in business support policy and provision;



Figure 1. Place–policy–practice nexus and associated gaps.

and (c) exploring the gaps and the synergies related to supporting businesses towards the net zero transition locally, nationally and globally.

The following gaps characterise the relationship between the nexus elements shown in Figure 1:

A *place–policy gap* (Gap 1) occurs when policy lacks recognition of the contextual specifics of the place, such as sectoral composition, growth trends and skills base, in the development of the policy scope and policy implementation mechanisms (Cleave *et al.* 2016). A lack of understanding and knowledge about place characteristics, sectoral makeup, community behaviour and attitudes could result in poor uptake of the policy initiative and policy failure (McConnell 2015). Skills gaps either of policymakers or of the local community could result in ill-designed policy interventions and weak implementation. Finally, *place-blind* governance and policy instruments are likely to hinder effective policy design and implementation (Nurse & Sykes 2020). As a contrast to the place-based approach, the place-blind perspective advocates adaptation of ‘spatially blind improvements in the basic institutions of law and order, regulation of land, labour and property markets, macroeconomic stability and the provision of basic services such as education and health’ (O’Brien *et al.* 2015). Such an approach is unlikely to support the development of effective policy mixes towards sustainable development where a place dimension is at the very core of sustainability.

A *policy–practice gap* (Gap 2) results in the design and implementation of interventions that are ill informed and unfit to support the delivery of policy priority areas and associated incentives. This gap could widen further as a result of poor communication between the policy and practitioners and ineffective engagement mechanisms during the

consultation stages of policy development (Waring *et al.* 2016). A weak evidence base and/or difficulty in accessing up-to-date and relevant data could also lead to policies which are ‘out of touch’ with practice (Sanderson 2002). Anticipation, that is ‘foreseeing future and preparing for it’, is argued to be central to how a policy is designed, executed and assessed (Bali *et al.* 2019 1). The effectiveness of the policy mixes is dependent on understanding and forecasting practice complexities and developmental scenarios (Howlett & Mukherjee 2018). Hence, anticipating the net zero transition trends and challenges businesses are likely to face should be at the top of the policy-making agenda when it comes to the design and operationalisation of business support provision.

A *practice–place gap* (Gap 3) signals insufficient recognition of context and place specifics in practice. This gap is often narrow, as businesses are usually well attuned to local markets as a prerequisite for competitive success. Having said that, businesses could be working with local markets by inertia and might not trace the emergence of new market niches efficiently enough to align operations. A regional supply chain is another case in point where small businesses could be left behind as a result of changes in business models and vendor requirements. As some markets would rise and others would fall as a result of the net zero transition (McKinsey 2022a), it is becoming important to pay attention to economic, socio-demographic and behavioural trends of a place for net zero success.

Gaps identification relates to the seven areas concerned with understanding, knowledge, skills, information, instruments, governance and strategy. These areas are often associated with misalignment between policy, practice and place, and inhibit local and regional development (Pike *et al.* 2016b, Hudson *et al.* 2019, Mukherjee 2021). A lack of understanding and awareness about climate change negatively impacts behavioural patterns in society and leads to passive responses from consumers towards green products and services. Knowledge and skills are critical for the development of evidence-based policy instruments. Information gaps often lead to low uptake of policy programmes and negative perception of policies from the practitioners’ point of view (Baranova *et al.* 2020). Policy instruments, such as programmes, initiatives, projects and incentives, can be ill informed and ill designed and of little relevance to practice and place (Howlett 2019). Governance and strategy are often argued to be practices that have the potential to bring the interests of policy, practice and place closer together and address contradictions through multi-stakeholder collaborations and partnerships (Ansell & Gash 2008).

Understanding the complex relationship between place, policy and practice becomes pivotal in the development and delivery of business support towards net zero transition. Identification of nexus gaps is a useful conceptual approach in articulating transition challenges and in finding synergetic solutions. This approach ensures the inclusion of a place and policy in the design and implementation of

support programmes. This strengthens the development of a place-based support ecosystem which ensures access to diverse business support opportunities aligned with the business environment of the place. In light of a conceptual approach that calls for an exploration of place–policy–practice nexus gaps, a review of net zero policy with a focus on net zero support provision follows.

3. Policy context

3.1 Net zero policy initiative

The UK has been leading by example in tackling climate change and was the first country in the world to pass legislation — Climate Change Act 2008 (UK Government 2008) — to provide a comprehensive framework to tackle global warming. This Act remains the backbone of legal, regulatory and political commitments in the UK and worldwide to keep global warming to no more than 1.5°C with a reduction in emissions by 45 per cent by 2030 and reaching net zero by 2050 as per the Paris Agreement (Paris Agreement on Climate Change 2015).

The UK *Industrial Strategy: Building a Britain Fit for the Future* (BEIS 2017) maintained climate change commitments and outlined clean growth as a Grand Challenge. The government pledged support to ‘maximise the advantages for UK industry from the global shift to clean growth’ (BEIS 2017: 34). The strategy emphasised the importance of *place* and *business environment* as foundations of productivity and economic growth and creating prosperous communities across the UK.

The narrative of place in the Industrial Strategy is centred on harnessing the potential of local economies to resolve UK disparity in regional productivity, the so-called ‘productivity puzzle’,¹ when compared with other European countries (ONS 2021). This affects people in their pay, their work opportunities and their life chances. Place strengths and growth opportunities are to be accentuated and supported through effective policy mixes. The strategy approach places people in local communities at the heart of Local Industrial Strategies (LISs) and promises investment in local skills, innovation, infrastructure and support for new high-value businesses and leading sectors. Local leadership, both public and private, is needed to accelerate industrial regeneration and Local Enterprise Partnerships

¹ The UK economy, like any other, is viewed as a system that converts work into the outputs of good and services. Productivity measures that conversion and is an indicator of the economic health of the country. As productivity increases, living standards are rising. In the UK, productivity has been flatlining since 2010. This is unprecedented in the post-war era and has come to be referred to as the ‘productivity puzzle’ (ONS 2015).

(LEPs) remain important vehicles for driving economic growth in their area. Alongside the strong narrative about building on local strengths, collaborations to address shared challenges in the regions are encouraged. The strategy draws on the Northern Powerhouse and Midlands Engine examples in attracting central government investments, developing industrial clusters, driving competition and increasing access to domestic and international markets.

The establishment of the world's first net zero carbon industrial cluster² by 2040 and four low-carbon clusters by 2023 was one initiative towards wide-scale decarbonisation. The establishment of six low-carbon industrial clusters is underway in Humber, Teesside, North Wales, Scotland, Tees Valley and the Black Country supported by £210 million of funding matched by £216 million from industry. There has been an investment of £20 million committed into a new research and innovation centre. Nine projects and six cluster plans are in operation, and over 170 businesses are engaged in cluster development (UKRI 2021).

