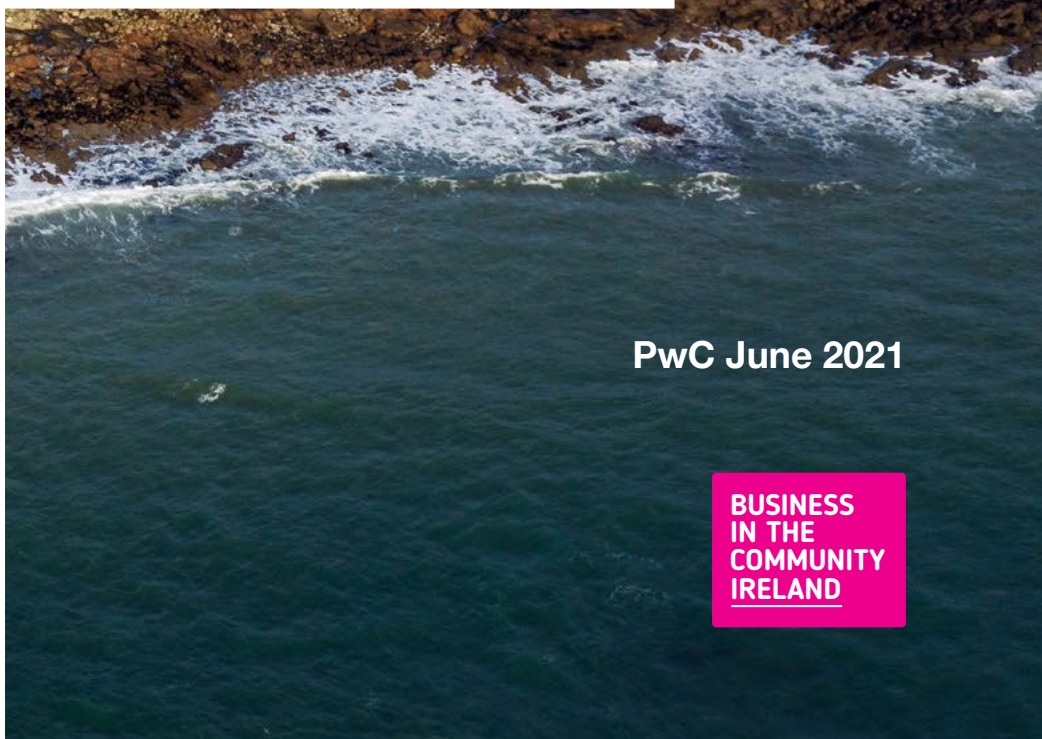


Business Working Together for a Low Carbon Future

Net-Zero backed by Science-based Targets

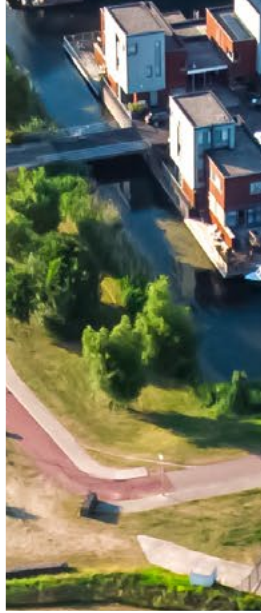
PwC's 3rd Annual Report on the Business in the
Community Ireland (BITCI) Low Carbon Pledge



PwC June 2021



**BUSINESS
IN THE
COMMUNITY
IRELAND**



Ministerial Foreword



Eamon Ryan TD

Minister for Transport, Climate,
Environment & Communications

The COVID-19 pandemic is still part of our lives. We continue to live in extraordinary circumstances, with unprecedented economic and social implications. However, as we look to emerge from this crisis, we will do so sustainably and in an inclusive way, as we rebuild our economy and society.

We continue to see the impacts of the climate and nature emergencies all around us, as it shapes our lives and communities. These are the most pressing challenges of our lives. The Government is taking decisive Climate Action, providing a legislative path to achieving the ambitious target of 51% reduction in carbon emissions in this decade and setting us on the path to net-zero by 2050.

The Climate Bill shows Ireland can be a world leader on Climate Action. A new Climate Action Plan will be developed, providing guidance for the decarbonisation of each sector of the economy. We must work collectively across Government, enterprise, and wider society to address the challenges and realise the opportunities that such changes can hold. All of this will be done in conjunction with the development of the revised National Development Plan, which is central to the Government's new Economic Recovery Strategy.

This is the decade for change and this year, COP26 will set the tone for how the world plans to achieve the ambitious climate targets that have been set. Governments and business must take significant strides forward in the next five to ten years to decarbonise and support nature restoration. Transformational change is required, as we create new circular, more efficient, digital economies, and an inclusive and vibrant society.

