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# Scoping exercise: The role of banks in reducing GHG emissions of UK SMEs

SMART DATA FOUNDRY



**Bankers** for Net**Zero**

## Executive Summary

This report is a scoping exercise to address the question:

How could banks implement, or participate in, a system to gather data from their SME clients, measure greenhouse gas (GHG) emissions in a standard way across the economy and help drive/enable the carbon footprint reductions of their Small and Medium-Sized Enterprise (SME) clients.

### Context

At the Paris Climate Agreement of 2015 (COP21), participants agreed to limit global warming to “well below 2°C, preferably no more than 1.5°C above pre-industrial levels”, effectively requiring the net-zero by 2050 emissions scenario or similar (UNCC, 2022).

The UK enacted The Climate Change Act 2008 (2050 Target Amendment) Order 2019 which commits the UK to Net Zero carbon emissions by 2050 (UK Government, 2019).

At COP26 in Glasgow, banks committed to play an important role alongside governments and regulators in meeting global Net Zero targets by 2050. The Glasgow Financial Alliance for Net Zero (GFANZ) has four main branches, of which the banking pillar is the United Nations initiated Net Zero Banking Alliance (NZBA). The Bankers for Net Zero (B4NZ) group is the UK country chapter of the NZBA. B4NZ was formed in October 2019 with the aim of galvanising credible, demonstrable leadership from the UK banking sector on climate change. The initiative brings together banks, businesses, policymakers and regulators to define and implement the interventions needed to accelerate the UK economy’s transition to Net Zero.

Banks have a crucial role in providing new finance to green infrastructure, phasing out funding for existing fossil fuel infrastructure and discontinuing funding for new fossil fuel infrastructure (Cojoianu et al., 2020). Commercial banks should focus on GHG emissions stemming from their corporate and business customers. The largest direct impact to GHG emissions will be large corporates and businesses and larger SMEs in the agriculture and manufacturing sectors, but SMEs in general are a critical part of the supply chain and require careful consideration.

Banks can also create awareness and educate all companies, including SMEs, with a view to encouraging attitudinal change.

### Approach

This report only focuses on the role commercial banks can play in measuring and reducing GHG emissions from their SME clients. The scoping work is organised around three workstreams:

- How can banks assess SME GHG emissions?
- How can banks encourage SMEs to change behaviours and reduce GHG emissions?

- How can banks help to achieve a *just* transition to Net Zero?

Smart Data Foundry led the work over a period of 8 weeks, during which we:

- Conducted desk research on each of the workstreams. This included studying academic papers, recently published reports, and case studies;
- Interviewed experienced academics, involved in researching each of the workstreams;
- Interviewed specialist sponsors from Bankers for Net Zero (B4NZ) and other relevant organisations;
- Ran four workshops, led by academics, to structure the work and discuss each workstream;
- Interviewed several organisations that specialise in countering the climate emergency;
- Explored several cases from providers of market solutions, aimed at tackling different aspects of the problem statement.

This scoping exercise has been funded by HSBC UK.

## **SMEs in the UK**

There are more than 5.9 million SMEs in the UK, collectively employing some 16.8 million people and accounting for an estimated £2.3 trillion in turnover or 52% of the UK Private sector (BEIS, 2021).

While environmental activity among large companies has mainly been driven by investor demand and regulation, many SMEs are exempt from mandatory reporting requirements and some of the pressures large companies face.

There is not yet a dominant standard for SMEs to follow when reporting GHG emissions.

In the absence of specific standards, SME responses to environmental regulation have been ad hoc and uncoordinated, which highlights the need to standardise the approach for reporting GHG emissions.

In addition, there are barriers to transition for SMEs, including scarce financial and human resources, time constraints, lack of awareness, knowledge and expertise, absence of perceived benefits, unsuitability of formal management tools and the complexity of sustainability standards.

On the positive side, drivers of change for SMEs include organisational culture, stakeholder and employee influence, customer preference, brand image, legal compliance, competition, and their networks and communities.

Apart from the obvious positive impact of addressing climate change, the transition to a low-carbon economy will undoubtedly create many benefits such as better insulated homes, cars that are cheaper to drive, cleaner air, quieter streets, more access to green spaces and more opportunities for citizens to improve their health. However, an “unjust” transition— one that leaves workers behind, abandons communities to post-industrial decline, and deepens inequality—would have disastrous consequences for the UK and the globe.

Therefore, we must consider the transition's impacts, specifically its impact on less affluent people, SMEs, larger enterprises, different regions, and industries as part of the UK's Net Zero efforts.

### Plan to reduce GHG emissions of UK SMEs

We have organised the work required into a long-term plan and a more immediate set of actions which would inform the long-term plan.