There has been some progress towards the introduction of zero emission cars and vans by 2040 and halving the energy use of new buildings by 2030. The government is providing extensive financing including £1 billion over 10 years to support innovation in clean ways of powering vehicles. An Automotive Sector Deal sets the mechanism of how industry and government will work together to deliver the electric mobility challenge. There was over £500 million available in various funds to drive the electric revolution through investments in zero emission vehicle technology and electric and low-emission vehicle infrastructure. Progress towards energy-efficient housing is less prominent despite over £400 million being made available for new construction projects, technologies and techniques (BEIS 2021)

The government's *Clean Growth Strategy* was launched in 2017 (DESNZ & BEIS 2017) and set out a plan for meeting the legislated carbon budgets through 50 key policies and proposals. The priority areas for funding and investment were identified as transport, buildings, power, industry and cross-cutting, mainly carbon capture, utilisation and storage (CCUS), assets. The clean growth ambition was reflected in the Local Industrial Strategies alongside three other Grand Challenges: artificial intelligence and data, an ageing population and the future of mobility.

Despite forming part of the local industrial policy discourse, the articulation of net zero investment priorities, support mechanisms and incentives for cross-sector collaboration lacked clarity. In many cases, manufacturing, transport and energy sectors dominated the focus of decarbonisation incentives as opposed to carbon-

² A net zero industrial cluster is a geographic concentration of interconnected businesses that provides opportunities for scale, sharing of risks and resources, and aggregation and optimisation of demand to achieve net zero (DESNZ & BEIS 2021)

rich sectors such as agriculture, land use, hospitality or tourism. This resulted in carbon-rich sectors being left out of local industrial strategies and contributed to the misrepresentation of place in policy. It is unsurprising that such an omission further narrowed an understanding of net zero transition challenges and risks. Hence, the widening of the net zero policy–practice gap continues to proliferate.

The government remained committed to supporting the net zero transition in the *Build Back Better: Our Plan for Growth* policy paper (HM Treasury 2021). There is stronger recognition of the net zero skills as an enabling factor to the success of the transition. For example, the job creation opportunities are set to be supported by the government, including 60,000 jobs in the offshore wind sector: 50,000 jobs in CCUS and up to 8,000 jobs in hydrogen industrial clusters. An estimated £12 billion of investment is allocated to supporting hydrogen, CCUS, offshore wind, nuclear and accelerating EV charging roll out, and the decarbonisation of heat and buildings.

In the latest report to Parliament about progress towards net zero priority areas and emission reduction, the Climate Change Committee reported a lag in tangible progress compared with policy ambition. There is notably slow progress on wider enablers, such as the development of a strategy of engagement with small and medium-sized enterprises (SMEs) on decarbonisation and enabling participatory and deliberative governance methods in the net zero policy-making process (CCC 2022). Recognition of the low engagement of SMEs in decarbonisation initiatives is well overdue and signals a positive change in the policy narrative towards acknowledging the net zero challenges of smaller businesses.

The recent independent review of net zero ‘Mission Zero’ by the Rt. Hon. Chris Skidmore MP reported better than expected progress on net zero nationally and globally since 2019. Against the backdrop of 91 per cent of the global economy committed to net zero, UK is leading the transition from the regulatory and policy standpoint. Renewable energy costs are dropping sharply, including a 70 per cent drop in offshore wind prices since 2014 (Skidmore 2023: 19). Solar and wind are increasingly becoming real alternatives to fossil fuels worldwide. Global markets for renewable energy and low-carbon technologies are growing and present strategic growth opportunities for UK businesses. Net zero is framed as the economic opportunity of the 21st century, which is attracting interest from major economies across the globe:

‘We are in an international race for capital, skills, and the industries of the future. We must act quickly, and in collaboration with our international partners, to cement the UK as a prime destination for international capital and unlock export opportunities for British businesses around the globe. Failing to do so will mean missed opportunities.’

(Skidmore 2023)

Such a global ambition is firmly rooted in local action. The report concludes that a locally led, place-based approach is vital for unlocking the economic and social benefits of the net zero transition. The review calls for more local support and tailoring of net zero initiatives to local needs in recognition that each community has a different path to net zero. Integral to this approach is an opportunity for commonalities and development of economies of scale and scope in building regional supply chains, developing low-carbon industrial clusters, forging net zero skills and attracting green investment.

The Skidmore review calls for a simplification of business support and funding mechanisms to stimulate business engagement with the net zero transition. The review suggests there is a need for easy access to information and better signposting for SMEs to the support available regionally and nationally. The report recommends a wider review of the tax system to incentivise investment in decarbonisation, including incentives for SMEs to stimulate the uptake of energy-efficiency technologies.

3.2 Government support for businesses

Historically, the overall approach to the delivery and design of government support for businesses has been largely top-down, centralised and led by financial economic growth logic. Business Link, a decentralised network of business support services established in the late 1990s, became a prototype for the Local Enterprise Partnership (LEP) network operating currently. Business Links were supported by the Industry Ministry and funded on performance. The most important performance indicators were the amount of ‘market penetration’ and the ‘satisfaction rate’ (Mole *et al.* 2011). In contrast, government funding of LEPs supports ‘capacity building’ within LEPs and ‘supports the development and delivery of the LEP strategic plan’ (HM Treasury 2012). As net zero is becoming a strategic priority for most LEPs, there is an opportunity for a well-overdue shift in the business support towards sustainable and inclusive growth and well-being for all.

When it comes to policy-making, the literature recognises a mismatch in the ‘hierarchy of choices’ concerned with who delivers the support, the type of support offered, how it is allocated and how the support is funded (Mole & Bramley 2006). The reluctance of support providers to focus ‘more intensive assistance on appropriate beneficiaries’ or match enterprise support to a specific business problem has also been a well-recognised criticism of business support (Mole *et al.* 2009: 20).

These calls are not unusual as, throughout the history of the public policy of business support, there is a recurring problem of the limited uptake of support programmes. Uptake of support can be related to SME characteristics, such as size and

sector, as well as external influences, such as the state of the economy. A study by Bager *et al.* (2015) suggests, for example, that programme enrolment may be subject to selection bias, leading to SMEs with the most growth potential being overlooked. Communication and information gaps have been recognised as barriers to small business engagement with support provision (Bennett 2008).

The net zero business support provision is a welcome departure from the narrow and self-serving policy perspective on the purpose of an enterprise and its contribution to society and growth. Consecutive governments maintained a focus on financial economic growth outcomes with little attention to environmental sustainability or social dimensions. This is not surprising as business support policy has often been an extension of national industrial policy with a traditionally dominant focus on economic development and growth, especially at a regional level (Huggins *et al.* 2015). A purpose-driven approach to business (the British Academy 2019; British Standards Institute PAS 808 2022) support provision that accelerates business contribution towards a Wellbeing Economy (Scottish Government 2022) is a much-needed trajectory in policy-making.