The Business in the Community Ireland Low Carbon Pledge has taken a major step forward, with signatories committing to science-based targets aligned with the Paris Agreement. With over 60 businesses signed up to The Pledge, there is strong good alignment between this initiative and the roadmap set by the Climate Bill. Business leadership is a crucial lever for change, to make this a competitive challenge, and use innovations like the Low Carbon Pledge to get to net-zero faster.

Through the decisions you make in conducting your operations, to leverage the influence you exert on your supply chain and customers, your actions and influence are key to delivering on the step change that is required. I call on you to engage in the movement led by Business in the Community Ireland. This is a crucial step towards the transformational change required.

I want to acknowledge the considerable effort in preparing this report by Business in the Community Ireland, supported by the Co-Chairs of the Low Carbon Sub-group, Mark Foley, CEO, EirGrid and Denis O'Sullivan, Managing Director, Gas Networks Ireland.





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Introduction from Business in the Community Ireland (BITCI)

Business in the Community Ireland's Low Carbon Pledge (The Pledge) is entering its third reporting year with a new ambition. Signatory companies must align their climate action with what science says is necessary to limit global warming to 1.5°C.

The Pledge aims to provide leadership, set a collective ambition, and drive practical action on the climate crisis. With this new commitment, businesses take a significant step forward. Businesses across all sectors need to play a vital role if we are to address the climate and biodiversity emergency.

COVID-19 continues to impact on our lives and on how business operates. The impacts of this pandemic will live with us long after the virus has been eradicated. As countries work to rebuild their economies, it must be done with sustainability at its core, creating greener and even more inclusive economies. We can reset our systems and build back better: building the businesses of tomorrow that will thrive in the low carbon future. Business as usual will not succeed.

The time to act is upon us. 2021 will be the year that the world faces climate change head on, with the United States re-committing to the Paris Agreement, vowing to take a leadership role on climate action, along with the recent surge of net-zero commitments both from countries and businesses.

COP26 will be a focus point, as we lay the foundations for halving global emissions by 2030. What we achieve in this decade will be crucial towards limiting global warming to 1.5°C.

The Low Carbon Pledge demonstrates meaningful business commitment to reducing carbon emissions and enables wider and far-reaching complementary initiatives. Led by the Low Carbon Sub-group¹ of the Leaders' Group on Sustainability², the past 12 months have seen The Pledge evolve to a

commitment focussing on tackling carbon impacts across value chains. This is significant, as most emissions lay within the supply chain, in most sectors of economic activity.

The Pledge has moved towards business adopting carbon reduction targets based on science, and ultimately achieving a net-zero economy by 2050. This new Pledge³ calls on businesses to work towards setting science-based emission reduction targets (i.e. what science says is necessary to limit global warming to 1.5°C) by 2024 at the latest.

62 of Ireland's biggest businesses have committed to The Pledge. In doing so, they are building resilient and robust businesses that will grasp the opportunities of the low carbon economy.

Businesses need to understand their carbon impacts across value chains. This is challenging, even for the most carbon-mature companies. Through The Pledge, we aim to support businesses, working to better understand value chain emissions and overcoming the challenges ahead.

Over the past two years, The Pledge has provided several key actions and resources:

- The [2nd edition](#) of this Report focussed on three aspects of scope 3 emissions that are

¹ The Low Carbon Sub-group is chaired by the CEOs of Gas Networks Ireland and EirGrid, with senior representatives from Arup, Dawn Meats, ESB, Musgrave, and Veolia.

² The [Leaders' Group on Sustainability](#) is a CEO-led, multi-sectoral collaboration to progress collective business action on critical sustainability issues facing business.

³ The Paris Agreement requires actions to be taken to keep global temperature rise this century well below 2°C above pre-industrial levels. The latest IPCC Report has stated that a 1.5°C temperature rise is aimed for.

controlled by the business: business travel; waste management; and water usage.

- Landmark Scope 3 Research was published, to help business to understand the challenges of scope 3 emissions and science-based targets – [Progressing towards science-based targets](#)
- Signatories increased their expertise through participating in Knowledge Sessions focussing on topics, such as understanding scope 3 emissions and developing Climate Action Roadmaps.

These actions, along with the initial Pledge requirements⁴, created a unique platform for businesses to take the next step towards better understanding their entire carbon footprint. Incorporating carbon reduction targets to their entire carbon footprint and across the value chain is vital to achieving the expected climate action outcomes.

The Pledge now asks of its signatories:

- Start the process of setting science-based emission reduction targets by 2024 at the latest;
- Continue to advance the measurement, reporting and communication on carbon emissions performance, and critically review and assess indirect and supply chain emissions;
- Collaborate with peers on this common challenge, as this will be the core enabler for change at the speed and scale needed – pre-competitive collaboration will allow business to move quicker to low carbon solutions (i.e. technological, process, investment);
- Engage in dialogue on climate change with suppliers, employees, investors, and recognise that business needs to adapt through re-design of products and services, modifications to supply models, and revisions to investment mechanisms.