In the long-term plan we addressed the themes of:

- Segmenting SMEs and following a differentiated approach for different segments based on GHG emissions and ease of reduction.
- Defining data standards and a methodology to measure GHG emissions, including the work currently ongoing in this area on an international scale.
- Defining the role banks could play in creating awareness of GHG emissions and incentivising SMEs to reduce emissions, including banks acting as catalysts for community initiatives, the role of banks as market makers for highly reliable, audited carbon offsets that adhere to additionality, and their potential role in implementing government programs.
- Considering what constitutes a just transition, the potential economic opportunities and downfalls of the transition, and the role of banks in supporting a just transition.
- For all of the above, consider the role of government and regulation to ensure consistent measurement, avoid moral hazard, and ensure fair treatment of stakeholders.

The immediate set of actions consist of:

**Pilot** a framework and platform that will:

- Segment the SME market
- Use existing frameworks and technologies to assess SME GHG emissions in a standardised format
- Test the effectiveness of mechanisms to engage SMEs to reduce GHG emissions.

**Define** what a just transition entails for SMEs and determine the role of banks

**Draw up** a high-level roadmap to enable net zero by 2050

The ambition is to have a working pilot model after 12 months that has the support of all major stakeholders and could be rolled out to SMEs in the UK. This working pilot would also serve as part of the solution for government and regulators to ensure a level playing field in the transition to net zero.

## Plan to address the workstreams

### Proposed workplan

We split the workplan into two sections, the first section — *Long-term plan* — defines an overall list of workstreams we identified during the scoping exercise, including the actions and deliverables.

The following section — *Immediate Next Steps* — itemises which of these actions should be prioritised. The objective of this initial phase is to test, pilot and learn from different proposed approaches, analyse insights and outcomes, and propose potential solutions. This phased approach allows the use of an agile methodology to solve the problem statement given its complexity.

This section of the report also identifies the key stakeholders involved in each of the pilot projects, an estimated timeline, and the ask from banks.

It is important to mention that there are organisations that have already made progress on many of our action areas and to emphasize that our suggestion is to integrate these efforts into a cohesive national approach to make engaging with SMEs easy and frictionless. Over the course of this project, we have engaged with many organisations. This report will act as catalyst for other organisations to come forward to collaborate with B4NZ to define, model and roll out the best possible framework to engage SMEs to measure emissions and change behaviours. The focus is initially on the UK, and eventually our learnings could be applied to model a global approach.



## Long term plan

### Measuring SME GHG Emissions

Workstream	Actions	Deliverables	Partners Identified
<b>Segment the UK's SME market and determine which segments should be prioritised</b>	<ul style="list-style-type: none"> <li>o Define a methodology to segment the SME market, e.g., based on size (turnover) and industry (SIC Codes)</li> <li>o Define key segments to address based on GHG emissions and ease of reducing emissions</li> <li>o Identify SMEs that can play a role in enabling the net zero transition (i.e. SMEs providing retrofitting or insulations services or developing carbon removal technologies)</li> </ul>	<ul style="list-style-type: none"> <li>o A proposed segmentation methodology</li> <li>o The actual segmentation of UK SMEs</li> <li>o An indication of size of GHG emissions and ease of reduction per segment</li> <li>o An understanding of the types of SMEs creating products and services that enable the transition to Net Zero.</li> </ul>	The Broadway Initiative has been working with BEIS and the SME Climate Hub on methodologies to segment the SME market and provide tailored advice to SMEs based on industry. The Energy Saving Trust have also published some thinking on how to identify sectoral priority groups that we should further explore
<b>Determine a set of data standards for GHG emissions data</b>	<ul style="list-style-type: none"> <li>o Collate and analyse a set of SME data</li> <li>o Research methodologies to applying data standards from other areas of work, such as Open Banking standards, to understand best practices and implementation techniques</li> <li>o Work to build on ongoing efforts to promote standard convergence, and with experts to build on ongoing efforts to define and propose a set of Carbon Data Standards. These should be made open source to enable a continuous improvement, interoperability and facilitate adoption</li> </ul>	<ul style="list-style-type: none"> <li>o A guide on how to develop and implement data standards, and a proposed initial set of data standards for GHG emissions data</li> </ul>	This should be done by making use of already-existing efforts to encourage convergence, and in collaboration with important organisations and standard-setting leaders such as CDP, TCFD and GHGP. There have also been some recent developments in this area by consortiums such as the Carbon Data Specification that we should investigate further
<b>Determine the UK's SME GHG measurement standard</b>	<ul style="list-style-type: none"> <li>o Research and analyse the advantages and disadvantages of the most used GHG measurement frameworks</li> <li>o Determine how these frameworks can be</li> </ul>	<ul style="list-style-type: none"> <li>o A comprehensive analysis of the different measurement standards/frame works and a recommendation</li> </ul>	This should account for the international ambitions set out by organisations such as UNEP FI and GFANZ. We should aim to collaborate with and build on the