Such an approach has been emerging at grass roots for over two decades where not-for-profit organisations such as the Carbon Trust, Groundwork and Regen SW are leading the transformative change towards net zero. They provide access to skills, knowledge and expertise, as well as free to access tools that support businesses on the decarbonisation journey. They grow peer networks and multi-stakeholder collaborations for addressing the societal challenges of clean energy, zero-carbon transport, sustainable living, inclusive community and nature restoration. They provide purpose-driven support to strengthen business resilience, to succeed at net zero, to reduce ecological footprints, and to contribute to employee and wider community well-being. These examples are worthwhile sources of much-needed policy innovation for business support towards the net zero transition.

3.3 Net zero business support in the policy discourse

A review of the national net zero strategy and policy documents highlights a gap in articulating the role of business support in the net zero transition, as shown in Table 1. The policy lacks consideration for the approach, pace, scope and scale of the support that would prepare businesses to successfully engage with the biggest transformation of the business environment as a result of the net zero transition in coming years.

Although there has been a greater recognition of the role of enabling mechanisms in supporting business engagement with and benefits from the transition, the policy does not go far enough in articulating the focus, operationalisation, investment

Table 1. Policy articulation of the net zero business support.

<i>Topic</i>	<i>What is articulated</i>	<i>What is not articulated</i>
Businesses and net zero transition	Business is pivotal to the net zero transition as the bulk of investment and innovation is expected from the private sector (HM Treasury 2021). SMEs are core target for growth and the future of net zero (Skidmore 2023).	Configuration of the business support at the central and local levels including considerations for multi-stakeholder approach in creating business support ecosystem for the net zero transition.
Types of support	Government needs to act to enable SMEs to actively participate and benefit from the transition. Access to finance is part of the solution (Skidmore 2023).	Net zero business support beyond an energy-efficiency and decarbonisation focus.
Characteristics of support	Introduce a package of measures including a one-stop shop for SMEs to get decarbonisation advice with a carbon foot-printing tool, develop a strengthened low-carbon advisor/auditor role for SMEs and develop an effective financing strategy to support SME decarbonisation (CCC 2022).	Manufacturing focus dominates investment priorities, whilst services sector is downplayed. Urban vs rural business challenges of engagement with the net zero transition.
Support mechanisms/platforms	Utilization of role models — use sector-specific forums to provide evidence, case studies, information and advice to encourage businesses to actively decarbonise (Skidmore 2023).	Net zero support as a mechanism for accelerating the transition of regional and local entrepreneurial ecosystems towards net zero. Collaboration and cross-sector solutions to support net zero innovation and decarbonisation.
Net zero/green skills	Net zero skills are critical to the success of the net zero transition. A comprehensive assessment of when, where, and in which sectors there will be skill gaps specific to net zero. This should include consideration of particular barriers to labor market entry into occupations (CCC 2022)	Upskilling of business advisors to support the net zero transition. Considerations for pace and scope of training as well as the numbers of the advisers to be trained.

priorities and governance of the business support. The policy treats the business community as a homogeneous group without signalling differences in business support mechanisms and incentives for businesses of different size, sector of origin or location. The prevailing focus of support provision remains on the delivery of financial economic outputs rather than supporting businesses to succeed in the net zero transition.

The importance of place characteristics in the design and delivery of net zero business support is underplayed. Such a place-blind approach to the design and delivery of net zero support is unlikely to enable meaningful and transformative interventions capable of raising the capacity of local communities to take advantage of net zero growth opportunities.

The role of collaboration and cross-sector solutions is underplayed throughout the policy narrative. The importance of multi-stakeholder partnerships for the development of the net zero support ecosystem has yet to be brought to fore. The net zero skills and the net zero support agendas are yet to be linked, opening opportunities for discussions about how to support skills development through business support mechanisms, thus boosting the supply of local net zero skills for the transition.

When it comes to support provision towards net zero, the prevailing policy discourse is around energy-efficiency initiatives and decarbonisation. Although these are well-recognised opportunities of the net zero transition, there are other opportunities around development and commercialisation of the new product and service offerings, and supporting businesses towards green growth (OECD 2011). The latter requires a holistic understanding of the transformation that businesses would undertake as part of net zero. Such a transformation involves re-imagining the purpose of business in society and redefining the approaches to sustainable growth through contributions to place and communities.

4. Research overview

The underpinning research for this paper has been drawn from a number of studies and the practical experience of delivering an award-winning ERDF DE-Carbonise project³ (DBT 2020). The contributing studies include:

³Derby City and Derbyshire County Councils won the title of Energy Efficient Council of the Year in the East Midlands Efficiency Awards in both 2018 and 2019, for their role in the delivery of the project. The project was also shortlisted for the Institute for Environmental Management & Assessment (IEMA) Sustainability Impact Award 2019 and was a finalist for the APSE [Association for Public Service Excellence] Best Renewable or Energy Efficiency Initiative 2019 and APSE Best Climate Action Initiative 2020. Additionally, the project was winner of

- A review of the Local Industrial Strategies (LISs) and Strategic Economic Plans (SEPs) across the 38 LEPs with a view to studying the representation of place in the policy documents and articulation of net zero business support provision. Each of the LISs and SEPs in the LEPs were carefully reviewed according to three themes: a net zero transition narrative, including framing of strategic priorities, interventions and challenges; business support provision framing, including net zero support; the articulation of place and place characteristics in LEP policy documents.
- An analysis of the net zero business support available through LEPs and Growth Hub web pages. The analysis included current support provision as well as past support offerings since 2014 in line with the ERDF (European Regional Development Fund) and ESF (European Social Fund) funding cycle. The analysis included type and scope of support offers, delivery mechanisms, and level of reflection of place characteristics (sector, locality, local socio-demographic and economic trends) in the support provision.
- A longitudinal study of green growth trends in the East Midlands region. The study analyses a survey of 372 businesses operating in the Midlands and reveals trends of engagement with green growth, demand for green skills development and trends in business support requirements and uptake in 2015 (Baranova *et al.* 2022).
- An analysis of the ERDF and ESF projects delivering business support towards decarbonisation, eco-innovation and clean growth from 2014 to 2023. The author accessed publicly available European Structural and Investment Funds data (DBT 2023) and analysed the projects that targeted carbon reduction, low-carbon innovation, net zero and green growth as part of the project outcomes.

The limitations of the methodological approach are twofold. First, the analysis does not include any data on private providers or NGOs delivering net zero support. The market for private net zero consultancy and training is growing and market scanning needs to be undertaken to understand the size, characteristics and locality of the provision. There are some well-established NGOs (non-governmental organisations), for example the Carbon Trust, supporting businesses on their net zero journey. The scale and diversity of support offering are growing and cover almost every UK region. Second, the data on demand for net zero support, policy awareness and uptake of the support programmes is based in the East Midlands region. The D2N2 LEP, which covers the majority of the East Midlands, has a long-standing

and successful tradition of attracting central and European funding for pro-environmental business support provision.