Through these actions, The Pledge will play an important role in supporting companies in decarbonising operations across their value chains. Creating a platform for collaboration among businesses of all sectors provides an opportunity for innovation and partnerships. Companies will be required to continuously review and work on improving their Climate Action Roadmaps. The Pledge provides a key support to this process.

Looking to the future and the risks business will experience, there is a high level of unpredictability. It has never been more important for businesses across all sectors to prepare for these climate, wider environmental, social, and economic impacts. Resilience and adaptability will be key.

As investors and financial institutions recalibrate business risks and ESG ratings increase in volume and influence, it is imperative that business has a rigorous process to measure, report, and communicate actions across its supply and value chains.

Businesses are experiencing the need to evolve and transform their operations to deliver a green and socially inclusive future. This transformation will be complex and challenging beyond what we have experienced. It will be costly and take time to research and innovate, creating partnerships and ways of working. However, with all these challenges comes endless opportunities to build the products and services of tomorrow, supporting a just and responsible transition.

Our aim is for The Pledge to provide leadership, set a collective ambition and standard, and drive practical action on the climate crisis.

Tomás Sercovich
CEO, Business in the
Community Ireland



Mark Foley
CEO, EirGrid



Denis O'Sullivan
MD, Gas Networks Ireland



⁴ All signatory companies commit to reducing their scope 1 and 2 greenhouse gas emission intensity by 50% by 2030.

Organisations participating in this report





The transition to carbon neutrality has major implications for society, the economy and organisations. The efforts needed to secure a more sustainable country require contributions from all members of society, from individual households to businesses to Government.

2

The Decarbonisation Agenda

2.1 Introduction from PwC

PwC is proud to be once again working with BITCI on this the 3rd edition of the Low Carbon Pledge report. The following sections outline the progress made by the signatory companies towards setting and adhering to science-based targets (SBTs). The subsequent analysis and case studies highlight some key actions and exemplar business practices that are helping companies to drive their emission-reduction efforts and to progress on a pathway towards genuinely sustainable business.

2.2 Ireland's Decarbonisation Agenda

This year's Low Carbon Pledge report comes at a challenging time for us all. The effects of the COVID-19 pandemic have been widely felt over the last 18 months and will have a lasting impact both economically and socially. However, as we move beyond the pandemic we must not forget the importance of urgently decarbonising our economy. It would be easy to sacrifice sustainability initiatives in return for a faster economic recovery. However, in reality the disruption of the past year can be viewed as an inflection point which presents an opportunity to pivot businesses towards a sustainable future.

Global sustainability developments

A key focus of this year's Low Carbon Pledge report is charting a pathway to net-zero and setting science-based targets (SBTs). More than 1,300 companies worldwide have set SBTs (submitted to Science Based Targets initiative (SBTi)). These verified emission-reduction targets, grounded in climate science⁵, put companies on a path to reduce greenhouse gas (GHG) emissions and prevent the worst effects of climate change. In the US, President Joe Biden has taken an opposing view to his predecessor in relation to climate action, and immediately committed to re-join the Paris Climate Agreement. Climate has continued to be a central focus of Biden's first months in office and during his climate summit in April 2021 announced a pledge for the US to cut carbon emissions by 50-52% below 2005 levels by 2030. Canada, Japan and South Korea stepped up with similar promises at this summit. Meanwhile, the UK has adopted a 'world-leading' sustainability position with a pledge to cut carbon emissions by 78% by 2035 from 1990 levels. They plan to achieve this with a focus on driving adoption of electric cars / low-carbon heating / renewable electricity, reducing meat and dairy, while also extending climate law to cover international aviation and shipping⁶.