	<p>simplified and adapted to be suitable for SMEs</p> <ul style="list-style-type: none"> <li>o Define which combination of standards banks in the UK should adopt/encourage when measuring SME emissions</li> </ul>	<p>of which standards/frame works UK banks should adopt going forward</p>	<p>work being done by the SME Climate Hub, CDP, Normative and Exponential Roadmap initiative when working on an SME reporting tool</p>
<p><b>Improve accuracy of SME emission measurement mechanisms</b></p>	<ul style="list-style-type: none"> <li>o Analyse current SME data collection mechanisms</li> <li>o Test the potential of alternative data sources to improve accuracy of estimates</li> <li>o Define who is responsible for data collection, carbon measurements and reporting</li> </ul>	<ul style="list-style-type: none"> <li>o A roadmap for enhancing data collection mechanisms and improving the accuracy of SME carbon accounting</li> </ul>	<p>There are several organisations working on different data approaches to collecting/measuring SME emissions data. As part of this project, we have researched/interviewed some solution providers. We should aim to pilot some of these approaches and engage further with alternative solutions</p>
<p><b>Determine a measurement methodology for each SME segment</b></p>	<ul style="list-style-type: none"> <li>o Analyse findings and determine a suitable carbon measurement methodology for each SME segment</li> <li>o Determine a responsible party to authenticate methodologies, to provide accreditation of measurements, and to monitor accuracy and compliance from SMEs</li> </ul>	<ul style="list-style-type: none"> <li>o A rulebook of measurement methodologies per SME segment, and a recommendation on the enforcement mechanisms</li> </ul>	<p>This should be done in collaboration with all the partners identified above, and include industry and academic experts</p>
<p><b>Consider the role of regulation in enforcing accuracy and consistency of SME measurements</b></p>	<ul style="list-style-type: none"> <li>o Study the role governments and regulators should play in enforcing the accuracy and standardisation of carbon accounting for SMEs</li> <li>o Define topics banks should work on with the UK Government in terms of standardising and enforcing SME emission reporting</li> </ul>	<ul style="list-style-type: none"> <li>o A view on the role of government, regulation, and accreditation agencies in setting, monitoring accuracy and enforcing SME emission reporting</li> </ul>	<p>Progress has been made on this topic by the UK Government, and by organisations such as TCFD, UNEP FI, WPI, BEIS, The Energy Saving Trust, and others and we should aim to contribute to their work</p>

## How to encourage SMEs to change behaviours

Workstream	Actions	Deliverables	Partners Identified
<b>Define the role banks should play in creating awareness and educating SMEs</b>	<ul style="list-style-type: none"> <li>o Create examples of messaging banks can use to inform SMEs of their GHG emissions</li> <li>o Define sources of information and education banks can use for their SMEs</li> <li>o Define communication channels to SMEs</li> </ul>	<ul style="list-style-type: none"> <li>o A guide for banks to play a role in creating awareness and educating SMEs. This could include examples of messaging to SMEs, sources of information and education for SMEs (some may be public), and an analysis of the communication channels that could be used by banks to connect with their SMEs</li> </ul>	This should be based on the progress already made by the SME Climate Hub initiative in generating content and getting SMEs to pledge their commitment to Net Zero initiatives
<b>Create a playbook for banks to use when incentivising SMEs to reduce their emissions</b>	<ul style="list-style-type: none"> <li>o Define characteristics of a "green product"</li> <li>o Provide an example list of green products</li> <li>o Lay out a logic of differential pricing for loans, to either enable transition to lower carbon operations or reward SMEs who have made the transition (both could be based off capital requirements)</li> <li>o Define a list of examples of agreements between banks and third parties, to provide products or services at a discount - e.g., insulation for SMEs who commit to reduce emissions</li> </ul>	<ul style="list-style-type: none"> <li>o A playbook for banks to incentivise their SME customers to reduce their emissions, ranging from examples of green products to loan pricing and agreements with third parties</li> </ul>	The SME Climate Hub, in partnership with BSR and Cambridge University is developing a financial support guide hub for SMEs. The work done in this area should be represented in our workstream
<b>Investigate the role of banks as catalyst for community/cluster cooperation to reduce GHG emissions (e.g., a cluster of SMEs jointly funding a windfarm)</b>	<ul style="list-style-type: none"> <li>o Investigate examples of community/cluster cooperation and define best practises</li> <li>o Obtain input from banks on the viability of acting as catalysts of these arrangements</li> </ul>	<ul style="list-style-type: none"> <li>o A guide for banks to set up communities or clusters of SMEs that can jointly reduce their GHG emissions</li> </ul>	Responsible Finance has been working on developing a pilot on how banks and community development finance institutions can collaborate to assist SMEs in raising the necessary capital for sustainability projects