In addition to the above studies, the paper draws on the author's own experience of leading and managing decarbonisation initiatives in small businesses as part of the ERDF DE-Carbonise project. DE-Carbonise was a business support programme delivered to SMEs in the East Midlands during 2016–22. The £8.9 million programme supported over 1,000 SMEs by providing carbon audits and grants worth over £1.6 million for energy-efficiency measures that delivered savings of over £750,000 per year, helping 273 SMEs to be significantly more resilient in the face of steep rises in energy costs. The project supported extended innovation and research and development (R&D) projects to 47 firms and business improvement consultancy for 153 SMEs to support their journey towards net zero. Overall, it secured an estimated 32,600 tonnes of reductions in greenhouse gas (GHG).

In the second phase of the project from 2019 to 2022, businesses were allowed to access all three strands of the project offer. This included energy audits followed by energy-efficiency grants, consultancy, and eco-innovation R&D as well as sign-posting to broader business network support activities. The DE-Carbonise project Summative Assessment Report (Shaw *et al.* 2022) acknowledged that this integrated offer to SMEs (audits, grants, R&D and consultancy) was a key strength of the business support offering. Following this outline of the data used in the research, place–policy–practice nexus gaps are analysed.

5. Analysis and discussion

5.1 Place–policy gap

5.1.1 Lack of local net zero policy ambition and evidence base

Policy ambition in relation to the net zero transition is communicated by only one in three LEPs. Although linked to the clean growth Grand Challenge (BEIS 2017), the net zero transition demands an identification of key sectors and risks of the transition including job market patterns, potential skills shortages and infrastructure constraints. The strategy documents show only a few LEPs are advanced in this work. Net Zero North West, a partnership between Liverpool, Greater Manchester, and Cheshire and Warrington LEPs, has undertaken a review of net zero skills gaps. The report highlights the need for a coordinated, strategic approach to connecting the mechanisms across the regions for the rapid development of net zero skills, capacity building, effective communication and awareness raising (Net Zero North West LEP 2021).

The South Yorkshire Mayoral Combined Authority pledged concerted efforts to achieve a net zero economy by 2040 as part of the strategic economic plan. Net zero is presented as an ‘unparalleled opportunity to transform energy generation, supply, storage, and use will create benefits for the local economy, our communities and the environment’ (SYMCA 2022: 51). The plan proposes a focus on (1) clean growth and decarbonisation of local businesses; (2) enabling investment and innovation in low-carbon energy; (3) improving the energy efficiency and sustainability of the built environment; and (4) a transition to ultra-low emission vehicles and transport systems. These areas are regularly mentioned in other local net zero policies alongside priority areas for investment such as green hydrogen; Ultra Low Emissions Vehicles (ULEV) and transport systems; renewable energy systems; and design and building construction and using modern methods of construction (MMC).

Decarbonisation and the drive to net zero is a cross-cutting theme in the North East LEP SEP. The commitments to net zero are balanced alongside ensuring quality employment, improved standards of living and enhancement of the unique regional natural environment. There are emphases on collaborative working across businesses, institutions and communities to ‘collectively drive to Net Zero and advocate for a firmer national response and strengthened local powers to enable us to deliver this’ (North East LEP 2022: 8).

York and North Yorkshire Region LEP declared commitments to become England’s first carbon-negative region. Additionally, clean growth enabled by a circular bio-economy is viewed as ‘a USP’ of the economic recovery plan (York and North Yorkshire LEP 2020). Such an ambition is rooted in place capabilities, including world-leading bio-economy and agri-tech innovation assets, and low-carbon industrial innovation, including carbon capture and storage. Access to two national parks and three Areas of Outstanding Natural Beauty provides the opportunity to increase agricultural and food productivity whilst delivering natural carbon-reduction opportunities. The strategy identifies key sectors for investment and targeted interventions to deliver the carbon-negative ambition, including heat and building; transport; business and industry; power; land-use, agriculture and marine (York and North Yorkshire LEP 2022)

Despite these examples of commitments to the net zero transition, the majority of LEPs have not undertaken the necessary work to develop net zero targets, governance mechanisms and implementation plans. A holistic approach to understanding the impact of the net zero transition on the locality and the opportunities and challenges it might bring is rare. There are information gaps about the purpose and impact of the net zero transition in local and regional contexts. There is limited consideration of the support mechanisms and programmes that need to be in place

to support businesses engagement with the net zero transition. Where they are articulated, they lack place-based focus due to insufficient evidence-based data on business attitudes, barriers and enablers of the net zero transition.

5.1.2 Misalignment between policy and place characteristics

An overview of the Local Industrial Strategies (LISs) and Strategic Economic Plans (SEPs) of 38 Local Enterprise Partnerships (LEPs) showed large variations in policy commitments towards business support. There are four positions which describe how the policy treats the business support narrative:

- (1) **Little or no articulation of business support in the policy documents.** This position is rather rare and only one LEP was identified as being in this position.
- (2) **Generic articulation with little implementation detail or place recognition.** Although only five LEPs fall into this position, it is concerning that such an approach is exercised alongside a well-evidenced body of knowledge about the value of business support for economic growth, and regional and national development (OECD 2017).
- (3) **Some sectoral focus, a well-defined approach and detailed implementation steps.** This is the majority position exercised by 22 LEPs. The business support approach is often linked with LIS priority sectors and is aimed at strengthening established businesses; creation of new ventures; start-up support, and improvements in productivity. There is little consideration beyond the LIS priority sectors, including low-income areas and communities underrepresented in entrepreneurship. The place characteristics are limited to sectoral composition with little consideration of natural capital, infrastructure, heritage or business characteristics.
- (4) **Strong sectoral focus alongside other place characteristics.** This approach is applied by only 10 out of 38 LEPs and shows a broad range of place characteristics in the design and delivery of business support. Such considerations include support for rural and coastal businesses; collaborative working across training providers to deliver business support; public–private partnerships for inclusive support provision; heritage, tourism and well-being; internationalisation activity; and infrastructure characteristics.

The analysis confirms a fragmented picture when it comes to use of place characteristics in the design of public business support. Less than a third of LEPs drew on the range of place characteristics to design business support provision that reflects the sectoral make-up, business composition, local infrastructure and

community. Although many policy documents communicated business support commitments for the LIS priority sectors, this does not go far enough in terms of place taking centre stage in policy design and implementation from a regional development perspective. The varying needs of different sectors beyond the priority areas remain underexplored and unrecognised in the net zero policy discourse. This leads to the design and delivery of place-blind business support due to a limited understanding and knowledge of the local business environment.

5.1.3 Narrow appreciation of the rural–urban dimension

The rural–urban specificity of the place is largely underrepresented across the policy documents. Only seven out of the 38 LEPs declared the development of and investment in rural areas as a strategic priority. Support for rural businesses is rarely articulated in the LEP strategic narrative. Where it is mentioned, the support focus is on new and developing micro and small rural businesses. There is a recognition that business support programmes could support the upskilling of rural businesses and that their learning needs and preferred modes of learning might be different: i.e. collaborative learning (Pittaway & Cope 2007).