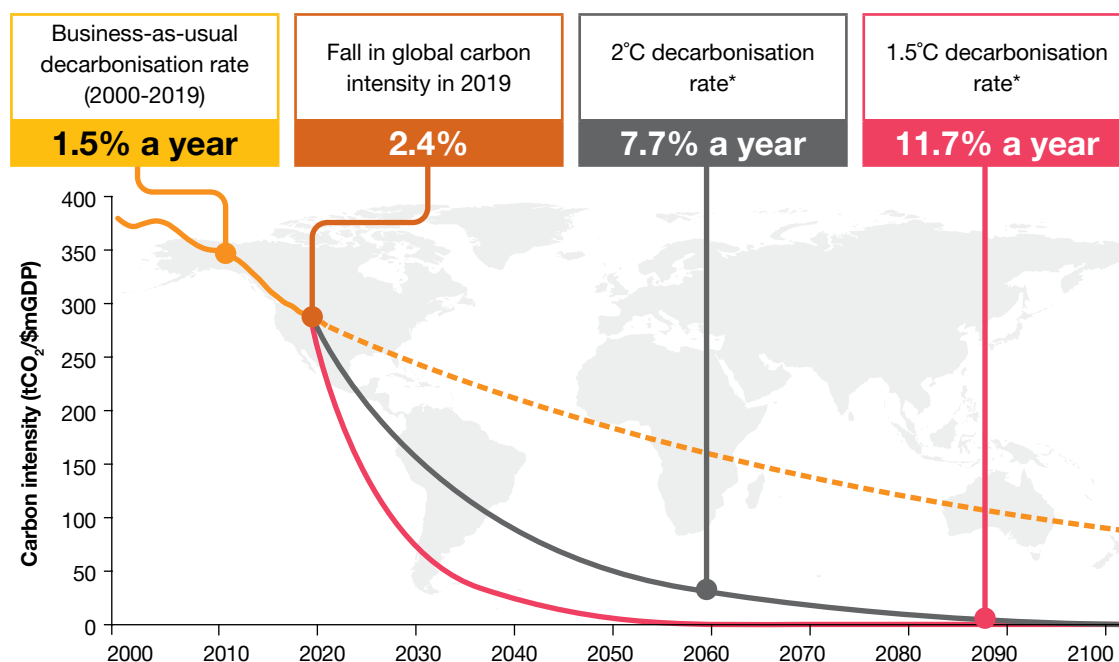
According to PwC's Low Carbon Economy Index (2020)⁷, the world needs to decarbonise at 7.7% each year, while the current business-as-usual decarbonisation rate is just 2.4% annually. In order to achieve the Paris Agreement, countries must immediately begin reducing emissions and make steps towards a decarbonised future.

⁵ Source: [SBTi](#), Science-Based Targets

⁶ Source: [BBC](#), 'Climate change: UK to speed up target to cut carbon emissions'

⁷ Source: [PwC](#), Net-Zero Economy Index 2020

Figure 1: Net-Zero Economy Index 2020



Europe's dynamic climate agenda

The European Green Deal, launched in December 2019, is a sustainable growth strategy that aims to unite and transform the Union into a modern, resource-efficient and competitive economy, which has no net emissions of GHGs by 2050 and where economic growth is decoupled from resource use. This involves turning sustainability challenges into opportunities and making the transition just and inclusive for all. Key elements of this strategy include boosting the efficient use of resources by moving to a circular economy, restoring biodiversity and minimising pollution.

The European Green Deal encompasses a range of activities which have already commenced. March 2020 saw the introduction of European climate law to enshrine the EU's goal of being climate neutral by 2050 into legislation. This transformed the promise of climate neutrality by 2050, into a legally binding commitment, along with outlining the necessary steps to achieve this commitment. Soon after, the EU announced their European Industrial Strategy, which is designed to prepare companies for a 'future-ready economy' with three key priorities: (1) maintaining global competitiveness, (2) making Europe climate-neutral by 2050 and (3) shaping Europe's digital future. The proposal of the Circular Economy Plan, also in March 2020, emphasised the EU's focus on sustainable resource use, which is said to be one of the main building blocks of the European Green Deal. This plan aims to ensure that resources used are kept in the EU economy for as long as possible, by promoting sustainable products, empowering consumers with access to information on product

reparability and durability, and avoiding waste by transforming it into high-quality secondary resources.

The EU's Farm to Fork Strategy introduced goals and guidance to move towards a more healthy and sustainable food system in terms of pesticides, nutrients, antimicrobial resistance and organic farming. As part of this, the Commission has set specific targets to be achieved, such as 25% of total farmland being used for organic farming by 2030 and reducing the sale of antimicrobials for farmed animals and in aquaculture by 50%. July 2020 saw the introduction of strategies for energy system integration and hydrogen. The former provides the framework for the green energy transition, while the latter addresses how to transform hydrogen's decarbonisation potential into a reality through investments, regulation, market creation, research and innovation. The EU revised their 2030 emissions reduction target from 40% to at least 55% below 1990 levels. If achieved, attainment of this target would put the EU on a firm pathway to reaching climate neutrality by 2050. These strategies and others outlined by the European Commission will inevitably require a huge amount of investment, so the EU has developed the Sustainable Europe Investment Plan to mobilise at least €1 trillion of investments over the next decade⁸.

Ireland's long-term climate ambition

Ireland's long-term climate ambition broadly mirrors that of the EU, as they too have set the primary goal to transition to net-zero by 2050. The Climate Action and Low Carbon Development Bill is designed to

⁸ Source: [European Commission](#), A European Green Deal

support this transition to net-zero by establishing a legally binding framework with clear targets, commitments, structures and processes to ensure Ireland achieves its near and long-term goals. Key elements of the Bill include the development of a National Long Term Climate Action Strategy, which will be updated every five years, and placing the onus on government ministers to achieve legally-binding targets set in their own areas. In addition, the Bill requires each local authority to prepare a Climate Action Plan, including mitigation and adaptation measures, along with embedding five-year carbon budgeting into law with various sectoral targets proposed by the Climate Change Advisory Council⁹. These carbon budgets outline the total amount of GHG emissions that Ireland is permitted to emit during each five-year period. This will help to produce short-term goals aligned with Ireland's long-term targets. While the specific numbers of the first budget are due to be announced later this year, the 2021 Climate Bill states that Ireland's first two carbon budgets shall provide for a 50% reduction in GHG emissions by 2030 from 2018 levels¹⁰. The policies in the Climate Action Bill will create opportunities for some sectors, such as renewables, but they are likely to put significant pressure on others, such as transport and agribusiness. Setting specific climate budgets for each department will hold them accountable for climate-related failures in the same manner as monetary failures.