<p><b>Investigate the role of banks to act as market makers for carbon offsets</b></p>	<ul style="list-style-type: none"> <li>o Investigate local and international examples of banks acting as market-makers for carbon offsets</li> <li>o Research accreditation of carbon offsets, and the role banks could play in ensuring the credibility of carbon offsets</li> </ul>	<ul style="list-style-type: none"> <li>o A view on the role banks can play as credible parties offering and distributing carbon offsets to clients</li> </ul>	<p>The University of Edinburgh has been working with commercial partners to develop and test innovative carbon removal technologies; we should look to extend our research into these emerging technologies. Tide has also been doing some work on how to partner with their SME clients to encourage carbon removal investments</p>
<p><b>Consider if regulation is required to ensure parties (banks, SMEs) are incentivised to adopt carbon measurements and reduce GHG emissions</b></p>	<ul style="list-style-type: none"> <li>o Determine the risks if no regulation is adopted (e.g., banks not measuring emissions of SMEs are advantaged because of less stringent requirements)</li> <li>o Determine the likely regulation that may be required to ensure a level playing field e.g., requirement to measure GHG emissions from SME clients, capital adjustments based on banks' Scope 1, 2 and 3 emissions)</li> </ul>	<ul style="list-style-type: none"> <li>o Decision on whether regulation/disclosure of certain information is necessary</li> </ul>	<p>The Energy Saving Trust and other organisations have published reports analysing and defining this issue - we should seek to contribute to their or other similar research and analysis</p>
<p><b>Determine the potential role of banks in implementing government programs to help reduce GHG emissions</b></p>	<ul style="list-style-type: none"> <li>o Draw up a view of the role banks could play as distribution channels for government programs to help or incentivise SMEs to reduce their GHG emissions, considering the measurement system that banks may administer or use</li> </ul>	<ul style="list-style-type: none"> <li>o View on the role banks could play as distribution channels for government programs, potentially leveraging the carbon score or measurement methodology banks implement</li> </ul>	<p>Study role of banks in implementing government programs (e.g., BBLs and CBILs during the pandemic), and how we can emulate these processes or utilise the learnings from them</p>

## Ensuring a Just Transition

Workstream	Actions	Deliverables	Partners Identified
<b>Defining the Just Transition for SMEs</b>	<ul style="list-style-type: none"> <li>o Define what constitutes a just transition: its key principles, practical applications, risks, and mitigations for SMEs</li> </ul>	<ul style="list-style-type: none"> <li>o A report determining the principles of a just transition; defining its practical applications and itemising the mechanisms that must be put in place to mitigate the risks for SMEs</li> </ul>	We should aim to collaborate with the Grantham Institute at the London School of Economics and the International Labour Organisation on the work they have done in defining the principles of the just transition
<b>Roadmap to enable UK SMEs to meet the 2030 targets and become Net Zero by 2050</b>	<ul style="list-style-type: none"> <li>o Define key milestones that will enable us to reach our targets</li> <li>o Determine a realistic timeline for each milestone, and what mechanisms needs to be in place by when to ensure that banks are not contributing to the creation of 'finance orphans'</li> </ul>	<ul style="list-style-type: none"> <li>o A timeline and roadmap with clear and realistic milestones</li> </ul>	We should collaborate with all the stakeholders identified in this plan and use the learnings from each of the pilots executed over the course of the next 12 months to define a realistic timeline. Other organisations like the Energy Saving Trust have also done a lot of work and thinking on this - we should seek to engage with them in the next stage
<b>Define the potential economic opportunities and downfalls of the transition</b>	<ul style="list-style-type: none"> <li>o Determine the positive impacts of a well-managed transition e.g., how it will encourage innovation and development, create high-quality jobs, reduce inequality, and improve population health and well-being</li> <li>o Determine the negative impacts of poorly managed transition: its economic and societal effects, and what it could mean to those left behind</li> </ul>	<ul style="list-style-type: none"> <li>o A study analysing the potential economic and societal impacts and opportunities of a just transition from a banking perspective</li> </ul>	The Grantham Institute at the London School of Economics has been researching the economic impacts of the transition
<b>Determine the role of government and regulation to</b>	<ul style="list-style-type: none"> <li>o Determine the role of regulation in ensuring that banks do not</li> </ul>	<ul style="list-style-type: none"> <li>o Decision on whether banks should ask for regulation, and a playbook on how</li> </ul>	We should analyse the findings from the further work being proposed, and collaborate with all

enable and enforce a just transition	<ul style="list-style-type: none"> <li>o disadvantage SMEs in high-carbon sectors</li> <li>o Define the role of blended financing and other investment mechanisms, and how banks and government can work together to channel assets to delivering positive impact in key sectors and regions</li> </ul>	banks and government can work together to enable investment in key sectors and regions	stakeholders to propose to government a set of regulatory measures needed to achieve our roadmap to 2050
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## Immediate next steps

### Pilot a framework to measure SME GHG emissions

#### Segment the SME market

The heterogeneous nature of the SME market makes it difficult to implement a *one-size fits all* solution.