5.1.4 Net zero skills and the net zero transition: a missing link

Net zero skills is another area that has little representation in the policy discourse and is linked to a vague articulation of net zero commitments. Despite the skills agenda being part of local industrial strategies, little is done to forecast demand for net zero skills to accommodate changes in the job market as a result of the transition (BEIS 2021). Little contingency planning is in place to accommodate changes in demand for net zero skills. The characteristics of local training providers, potential for upskilling and opportunities for flexible and collaborative provision remain largely underexplored.

5.1.5 Challenges of local net zero governance

The net zero governance mechanisms that ensure place representation, effective and evidence-based decision-making, as well as resourcing are rarely articulated. They are at the early stages of development and require concerted efforts to ensure multi-stakeholder representation. The net zero strategies of local government, LEPs, regulators and other significant institutional stakeholders remain unsynchronised, which adds to the fragmentation and mixed messages about net zero policy commitments and policy instruments.

5.2 Policy–practice gap

5.2.1 Limited understanding of the impact of the net zero transition

Policy articulation of the business support focus, characteristics and delivery mechanisms is fragmented and shows little understanding of the varying needs of businesses across sectors and localities. The review of strategy documents across 38 LEPs showed that the main policy business support narrative is linked to the stages of enterprise development. These include development of entrepreneurial ideas (support through concept and innovation grants); start-up support; scale-up support; and support for high-growth firms. The type of support includes commercialisation support; capacity building; access to funding for growth; innovation and supply-chain support; and export growth strategy support. Only a few LEPs differentiate the specific needs of rural businesses for business support.

There is a recognition of the role of networks in supporting enterprise development and growth. Although every LEP has some form of business network they facilitate, it is rarely linked to the net zero transition. In fact, when articulating business support strategy, the majority of LEPs revert back to the traditional view of support for financial or activity-based growth without reflecting clean growth or net zero priorities in the business support design and interventions.

There is limited recognition of the impact of the net zero transition on businesses in regions and localities. Net zero impact is often understood through energy, infrastructure and opportunity for cost efficiencies and business growth opportunities. It is far less understood through changes in social practices, including skills and talent development; career pathways and professions; and physical and mental well-being in the workplace.

5.2.2 Energy efficiency dominates support focus

By and large, the focus of net zero business support is on energy efficiency. Such a narrow and ‘one-size-fits-all’ approach limits business responses to the opportunities presented by the net zero transition in domestic and international markets. Analysis of net zero support provision across LEPs and Growth Hubs shows that energy-efficiency advice and information remain the most common form of support, followed by advice and information on net zero and renewable energy, as shown in Table 2.

Only 21 LEPs out of the 38 have provided energy-efficiency grants. Most grant schemes offered funds of up to £20,000 for eligible businesses. Only a few programmes offered funds above the threshold of up to of £25,000. Drawing on the experience of the £8.9 million awardwinning ERDF DE-Carbonise project, the

Table 2. Net zero business support provision across the Local Enterprise Partnerships and Growth Hubs.

<i>Business support towards the net zero transition</i>	<i>Number of LEPs</i>
Energy-efficiency advice and information	32
Net Zero advice and information	31
Renewable energy use and adoption advice and information	23
Energy-efficiency grants	21
Eco-innovation advice and innovation	12
Sustainability/net zero/clean growth network	9
Eco-innovation grants	8
Green growth grants	8
Renewable sources of energy adoption grants	7
Retrofit grants for households and communities	3

most common types of energy-efficiency initiatives for grant applications were for heating, including new compressors and boilers; LED lighting and heating control; and solar energy generation. The distribution of the grants was also uneven across sectors. Manufacturing companies were responsible for a third of the uptake of energy-efficiency grants followed by repair outlets for motor vehicles and motor-cycles, and wholesale and retail businesses. The grant value, locality of grant availability, and availability of energy and carbon data to support the grant application were recognised as limiting factors in the uptake of energy-efficiency grants (Shaw *et al.* 2022).

Unsurprisingly, advice and information provision are more common than grants due to national and local budget and funding restrictions. Despite the significant role innovation plays in the net zero transition (DESNZ *et al.* 2020), eco-innovation advice and information were provided by only a third of LEPs. Surprisingly, only eight out of the 38 LEPs provided eco-innovation grants. Green growth grants targeting businesses with support packages to enhance their performance on green market niches and to reduce carbon are also quite rare. Grants for adoption of renewable sources of energy are the least common form of grant offer in seven out of the 38 LEPs. Retrofit grants for households and communities were available through only three LEPs, making this the rarest form of net zero support.

The prevalence of energy-efficiency advisory and information, and energy-efficiency grants in net zero support offerings is not surprising. Although such programmes offer the benefits of ‘light-touch’ and ‘quick ROI (return on investment)’ interventions for carbon reduction and cost efficiency, these interventions tend to be short term and transactional in nature. They are a useful starting point on the decarbonisation journey for many SMEs. However, a more holistic offer of business support that adopts a transformational approach to business engagement with net zero is well overdue. Such an approach involves broadening the scope of support provision as well flexibility in delivery modes.

5.2.3 Information and communication issues

Based on the Green Growth Trends in the East Midlands Report (Baranova *et al.* 2022), only 17.2 per cent of the 372 businesses that took part in the Quarterly Economic Survey (QES) said that the current policy allows them to fully engage with the clean growth policy agenda. This is a decline of nearly 2 per cent from the 2021 QES response about the confidence level in relation to clean growth policy. A third (33 per cent) did not feel well informed about the support available for clean growth, although this was a drop from 42 per cent in 2021. These findings paint a challenging picture where information and communication gaps constrict the engagement of regional businesses with net zero policy and support provision.

5.2.4 Networks as support mechanisms

The availability of the networks that support clean growth, sustainability and net zero in nine out of the 38 LEPs, is not as widespread as expected. Networks have long been recognised as effective mechanisms for entrepreneurial learning and business support (Vittoria & Lubrano Lavadera 2014). There are missed opportunities to establish such networks as effective mechanisms for knowledge sharing, knowledge exchange and innovation to support capacity building towards net zero (Baranova 2022).

Net zero business support must cater for rural communities and realise their specific challenges when engaging with net zero. As the policy mainly targets manufacturing, power, energy, digital and transport sectors and rural businesses are challenged to find pathways of engagement with net zero. This widens the policy–practice gap between rural communities and local and regional net zero policy ambitions, leading to unrealistic targets and ineffective policy mixes (Peters *et al.* 2018).

5.2.5 Capacity shortages to deliver net zero support

Undoubtedly, there is a question of business support capacity for net zero in regions and localities. Many LEPs and Growth Hubs have dedicated advisors for energy-efficiency and decarbonisation support. However, the numbers are often small — one or two advisers per Growth Hub business support team. Taking into account a significant increase in the business engagement required to meet the net zero targets set in the *Building Back Better* report (HM Treasury 2021), the support capacity needs to be increased not only in terms of the number of advisers but also in terms of sustained investment in advisor upskilling.