Challenges faced in Ireland

According to the EPA, agriculture is the largest source of emissions in Ireland, representing ~35% of total emissions in 2019, while the transport and energy sectors represented ~20% and ~16% respectively. However, the transport sector is the fastest growing emitter since 1990 with a ~137% increase. Ireland is struggling to comply with current emissions targets. Non-Emissions Trading Scheme (non-ETS) emissions were estimated at 2-4% below 2005 levels in 2020, which is significantly behind the target of 20%. The EU target requires this reduction to be 30% by 2030, which will require mass adoption of electric vehicles and other low/zero carbon fuel solutions. To move towards achieving these targets, Ireland's current policy position is to reduce 2050 CO₂ emissions by at least 80% from 1990 levels across the electricity generation, built environment and transport sectors. Meanwhile, they aim to become carbon neutral in the agriculture and land-use sector without compromising capacity for sustainable food production¹¹. The extent of these challenges cannot be underestimated, meaning that an immediate and collaborative effort is required from all sectors, companies and individuals across the Irish economy.

⁹ Source: [Gov.ie](https://gov.ie), Climate Action and Low Carbon Development (Amendment) Bill 2021

¹⁰ Source: [Irish Times](https://www.irishtimes.com), 'How we can frame Ireland's carbon budgets'

¹¹ Source: [EPA](https://epa.ie), Environmental Indicators

2.3 | External Perspective on the Climate Agenda and the Role of Business



Professor John Sweeney

Emeritus Professor of Geography
at Maynooth University

Professor John Sweeney offered us his insights and perspective on the climate agenda and the role businesses can play in addressing climate change.

Ireland's commitment

The fight against climate change has to be a joint endeavour between nations, civil society and business. Earlier this year, the Irish government approved a climate bill that sets emission reduction targets in law and puts the country on a path to carbon neutrality by 2050. The proposed law would commit Ireland to cutting its emissions by 51% between 2018 and 2030 and to be net-zero no later than 2050. While this represents a significant step up in ambition, this commitment is simply a step towards aligning our decarbonisation rates with the Paris Agreement. In reality, Ireland as a developed country, is disproportionately responsible for the existing level of atmospheric carbon and the recently committed to 7% p.a. reduction should be considered a minimum level of reduction rather than an aspirational target. Exceeding this level would give some leeway to developing countries as they struggle to deal with the current and future impacts of climate change while in parallel looking to develop sustainably and navigate a pathway to net-zero.

Climate action with consumers at the core

Climate action has grown from modest roots, championed by small groups of informed individuals, to being something that now engages large portions of society. Today, consumers are much more informed as to the urgency of these issues, and they increasingly realise the power of their collective actions and buying behaviours. Consumers are recognising the seriousness of the climate and biodiversity emergencies and are putting pressure on companies to embrace more sustainable business practices. This very rapid mobilisation of consumer action can have very negative impacts on the viability of products or services that are not considered to be sustainable. The private sector in Ireland will have to respond in a proactive and transparent way to this ever-increasing consumer focus and ensure that their products or services are genuinely low carbon and strictly aligned with sustainable business practices. Today's consumers are very sensitive to corporations' claims that are considered to be 'greenwashing' and any perception that a company is exaggerating their environmental credentials is likely to have very negative commercial ramifications.

Role of policy-makers

While the citizen may fundamentally drive climate action, policy makers play a critical role in creating the enabling policy and regulatory environment which signals to companies, via both the 'carrot' and the 'stick', how low carbon behaviours are incentivised. Strong and consistent leadership on this topic is essential as policy certainty allows companies to take a longer-term perspective when making investments and formulating strategy. For example, clear signposting on future increases in carbon prices may encourage companies to invest earlier in low carbon solutions. Policy makers also have a critical role to play in mapping out specific decarbonisation pathways for each sector. The specific sectoral pathways again provides clarity on what business practices will be more sustainable. In many cases this will require state investment in enabling infrastructure or support schemes or the removal of environmentally damaging subsidies. Examples would include adequate electric car charging infrastructure or financial schemes that support deep retrofitting of homes. The societal impact of any transition must also be carefully considered. Where any group of citizens is disproportionately disadvantaged, support schemes must be put in place to enable the retraining of the affected cohort. This is essential if we are to maintain continued societal support for the low carbon transition.