The UK government definition of SMEs encompasses micro (less than 10 employees and an annual turnover under €2 million (£1.73 million)), small (less than 50 employees and an annual turnover under €10 million (£8.66 million)) and medium-sized (less than 250 employees and an annual turnover under €50 million (£43.31 million)) businesses.

This wide-ranging definition means that each SME will have a different impact on the overall carbon footprint of the UK depending on their industry and size of the business. As an example, a micro tech company or a local customer-facing business like a hairdresser or a restaurant, will have a very small impact on the environment when compared to a medium-sized manufacturing company that distributes their products across the world.

The segmentation should also consider the ease of reducing GHG emissions. Factors like economies of scale, criticality of the segment, and existing and emerging technology to reduce GHG will all play a role. Banks and regulators might wish to take this into account when considering the transition of SMEs to Net Zero. It seems reasonable to focus efforts on measuring, reporting and ultimately reducing the GHG emissions of carbon-heavy SMEs.

Each type of business will have distinct motivations, resources, barriers, and challenges in their Net Zero journey, and these need to be carefully weighed when implementing the mechanisms to support, encourage or regulate the transition to Net Zero by SMEs.

Businesses with low turnover and employee count are not likely to have access to the necessary resources and skills to plan and achieve a successful green transition, but they are also unlikely to have a large carbon footprint. They could be treated like consumers in terms of engagement, where incentives to reduce energy consumption and retrofitting are most likely to have the biggest impact.

On the other hand, the larger, carbon-heavy SMEs will likely face a significant financial cost to transition that may hinder their competitiveness in the market or even their ability to survive, so we must target our efforts and resources to ensure that these segments are supported in their green transition.

Once we have segmented the SME market, we should aim to classify each industry in terms of its carbon usage and potential for carbon reduction. This would allow us to focus our efforts on the actions with the biggest possible impact going forward.

From our research, the Broadway initiative has been working with the SME Climate Hub on this issue - our suggestion is that we should explore further collaboration.

As part of the segmentation effort, we should also look to identify SMEs that provide services and products to enable the transition to net zero like heat pump installers, building insulation and retrofitting services and carbon capture and removal technologies.

#### Improve the accuracy of SME carbon measurements

Collecting the right level of information from SMEs is paramount to accurately measuring their GHG emissions and impact on the environment. However, as we have highlighted in this report, SMEs face several internal and external barriers in their adoption of environmental management systems.

This means that not all SMEs have the capability, resources, and motivation to meaningfully engage in the process of measuring GHG emissions.

There are several potential approaches to collecting relevant data that enables banks to have some understanding of their SME clients GHG emissions, with minimal impact on SME resources.

Carbon calculators and other technological approaches have been created to enable SMEs to automate their emission measurements based on simple questionnaires, and by allowing access to key data points in their open banking data. These technologies analyse transactional level data and use standardised carbon modelling databases to estimate the carbon impact of each transaction logged.

Whilst these approaches are not fully accurate, they could provide an initial step in terms of estimating each SMEs impact on the environment, and act as an awareness and educational tool for companies looking to change behaviours. Our hypothesis is that this approach is suitable for most smaller SMEs, but work needs to be done in defining a more tailored and accurate approach to SMEs identified in high carbon segments.

During the B4NZ workshops, there was a suggestion that in addition to the already tried and tested approaches using Open Banking data to measure SME emissions that we could test other sources of information, like cloud accounting or energy data, to complement the detail and granularity of information that we cannot access from open banking data, by analysing the detail of each transaction and using that information to provide a potentially more accurate estimate of the carbon footprint of the transaction. In the next stage we should seek to collaborate with organisations looking at this problem to explore and test their approaches, some of which have been identified during this work like Rewired.Earth, Normative, Ciendos, iSumio, Connect Earth, and Icebreaker One.

### Define data collection mechanisms

Once we have defined the most accurate methodology to measure SME data, we need to understand who should be responsible for collecting and reporting this data. During the workshops, several approaches were discussed, as described below:

	Inside-Out	Outside-In	Hybrid
<b>Description</b>	<ul style="list-style-type: none"> <li>Data reported by SME</li> <li>May be a materiality threshold, similar to VAT reporting</li> <li>May require a form of vetting or auditing to confirm accuracy</li> </ul>	<ul style="list-style-type: none"> <li>Data collected automatically from sources that could be accessed by a third party</li> <li>May require authorization by SME</li> <li>Could be done e.g., by Banks, Credit Reference Agencies or Cloud Accounting Providers</li> </ul>	<ul style="list-style-type: none"> <li>Combination of approaches, e.g., every SME receives an automatic outside-in carbon score, but SMEs could choose to self-report if they disagree with the score</li> </ul>
<b>Examples of data</b>	<ul style="list-style-type: none"> <li>Any data to which the SME has access (internal and external)</li> </ul>	<ul style="list-style-type: none"> <li>Open Banking Data</li> <li>Cloud Accounting Data</li> <li>EPC Ratings for property occupied</li> <li>Number and type of registered vehicles</li> </ul>	<ul style="list-style-type: none"> <li>Combination of described sources</li> </ul>
<b>Pros</b>	<ul style="list-style-type: none"> <li>SMEs involved</li> <li>Can account for special circumstances</li> <li>Theoretically could be more accurate and up to date (in practice SMEs may have an incentive to misreport)</li> </ul>	<ul style="list-style-type: none"> <li>Consistent analysis of comparable data</li> <li>No vetting or auditing required</li> <li>Economies of scale</li> <li>No need to convince or compel SMEs to participate</li> </ul>	<ul style="list-style-type: none"> <li>“Best of both worlds”</li> <li>Appears to be fairer</li> </ul>
<b>Cons</b>	<ul style="list-style-type: none"> <li>Could have an inconsistent application of standards</li> <li>Vetting or auditing required</li> <li>Requires effort from SMEs</li> <li>Have to convince or compel SMEs to participate</li> </ul>	<ul style="list-style-type: none"> <li>Does not account for special circumstances</li> <li>SMEs not involved, and may distance themselves from the result</li> </ul>	<ul style="list-style-type: none"> <li>More complex to administer</li> <li>Could lead to biased outcomes (SMEs who feel they are under-assessed would not offer to self-report)</li> </ul>

### Determine a set of data standards

The market for products aimed at helping SMEs collect and measure their GHG emissions is growing rapidly; in recent years there has been a steady increase of carbon calculators and other technologies aimed at gathering SME data and providing automated estimates of emission impacts.

The competitive nature of the market means that the data gathered is completely siloed and protected by each of the technology providers. However, to achieve the ambition of becoming a Net Zero nation by 2050 there will likely be a need to understand the data at a UK and global level. For that to be possible we will need to find solutions to overcome these siloes, whilst protecting market competition and respecting IP and data ownership boundaries.

An option to facilitate this could be to determine a consistent approach to the way data is collected and stored that enables it to be accessible, comparable, and linked for a total market analysis. This could be enabled by setting industry wide data standards for SME GHG emissions data.

Data Standards are the pre-requisites to how the data is managed, used, represented, formatted, defined, transmitted, structure and tagged. An agreed documented approach that refers to the technical specifications of how the data should be stored or exchanged across different systems is required. These steps are essential to ensure data quality, improve access to data, and guarantee interoperability in an open market.

Setting industry-wide carbon data standards would enable a collaborative approach to tackling climate issues, allowing governments, banks, academics, climate experts and other stakeholders to easily access and link different datasets together. This would ensure comparability, facilitate comprehensive research, and enable data driven decisions on how to achieve our Net Zero targets.

The creation of data standards should be an open-source effort to ensure interoperability, transparency and facilitate adoption. The financial services industry collectively supporting and using one set of data standards would facilitate global adoption.

Significant effort was made to create an appropriate set of data standards for Open Banking data, and we should be leveraging the experience and learnings from these efforts to model a solution to this problem.

### Determine SME carbon measurement standards

Unlike SMEs, large corporations have been widely regulated to report on their Scope 1 and 2 GHG emissions and have had to invest significant resources in establishing Environmental Management Systems that facilitate their carbon accounting.

There is a thriving market for corporate carbon accounting. Significant resources have been invested in establishing emission measurement frameworks, and in defining the standards and protocols to standardise the methods of calculating and reporting GHG emissions across industry. However, these are largely aimed at large corporations and the cost of comprehensively implementing these remains prohibitive for the average SME.



Even though there is no active regulation that require SMEs to report on their GHG emissions, some SMEs have made efforts to better understand their carbon footprint, and in the past few years there has been notable growth in the SME carbon accounting market.

This growth has mostly been using innovative approaches to help SMEs measure and manage their GHG emissions by using technology and data to automate the process.

As the market grows, determining industry wide SME measurement standards is essential to ensure fairness, comparability, and to mitigate the risk of greenwashing.

From our research, the community of SME solutions is mostly collaborative. Through consultation and consensus, SMEs use variations of the GHGP to understand what to measure, and carbon modelling databases such as Exiobase to estimate the environmental impact associated with SME activities.

However, further work is required in formalising the measurement standards across the market to ensure fairness and comparability, and banks could play a role in the absence of regulation.