5.2.6 *Lack of synchronisation in policy mixes*

Lastly, the studies of local clean growth policies commented on the confusing messages in the policy documents and the lack of a ‘joined-up’ approach in developing policies across institutional stakeholders (Baranova *et al.* 2020). Businesses commented on the lack of clarity in the policy documents about business support mechanisms and the incentives for cross-sector collaboration towards tackling environmental underperformance. Considering the well-recognised lack of small business engagement with policy (Blackburn & Smallbone 2011), effective governance mechanisms that actively encourage business participation in net zero policy design and implementation are essential. They hold the potential to narrow the understanding, knowledge and information gaps as well as to design effective policy instruments and to contribute to strategy alignment and synergies.

5.3 Practice–place gap

In considering the practice–place gap, the following questions direct the inquiry: ‘What is the availability of the net zero support provision relevant to the place?’ and ‘How well do net zero business support programmes cater for the place?’ Analysis of the business support provided through LEPs and European Structural and Investment Funds reveals some interesting insights.

5.3.1 *Lack of local net zero business support provision*

Analysis of LEP support offerings shows a low number of dedicated business support programmes for decarbonisation and net zero. Only 10 LEPs have such programmes in operation, and they are mainly delivered through advisory and information support with some grant provision. Such a position is problematic for ensuring business readiness for the net zero transition. Although most policies recognise the role of business support in the delivery of strategic economic priorities, the net zero support offer is limited in scope and availability.

5.3.2 *Prevailing manufacturing focus of the net zero support*

By and large, local business support programmes target LIS and SEP priority sectors. Although this is unsurprising at times of constrained public funding and economic uncertainty, there is a tendency to commit funding to a select group of sectors and repeatedly exclude the others. For example, advanced manufacturing, and digital and transport sectors are identified as priority sectors for growth and

investment in most of the LISs reviewed. Services and the agricultural sector are far less in focus; and hospitality, tourism and creative industries are mentioned in only a handful of the documents. Only seven out of the 38 LEPs have specialised business support provision for rural businesses.

As mentioned earlier in Section 4.2.2, manufacturing companies dominate uptake of energy-efficiency grants and other forms of support. This is linked to a strong manufacturing focus in the central net zero policy and sector reports that forecast significant demands on and transformation in manufacturing sectors as a result of the net zero transition (BEIS 2021). Although the role of manufacturing in the net zero transformation is undisputed, to achieve a whole-system transformation other sectors need to be engaged, adequately supported and succeed at the net zero transition.

5.3.3 Net zero community-based projects

There is a notable lack of projects that bring together local community and businesses in tackling issues of sustainable development. Local business support programmes for community-based projects are rare. Nationally, Business in the Community, the UK's largest responsible business network 'dedicated to building a fairer and greener world together' and supported by the Royal Family, leads the agenda (Business in the Community 2023). However, such an initiative is yet to be followed by national or local government.

There were 43 ERDF projects supporting community-led local development initiatives in rural and urban areas. The vast majority of the projects, 33, were delivered by local government. Only 11 projects focused on strengthening the links between businesses and local communities towards addressing localised sustainable development challenges. There were only six ERDF projects to support social enterprises during the period 2014–23. None of the projects were delivered by local government and/or LEPs. Two of the projects were delivered by the University of Bath and the University of Central Lancashire, respectively, and the remaining four projects were delivered by NGOs. There is a significant lack of policy innovation to support community-based projects that leverage synergies and collective strength of businesses and local communities to accelerate climate action and engagement with net zero.

5.3.4 Limited focus on place-based innovation

A review of business support programmes through ERDF and ESF programmes 2014–23 reveals that out just under half of all the funded programmes supporting

SMEs towards the net zero transition in England, 30 out of 69, focused on energy and resource efficiency (DBT 2023). These were primarily led by local council and combined authority teams (17 projects). The universities led eight and the private sector delivered only four of these projects. Only one project, Swindon–Wiltshire Target 2030, focused on the needs of rural businesses for energy efficiency and the use of renewables. The support design included a dedicated energy-efficiency and renewable energy advisory service; tailored expert advice and diagnostics; and a grant offer of up to 35 per cent of the cost of capital measures.

Twenty-eight projects were aimed more broadly at developing a local low-carbon economy and green business growth: i.e. ensuring sustained growth on green market niches balanced with a reduction in the carbon footprint. Many projects included a *multi-strand offer*, including business coaching, environmental mapping, carbon footprinting, attainment of Environmental Management Accreditation, consultancy and growth grants. Local councils and universities were the main delivery partners delivering 12 and 10 projects, respectively, followed by businesses and NGOs delivering three projects each.

Twenty-seven projects targeted eco-innovation with the vast majority, 20 projects, delivered by the university teams. Alongside generic areas of support with R&D, prototyping, access to demonstrators, laboratories and testing facilities, there were very few projects targeting *place-based innovation*. Examples of these projects include a £1.1 million Bioeconomy Growth programme aimed at growth of the emerging bioeconomy sector across the YNYER (York, North Yorkshire and East Riding) and Humber LEP Regions; and Orbis Energy's SCORE project with a £6 million delegated grant fund that supported over 200 SMEs to develop new and innovative technologies in the offshore renewable energy sector.

The analysis demonstrates a differentiation between universities that focused on eco-innovation support and councils specialising in energy-efficiency programmes. There is a clear disparity in the overall balance of funding. Funding for energy-efficiency and carbon reduction measures amounted to £376 million; £126 million was provided for more general low-carbon/green growth initiatives combined with business development programmes. Eco-innovation projects received £122 million in ERDF funding.

5.3.5 Business support ecosystem approach

An ecosystem approach to business support is gaining popularity in the policy and academic literature (Brown & Mason 2017; Spigel & Harrison 2018). It is credited with opportunities for access to resource pools, including skills, knowledge, finance, supply chains, technology and know-how. It ensures representation and

stakeholder management opportunities. There are opportunities for collaboration and partnership working in addressing the net zero transition challenges.

Despite this, the ecosystem approach to local and regional business support provision is rarely exercised. There are, however, some positive examples of how the ecosystem approach is adopted. For example, Liverpool City Region LEP is committed to an efficient, privately sustainable business ecosystem supported by public interventions informed by the requirements for business support, space and infrastructure (Liverpool City Region LEP 2020). Solent LEP outlines a holistic framework for business support through the Green and Sustainable Business Hub. LEAP (Local Energy Advice Partnership) is committed to a focus on circularity in business support provision and long-term investment priorities (LEAP Climate Hub 2023). The ecosystem approach is useful for realising the role of collaboration and partnerships in the delivery of business support. It offers opportunities for knowledge transfer, learning and multi-stakeholder engagement for local capacity building towards sustainable development.