The role of business

The transition to a low carbon economy will be transformational for companies. Businesses that do not adapt quickly will be at risk, while those that respond rapidly will be better positioned to access the resulting opportunities. The most obvious starting point for any company is to assess their true carbon baseline covering scope 1, 2, and 3 emissions. Getting a true picture of the carbon emissions associated with each product or service allows the company to adequately plan for a zero-carbon future. They then need to plan an appropriate pathway to net-zero which aligns to science-based targets. This alignment must include short term intermediate targets, such as annual reporting and management accountability. While internal governance arrangements are important it is vital that the company puts in place rigorous and transparent carbon reporting, which is externally validated, in order to give external stakeholders, including the consumer, confidence that the company is indeed on a trajectory to net-zero.



To achieve the global emission reduction set out in the Paris Agreement and limit global temperature rise to 1.5°C compared to pre-industrial levels, businesses must play a leading role. The Low Carbon Pledge aims to demonstrate the collective commitment of businesses to measure, report and communicate on their journey to decarbonisation.

3

Background to the Low Carbon Pledge

3.1 Science-based Targets

The Science Based Targets initiative (SBTi) drives ambitious climate action in the private sector by enabling companies to set science-based emission-reduction targets. Science-based targets (SBTs) provide a well-defined pathway for companies to reduce greenhouse gas (GHG) emissions, helping to avoid the worst effects of climate change and future-proof business growth. Targets are considered 'science-based' if they are in line with the latest climate science necessary to meet the goals of the Paris Agreement – to limit global warming to well-below 2°C above pre-industrial levels and pursuing efforts to limit warming to 1.5°C¹². SBTs are short to medium-term milestones, which aim to mobilise the private sector to take urgent climate action and ultimately enable companies to reach their long-term climate ambitions.

Despite government efforts, GHG emissions continue to increase. Under current trajectories, global mean temperatures are projected to increase by 2.2°C to 4.4°C by the end of this century.¹³ The private sector has a central role to play in ensuring that the global temperature goals are met, however the aggregation of existing company targets would not achieve the desired target and greater ambition is required. The majority of global GHG emissions are directly or indirectly influenced by the corporate sector. Many companies, recognising the risk climate change poses to their business, and the opportunity it creates for leadership and innovation, have set GHG emissions reduction targets. Yet, to date, most companies' targets do not match the ambition and timeframes consistent with a 1.5°C future.

This new more ambitious Pledge aims to demonstrate the commitment of Irish businesses to reducing their GHG emissions in line with the SBTs and to demonstrate their willingness to take a leadership role in helping to achieve Ireland's emissions reduction objectives.

3.2 Introduction to the New Pledge

Business in the Community Ireland's (BITCI) Low Carbon Pledge is entering into its third reporting year and this year's commitment represents a step change in the level of ambition. The Pledge now requires that all signatories commit to setting SBTs no later than 2024, and significantly review and assess indirect and supply chain emissions. This more ambitious Pledge builds upon one of the recommendations in last year's report, which called on companies to adopt carbon-reduction targets based on the latest climate science. The ultimate goal of The Pledge is to achieve carbon neutrality. Setting SBTs represents a significant step forward towards a net-zero economy by 2050.

3.3 Capturing the Journey to Setting Science-based Targets

One of the objectives of this report is to demonstrate the progress made by the signatory companies in setting SBTs and to detail their specific journeys towards decarbonising their operations across the entire value chain. A questionnaire, developed by both BITCI and PwC, was used to collect data for each company. All signatory companies responded to the questionnaire¹⁴, giving a 100% response rate. The aim of the questionnaire was to:

- Establish where companies are on the journey to formally setting SBTs;
- Determine what is driving the ambition to set SBTs and understand any sectoral differences;
- Determine where companies are on the pathway to assessing their scope 3 emissions; and
- Ascertain what companies find to be the main challenges when setting SBTs.

12 Source: SBTi, Science-Based Targets

13 Source: SBTi, Science-Based Targets Manual

14 There were 60 questionnaire responses as three companies; Janssen Pharmaceutical Sciences UC, Johnson & Johnson Vision Care Ireland UC and DePuy Synthes submitted their questionnaire responses as one entity ("Johnson and Johnson Campus Ireland") due to being part of a Global company with an Irish Campus approach structure in tackling their Carbon challenges.

Section 4 provides a breakdown of the main findings and observations stemming from the questionnaire responses.