If banks were to collectively state what standards and protocols were recognised when making banking decisions and risk assessments, this could nudge carbon accounting technology providers to adopt the recommended approach, to ensure that their calculations are recognised by banks, and that their products can be integrated with banking products.

Standardisation would enable SMEs, Banks, and regulators to use the same estimations and proxies when calculating GHG emissions, making these estimates comparable across the market and promoting fair competition. It would also allow for interoperability of measurements, ensuring SMEs could easily transfer their measurements and data across providers.

The UNEP.FI and TCFD have been running a series of pilot projects with key stakeholders that have generated several tools, frameworks and guides to support financial institutions in their transition and we should seek to leverage their expertise and learnings to adapt the model to SMEs. Work in this area has also been carried out in recent years by consortiums such as the Software Carbon Intensity (SCI) specification to study and define a set of measurement standards. Later this year, the SME Climate Hub, in collaboration with CDP will be launching their SME carbon reporting tool and we should aim to collaborate with these initiatives.

### Define the role of regulation

The collective action of banks can go a long way to facilitate the process of measuring SME GHG emissions in the UK but to achieve our Net Zero ambitions in the long term, regulation to monitor and enforce the accuracy of data collected and the consistency of methodologies used to calculate GHG emissions will be required.

The voluntary nature of carbon disclosure gives SMEs the freedom to decide the level of detail and accuracy of information provided. There will be a need to establish regulated mechanisms to audit the accuracy and completeness of the information disclosed, and to issue penalties to SMEs guilty of greenwashing their GHG emissions, much like it has been done for corporations.

Since there is a risk that carbon accounting technology providers might tweak their measurements or use inadequate proxies and estimates to calculate GHG emissions; we should consider the need to regulate the market to ensure consistent and trustworthy measurement methodologies as to prevent the risk of indirect greenwashing.

The solution to this problem will likely be a combination of several approaches to provide a more accurate snapshot of an SMEs impact on the environment. Whilst this can be technically enabled by a set of consistent data and measurement standards, there's a need for a centralised body that can collect the data from different sources and assess the overall carbon footprint of a company to establish a green rating that is attributed to SMEs and recognised by all parties.

Regulation will also ensure a level playing field so that banks who act first are not competitively disadvantaged. The role of government could be to mandate that all banks must measure each client's GHG emissions by a certain date, and that these measurements are used in their risk assessments going forward.

Further research is required to determine the need and role of regulation in ensuring consistency and accuracy of measurements across all SMEs. As part of the wider B4NZ efforts, WPI Economics have worked on analysing the policy gaps in the UK and we should collaborate with them in the next stages to use the learnings from this pilot to inform future policy recommendations. Other organisations have also been doing research on this matter, and we should engage and collaborate with them and contribute to their work for example, the Energy Saving Trust has published a report on how policy can better support SMEs in the pathway to Net Zero in collaboration Purple Research Market, The Open University and Oxford University, which explores a set of policy recommendations to address the problem statement identified.

## Proposed pilot projects

Actions	Stakeholders	Expertise needed
<b>1. Pilot a framework to measure SME GHG emissions</b>		
<p>a) Determine market segmentation framework</p> <ul style="list-style-type: none"> <li>i. Determine a suitable methodology to segment the SME market and prioritise segments for further analysis</li> <li>ii. Define which data collection mechanisms are needed for each of the segments (i.e., Energy and/or fuel consumption data)</li> <li>iii. Identify SMEs that provide services and products to enable the transition to net zero (i.e., building insulation and retrofitting)</li> </ul>	<p>B4NZ, The SME Climate Hubs, The Broadway Initiative, The Energy Saving Trust, ONS, FSB</p>	<p>SME, Data and Climate expertise</p>
<p>b) Test if other sources of data (i.e. Cloud Accounting) can improve accuracy of automated carbon calculations</p> <p>Define appropriate data sample and categories of data analysis needed</p> <ul style="list-style-type: none"> <li>i. Collaborate with data partners (i.e. Cloud Accounting firms) and secure access to data</li> <li>ii. Process data (Clean, anonymise/pseudonymise and link data)</li> <li>iii. Make anonymised data accessible for experts in climate accounting to analyse</li> <li>iv. Recommend an approach going forward (is cloud accounting accurate enough or do we need to consider other data sources?)</li> </ul>	<p>B4NZ, Data Partners</p>	<p>Data, Accounting and Climate expertise</p>
<p>c) Deepen our research on the current efforts being made globally to develop carbon data and measurement standards and determine next steps</p>	<p>B4NZ, relevant standard setting international organisations (PCAF, CDP, GFANZ, GHGP, SME Climate Hub etc)</p>	<p>Data, Standards and Climate expertise</p>
<p>d) Analyse findings to inform a first hypothesis on what the role of banks, SMEs and government/regulators is in measuring, reporting and ensuring accuracy and compliance</p>	<p>All stakeholders</p>	<p>Data, Policy, and climate expertise</p>

## Test the effectiveness of banking mechanisms to reduce SME GHG emissions

One of the most discussed points during our scoping exercise was defining the role of banks in creating the mechanisms for supporting SMEs in changing behaviours and reducing GHG emissions. It was agreed that banks should play an important part, but no clear consensus was reached on the exact role.