6. Net zero business support gaps and resolutions

Having undertaken an analysis of the place–policy–practice nexus gaps in relation to net zero business support, a summary is shown in Table 3. The review of business support provision through LEPs, local government, and national and EU funding streams confirms the focus on energy-efficiency interventions as a dominant model for business support towards net zero. Although this approach ensures a high uptake of energy-efficiency grants by businesses due to energy saving and a potential cost reduction, it has a limited scope in preparing businesses for large-scale and deep decarbonisation as part of the net zero transition.

Only 10 LEPs have dedicated net zero/decarbonisation business support provision. Where business support exists, it is largely in the form of net zero advice and information. There is a shortage of grants, funding and finance provision supporting resourcing towards the net zero transition. Only one in three LEPs communicates a strong sectoral focus alongside a well-defined business support approach, support targets, investment priorities and implementation steps.

One focus of the net zero support is dedicated to the development of technical competence at large. There are few opportunities for the development of a broader spectrum of net zero competences, including project management, change management, leadership, sustainable business strategy, big data and digital, inter-relational and sustainability competences. The level of competence development, depending on business size and specialist position (middle, senior management), is

Table 3. Summary of the net zero support gap analysis and resolutions.

<i>Gap area</i>	<i>Place–Policy Gap</i>	
	<i>Gap issue</i>	<i>Report section</i>
<i>Understanding</i>	The role of place in driving the net zero transition	5.1.2; 5.1.3; 5.3.4; 5.3.5
<i>Knowledge</i>	Lack of evidence-based data on how the net zero transition might impact the place including sectoral, market, technological and socio-demographic trends	5.1.1; 5.1.3; 5.2.1
<i>Skills</i>	Gaps in identifying net zero skills demand patterns of the place, shortages, and barriers to entry into occupations	5.1.4
<i>Information</i>	Policy does not fully reflect the needs of local businesses	5.2.3; 5.3.1; 5.3.3
<i>Instruments</i>	Sectoral focus and other place characteristics reflected in the business support provision in one in three LEPs	5.1.2
		<p>Undertake analysis and scenario planning to understand the impact of the net zero transition on place including opportunities, challenges and risks. Ensure such an analysis informs the policy-making. Work with local and regional stakeholders to understand the impact of the net zero transition and design effective place-based policy mixes.</p> <p>Working collaboratively with universities, support agencies and within and across the local government, ensure the availability and use of sectoral evidence-based data in the design of the net zero policy mixes.</p> <p>Undertake a supply–demand net-zero skills analysis against the net zero transition scenarios of the place.</p> <p>Clearly articulate the purpose and impact of the net zero transition across the multiple local and regional stakeholders. The emerging information gaps needs to be monitored and addressed timely and effectively.</p> <p>Ensure place characteristics inform and accommodated for in the design and delivery of the net zero business support provision.</p>

Table 3. Cont.

<i>Gap area</i>	<i>Gap issue</i>	<i>Place–Policy Gap Report section</i>	<i>Resolution</i>
<i>Governance (Clean Growth boards, streaking groups, networks)</i>	Governance mechanisms lack effective place representation	5.1.5	Establish effective and transparent net zero governance mechanisms at regional and local levels. Such mechanisms must ensure representation from the local government, business and public, and facilitate the partnership between local and central government to support the net zero transition.
<i>Strategy</i>	Lack of visibility of the place-specific challenges and opportunities of the net zero transition in policy	5.1.1; 5.2.1; 5.2.6	Undertake a review of local policies and strategies to ensure place-specific net zero challenges are consistently and comprehensively reflected in policy-making. Ensure greater strategy alignment through the synchronisation of priorities, targets, timelines and interventions.
<i>Understanding</i>	The role of business support in the net zero transition	5.2.2	Stimulate the policy–practice dialogue and strategy development for place-based net zero business support.
<i>Knowledge</i>	Lack of knowledge about business support needs and preferences for the scope, mode, style and timescale of business support interventions	5.2.2;	Undertake a comprehensive review of the net zero business support needs. Be mindful that not all sectors and communities will benefit from the net zero transition. Identify those who are at high risk and provide appropriate support to mitigate the risks.
<i>Skills</i>	Skills gaps in design and delivery of the specialised net zero business support programmes	5.2.5	Undertake a review of the net zero skills and capacity gaps at the local government, LEPs, universities and other business support providers.

Table 3. *Cont.*

<i>Gap area</i>	<i>Gap issue</i>	<i>Policy–Practice Gap Report section</i>	<i>Resolution</i>
<i>Information</i>	Insufficient and difficult to access information on business support towards net zero	5.2.3	Work collaboratively with businesses and business support providers to ensure accessibility and better signposting to the net zero business support.
<i>Instruments</i>	Energy-efficiency advice and information, and grants remain the most common form of the net zero business support followed by the advice and information on net zero and renewable energy.	5.2.2; 5.2.3	Broaden the scope of the net zero support to include support with eco-innovation, green growth and management of the net zero transition. A greater diversity in the types of the net zero support is encouraged including eco-innovation grants, green financing, bespoke consultancy and wide-ranging training provision.
<i>Governance (Clean Growth boards, streaking groups, networks)</i>	Conflicting oversight of the business support provision and lack of visibility	5.1.5; 5.2.4; 5.2.6; 5.3.5	Ensure application of the ecosystem approach in the design and delivery of the place-based business support.
<i>Strategy</i>	Lack of clarity in policy commitments to net zero business support	3.3; 5.1.2; 5.2.3	Net zero business support needs to become an integral part of the Local Industrial Strategies and Strategic Economic Plans. Local reviews of the impact and risks of the net zero transition are to take place and to inform the design of the support mechanisms for the effective transition.
<i>Understanding</i>	The role of place and its characteristics in the design and implementation of business support	<i>Practice–Place Gap</i> 5.3.2; 5.3.3; 5.3.4.	Ensure place characteristics and local specifics of the net zero transition drive design and delivery of the support.

Table 3. *Cont.*

<i>Gap area</i>	<i>Gap issue</i>	<i>Practice–Place Gap Report section</i>	<i>Resolution</i>
<i>Knowledge</i>	Business support programmes lack appreciation for the diversity of businesses in the locality and their growth aspirations including the international markets.	3.3; 5.1.3; 5.3.3	Strengthen the delivery of the net zero support through collaborative working across local and regional stakeholders including local government, LEPs, universities and training providers. Undertake data collection to develop a comprehensive understanding of the business make-up of the place, business growth potential and aspirations. Design effective business support that matches growth aspirations and the net zero opportunities at domestic and international markets.
<i>Skills</i>	Advisor shortages and need for upskilling of business advisers to match the net zero support demands	5.2.2; 5.2.6	Work collaboratively with the support agencies to assure advisor recruitment, upskilling and talent management.
<i>Information</i>	Effective communication of the net zero support offers, sector-leading net zero practices and networks.	3.3; 5.2.4; 5.3.5	Develop effective communication strategy and operational plans that support utilisation of role models; dissemination of the case studies and development of the net zero networks.
<i>Instruments</i>	Disjointed approach in the business support provision that leads to inefficiencies and weak uptake of the support programmes.	5.2.2; 5.3.1; 5.3.4; 5.3.5	An integrated model of support services that adopts a holistic approach to developing net zero capabilities is likely to equip businesses better for the net zero transition. A multi-strand provision by design characterised by a seamless customer experience across a number of