Table 1: 62 Low Carbon Pledge signatories and report participants

| Company | Sector ¹⁵ | Company | Sector |
|-----------------------|------------------------------------|------------------------------------|-------------------------------------|
| A&L Goodbody | Professional services | HEINEKEN Ireland | Agribusiness/food & drink |
| Abbvie | Pharma/med-tech | Hovione Ireland | Pharma/med-tech |
| ABP Ireland | Agribusiness/food & drink | Iarnród Éireann (Irish Rail) | Transport/logistics |
| Accenture | Technology | Irish Distillers | Agribusiness/food & drink |
| Actavo | Construction | Irish Water | Energy & utilities |
| AIB Group | Financial services | Janssen Pharmaceutical Sciences UC | Pharma/med-tech |
| Aldi | Retail | Johnson & Johnson Vision Care | Pharma/med-tech |
| Allianz | Financial services | KBC Bank Ireland | Financial services |
| An Post | Transport/logistics | Keelings | Agribusiness/food & drink |
| Arup | Professional services | KPMG | Professional services |
| Aviva | Financial services | Lidl Ireland | Retail |
| Bank of Ireland Group | Financial services | Marks & Spencer (Ireland) Ltd | Retail |
| Bidvest Noonan | Facilities management/ foodservice | Momentum Support | Facilities management / foodservice |
| Boots | Retail | Mercury Eng. | Construction |
| Britvic Ireland | Agribusiness/food & drink | Musgrave Group | Retail |
| BT | Technology | Ornua | Agribusiness/food & drink |
| Cairn Homes | Construction | Permanent TSB | Financial services |
| Cook Medical | Pharma/med-tech | PM Group | Professional services |
| Cisco | Technology | PwC | Professional services |
| Dawn Meats Group | Agribusiness/food & drink | RTE | Communications |
| Deloitte | Professional services | Sky Ireland | Communications |
| DePuy Synthes | Pharma/med-tech | Sodexo Ireland | Facilities management/ foodservice |
| DHL Supply Chain | Transport/logistics | SSE Ireland | Energy & utilities |
| Diageo Ireland | Agribusiness/food & drink | Tesco Ireland | Retail |
| Dublin Bus | Transport/logistics | Three Ireland | Communications |
| EirGrid plc | Energy & utilities | Ulster Bank Ireland DAC | Financial services |
| Enterprise Rent-a-car | Transport/logistics | Veolia | Professional services |
| ESB Group | Energy & utilities | Verizon | Technology |
| Fujitsu Ireland | Technology | Virgin Media Ireland | Communications |
| Gas Networks Ireland | Energy & utilities | Vodafone Ireland | Communications |
| Grant Thornton | Professional services | William Fry | Professional services |

¹⁵ The sector "professional services" includes environmental services. The sector "financial services" includes insurance. Note that agribusiness and food & drink have been combined in this year's report.

Understanding scope 1, 2 & 3 emissions

- **Scope 1:** Direct GHG emissions occur from sources that are owned or controlled by the company. This segment comprises four principal emissions sources: process, stationary, fugitive and mobile.
- **Scope 2:** Indirect greenhouse gas emissions from consumption of purchased electricity, heat or steam.
- **Scope 3:** Other indirect emissions. Figure 2 displays the 15 categories of scope 3 emissions, as outlined by the Greenhouse Gas Protocol.¹⁶

The benefits of setting science-based targets

SBTs are undeniably good for the planet but setting them also makes business sense. The following are benefits companies can expect to see after setting SBTs:

1. **Stakeholder confidence:** Increasingly investors are taking an interest in companies' environmental policies as they become more focused on value protection. Some companies are using SBTs to underpin their sustainability ambitions with a view to meeting customer expectations and, in many cases, to maintain a fundamental 'licence to operate'.
2. **Policy and regulatory readiness:** Companies are anticipating enhanced climate policy and regulation and SBTs are viewed as an important means of staying ahead of these changes.
3. **Increased innovation:** Companies are aligning their strategies to a low-carbon economy which allows them to access the significant associated business opportunities.

When companies set SBTs, they also benefit from the target validation process and detailed feedback and support provided by the technical expertise of the Science Based Target initiative (SBTi). Businesses who sign the SBT commitment letter, are immediately recognised as "committed" on the SBTi website, as well as the websites of CDP, UN Global Compact and We Mean Business.

Setting science-based targets

Embedding SBTs in a company's corporate and sustainability strategy is crucial. The SBTi have a general set of criteria that companies must follow when setting SBTs:

- **Boundaries:** Targets must cover 95% of scope 1 and 2 GHG emissions, and scope 3 where > 40% of emissions.^{17 18}
- **Timeframe:** 5/10/15 years into the future from the date the target is submitted to SBTi for official validation.
- **Ambition:** At a minimum, scope 1 and scope 2 targets must be consistent with the level of decarbonisation required to keep global temperature increase to well-below 2°C compared to preindustrial temperatures. However, companies are encouraged to pursue greater efforts towards a 1.5°C trajectory.
- **Offsets:** The use of offsets must not be counted as emissions reduction toward the attainment of companies' SBTs.