### Raising awareness and providing education to SMEs

We should work with the SME Climate Hub and The Broadway Initiative to define the role banks can play in raising awareness and providing educational material to help SME clients increase their knowledge of how to plan and implement transition plans.

### Providing financing incentives and green products

We should aim to test the effectiveness of banking incentives aimed at driving SMEs to change behaviours and reducing their GHG emissions, some examples of these might be:

- Favourable credit terms for loans enabling the transition to lower carbon operations
- Reduction in service fees for SMEs meeting certain absolute emission levels or improvements in emission levels
- A “green credit card”, with lower interest rates for SMEs with defined carbon emission performance, as verified by the bank
- Lower interest rates on loans for SMEs that emit less GHG emissions or that have reduced their GHG emissions

### Define other mechanisms banks can adopt to reach Net Zero targets

There are also other mechanisms that banks could implement to support the transition of their SME clients. These could include banks using their knowledge and influence in local communities to create clusters of SMEs that enable local collaboration; overseeing and managing joint financing of green solutions like local windfarms or even contributing to community financing initiatives to help local SMEs.

Banks can also be a catalyst for carbon offsets and can incentivise carbon removal initiatives by acting as credible partners to carbon removal companies. This could enable SMEs to safely invest in the right type of carbon offsets; banks could also create ‘match carbon removal schemes’ where they match the investment made by their SME clients in carbon removal projects.

Banks can also play an important role in supporting SMEs that offer products and services to enable the transition to net zero such as heat pump installers, providers of building insulation and retrofitting services, carbon capture and removal technology products and others. During the pilot we should work with banks to define the mechanisms they can use to both support the growth of these SMEs and also to connect them with SMEs going through the green transition in need of their products and services.

### Determine the role of regulation and when banks and governments should collaborate

Banks may choose to request to be regulated in order to ensure a level playing field, and to not disadvantage banks that choose to act first. While regulation takes time to implement, the pressure of banks could accelerate that process.

Having an overarching strategy and agreed collaboration between banks and government is essential to maximising the impacts and effectiveness of measures.

As we learned from COVID-19, in crisis situations banks can effectively act as a distribution arm for government policies like the distribution on government incentives, grants and loans.

### Proposed pilot projects

Actions	Stakeholders	Expertise needed
<b>2. Test the effectiveness of mechanisms to engage SMEs to reduce GHG emissions</b>		
a) Test mechanisms banks can use to promote awareness and education to their SME clients <ul style="list-style-type: none"> <li>i. Determine the most suitable sources of tailored SME content</li> <li>ii. Research with SMEs what are their preferred communication channels</li> <li>iii. Pilot effectiveness of messages and communications channels, gather feedback from SMEs and iterate approach</li> </ul>	B4NZ, SME Climate Hub, The Broadway Initiative	SME and Climate expertise
b) Test effectiveness of financing incentive mechanisms and green products <ul style="list-style-type: none"> <li>i. Work with banks to define a playbook of financing incentives and green products</li> <li>ii. Partner with banks and SMEs to test the effectiveness of each mechanism in changing behaviours and reducing GHG emissions</li> </ul>	B4NZ, Banks, SMEs	Banking, SME and Climate expertise
c) Define other mechanism banks can adopt to reach Net Zero targets	B4NZ, Banks, SMEs	Banking, SME and Climate expertise
d) Determine the role of regulation and when banks and governments should collaborate	B4NZ, Banks, Government, SMEs	Banking, Policy, SME and Climate expertise

## Ensuring a just transition for SMEs

### Define a roadmap to 2030 and 2050

A big concern that was consistently put across by multiple stakeholders during our workshops and interviews was related to the dangers that a poorly managed transition might have on the economy and society.

Given the potential negative socio-economic impacts of a UK Net Zero transition, discussed at length in the longer version of this report, there is a need to establish a realistic timeline, define what mechanisms need to be in place to support SMEs during the transition period and determine quantifiable measures of success for each SME.

Our suggestion is that we start with the immediate next steps identified as soon as possible and analyse the findings to inform and adapt the long-term plan, which might change with more information.

### Proposed pilot projects

Actions	Stakeholders	Expertise needed
<b>3. Analyse findings and determine next steps</b>		
a) Define what a just transition entails for SMEs and determine the role of banks  b) Draw up a high-level roadmap to enable UK SMEs to meet the targets for 2030 and become Net Zero by 2050	All Stakeholders	SME, Banking, Policy, Data and Climate expertise