Table 3. *Cont.*

<i>Gap area</i>	<i>Gap issue</i>	<i>Practice–Place Gap Report section</i>	<i>Resolution</i>
<i>Governance (Clean Growth boards, streaking groups, networks)</i>	Weak progress towards development of the agile business support ecosystem that supports the sectoral diversity of the place and ensured inclusion of low income and underrepresented communities.	5.1.5; 5.3.5	strands — for example, grants, R&D and consultancy — is proven to be the best practice nationally. Exercise strong place-based leadership to support development of the business support ecosystem which opens opportunities for multi-stakeholder collaboration and partnerships in the delivery of the business support and addresses needs of low income and underrepresented communities.
<i>Strategy</i>	Lack of considerations about the role of business support in the place-based capacity building for the net zero transition.	5.1.1; 5.2.1; 5.2.6	Clearly articulate the development of the business support ecosystem which builds collective place-based capacity for the net zero transition as a strategic priority in LISs and SEPs.

not articulated. The number of net zero advisers needs to be enlarged. Advisor upskilling opportunities should be in place to ensure access to the latest technological, operational and industrial developments.

The governance mechanisms need to increase the visibility and effective representation of a place in the oversight of the business support ecosystem towards net zero. The diversity of the business community of the place needs to be well understood. The design of support instruments needs to be aligned to the specifics of the place and regional growth priorities. The role of business support in place-based capacity building towards the net zero transition needs to be clearly articulated and provided for. An inability to design and implement effective business support interventions of varying scope, mode, timescale and delivery mechanisms could further delay business engagement with the net zero transition and limit access to net zero opportunities in domestic and international markets.

7. Conclusions and recommendations

The socio-economic transformation required to achieve net zero emissions by 2050 will be worldwide in scale yet localised in execution. Place-based solutions should lead the way in designing and executing interventions to transform our energy and land-use systems for a reduction in CO₂ and methane emissions. Place–policy–practice nexus thinking ensures place representation in policy-making and encourages practice with the place in our hearts and in our minds. Such an approach supports the sustainable development of regions and localities where place characteristics drive considerations for net zero policy design and policy mixes.

Gap analysis advances an understanding of net zero business support and reveals a number of challenges faced by businesses when engaging with the net zero policy agenda. These challenges are characterised by a degree of misalignment between the place, policy and practice nexus dimensions. Drawing on the article findings, the following set of recommendations aimed at re-imagining business support towards the net zero transition can be drawn:

For policy

- Net zero business support needs to become an integral part of Local Industrial Strategies and Strategic Economic Plans. A review of the net zero transition needs to be undertaken to understand the risks and the impact of the transition in a locality.

- This should inform the design of support mechanisms for an effective transition.
- The ecosystem approach in the design of agile business support provision opens opportunities for multi-stakeholder collaborations and partnerships in the delivery of business support interventions. As a result, the net zero capacity of the place advances.
- Deployment of place–policy–place nexus thinking in tackling the challenges of the net zero transition is helpful for designing policy mixes that are place based and practice relevant.
- An integrated model of support services that adopts a holistic approach to addressing business growth as well as carbon reduction challenges is likely to equip businesses better for the net zero transition. A multi-strand provision by design characterised by a seamless customer experience across a number of strands — for example, grants, R&D and consultancy — is proven to be the best practice nationally.
- Support the programmes to accelerate the scale and pace of the net zero transition. The availability of local evidence-based data on decarbonisation and green growth trends is a prerequisite for effective decision-making about the priorities and characteristics of net zero support programmes.
- There is a need for a greater alignment of strategy and collaborative work at a local level to ensure net zero targets and priorities are synchronised.
- Rural businesses need stronger representation in strategy documents. Rural challenges of engagement with the net zero transition need to be well understood and to inform the design of dedicated business support provision.
- Support development of net zero governance mechanisms that ensure ‘whole place’ representation, and effective and evidence-based decision-making. They should become enablers for multiple stakeholders to engage with policymakers and ensure the effectiveness of net zero policy instruments.

For businesses support providers

- Undertake a comprehensive review of business needs towards the net zero transition and design support interventions in alignment with the needs identified. Be mindful that not all sectors and communities will benefit from the net zero transition. Identify those who are at high risk and provide appropriate support to smooth the transition.
- Actively participate in local and national net zero governance mechanisms to ensure representation and access to the latest developments and opportunities for collaborative funding bids.

- There is a need to increase the business advisor capacity in local authorities and LEPs to accommodate the acceleration of the net zero transition. This should be supported by advisor upskilling programmes that ensure access to the latest technological, operational, industrial and societal innovations.
- Broaden the scope of the net zero business support beyond the traditional focus on energy efficiency and renewable energy. This includes development of competences in the areas of competitive strategy, responsible management and leadership, green funding and finance, collaborative working and stakeholder management.
- Such competences need to be developed over time and require *a transformative approach* in the delivery of business support. The ethos of such support is about *empowering* businesses to face the vision of their role in addressing climate challenges and *enabling* proactive and positive actions that strengthen the contribution of business towards sustainable development.

For businesses

- Businesses are encouraged to explore the opportunities presented by the net zero transition towards sustainable business growth and wide-scale decarbonisation in operations and through supply chains. Identifying and securing these opportunities in the locality reduces the risks and supports the pro-environmental business practices of a place.
- Approach the development of capability towards net zero holistically, and with strategic foresight. Although energy efficiency might be a starting point of the net zero journey, broader net zero skills and competences are required to succeed in the fast-emerging green market niches.
- Engage in a proactive dialogue with the policy community to shape net zero policy and the associated business support mechanisms, thus ensuring business representation in policy-making. Multi-stakeholder net zero networks and initiatives offer exciting opportunities for net zero capability development and innovation.

These recommendations have outlined target policy, business support providers and business as key stakeholder groups of the net zero support ecosystem. It is important to realise that such an ecosystem has many actors, for example regulators, professional networks and not-for-profit organisations, whose roles need to be better understood in the context of the net zero transition. Effective ecosystem governance and management need to become an integral part of local capacity building initiatives towards net zero.

Place has to become a bigger part of net zero support mechanisms in order to encourage policy buy-in and effective practice adaptation. This requires a deeper reflection of place specifics, including cultural, social, political and economic insights in policy discourse, local strategies and policy mixes. The availability of evidence-based regional data and analytical multi-stakeholder insights is necessary to inform policy-making and support provision. Enabling and partnership working between local and central government in shaping the focus, resourcing, delivery mechanisms and outcomes of net zero policy is necessary to ensure that local places flourish whilst undergoing the net zero transition. The success of the transition is place based, and is linked to how well the net zero initiatives are localised and supported; what opportunities they bring to the community; and how they contribute to community well-being and to building sustainable, resilient and inclusive places.

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