Figure 2: Overview of scope 1, 2 and scope 3 emissions

| ◀ Scope 3 | Scope 1 and 2 | Scope 3 ▶ |
|----------------------------------------------------------------------------|-------------------|-----------------------------------------------|
| Supply chain ('Upstream') | Reporting company | Customers ('Downstream') |
| 1. Purchased goods and services | | 9. Downstream transportation and distribution |
| 2. Capital goods | | 10. Processing of sold products |
| 3. Fuel and energy related activities (not included in scope 1 or scope 2) | | 11. Use of sold products |
| 4. Upstream transportation and distribution | | 12. End-of-life treatment of sold products |
| 5. Waste generated in operations | | 13. Downstream leased assets |
| 6. Business travel | | 14. Franchises |
| 7. Employee commuting | | 15. Investments |
| 8. Upstream leased assets | | |

¹⁷ Source: SBTi, Science-Based Targets Criteria

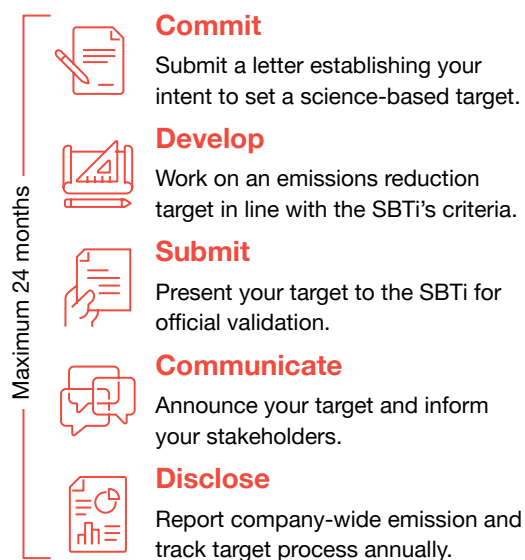
¹⁸ All companies that are involved in the sale or distribution of natural gas or other fossil fuel products must set scope 3 targets for the use of sold products, irrespective of the share of these emissions compared to the total scope 1, 2, and 3 emissions of the company.

¹⁶ Source: Greenhouse Gas Protocol, Scope 3 Standard



Setting SBTs is a five-step process (see figure 3 below). Once signatories have completed step 1, and formally committed to setting SBTs, they have 2 years to have their SBTs set and approved. As every sector is different, the SBTi is developing sector-specific guidance (for more, see table 4 in section 4.6).

Figure 3: Five-step process of setting science-based targets



The science-based path to net-zero

The path to net-zero must be science-based. Extensive scientific research clearly states the need to reach net-zero global CO₂ emissions by mid-century in order to limit global warming to 1.5°C and to reduce the destructive impacts of climate change¹⁹. The concept of net-zero has risen in prominence over the last few years, as companies are increasingly committing to reaching this ambitious goal. In contrast to SBTs, net-zero targets indicate carbon neutrality, rather than direct emissions reductions and therefore carbon offsetting is allowed. However, not all net-zero targets are equal. The definition of “net-zero”, as well as the path to get there, are diverse and often inconsistent. However, the SBTi has launched a process to develop the first science-based global standard for corporate net-zero targets, to ensure that companies’ net-zero targets translate into action that is in line with achieving a net-zero world by no later than 2050. This standard is expected to be finalised later this year. SBTs provide the short and medium-term milestones to align with the Paris Agreement but these targets can also give credibility to companies’ net-zero commitments.



¹⁹ Source: SBTi, Net-zero



The Low Carbon Pledge report is underpinned by the data provided by the signatories. Topics covered include the journey to science-based targets (SBTs) and net-zero; approaches; carbon accounting; challenges faced; carbon offsetting; and reporting.

4

Low Carbon Pledge

Summary Findings

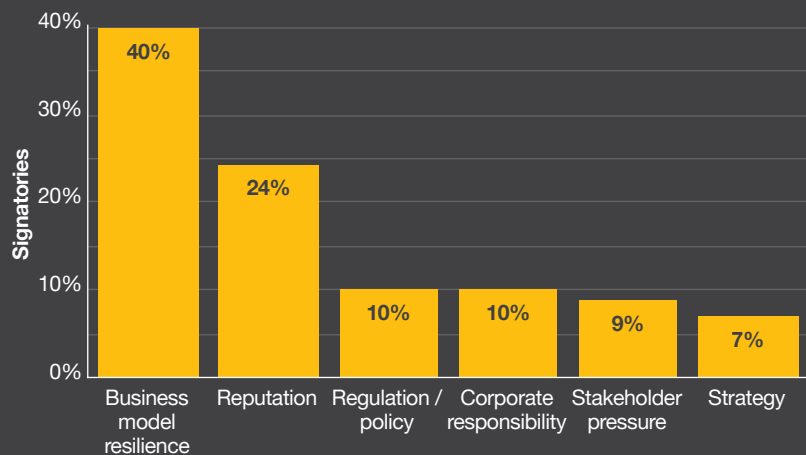
Pledge reminder

This new Pledge calls on businesses to work towards setting science-based emission reduction targets (i.e. what science says is necessary to limit global warming to 1.5°C) by 2024 at the latest.

62 companies have signed this year's more ambitious Pledge, up from 58 signatories in 2020.

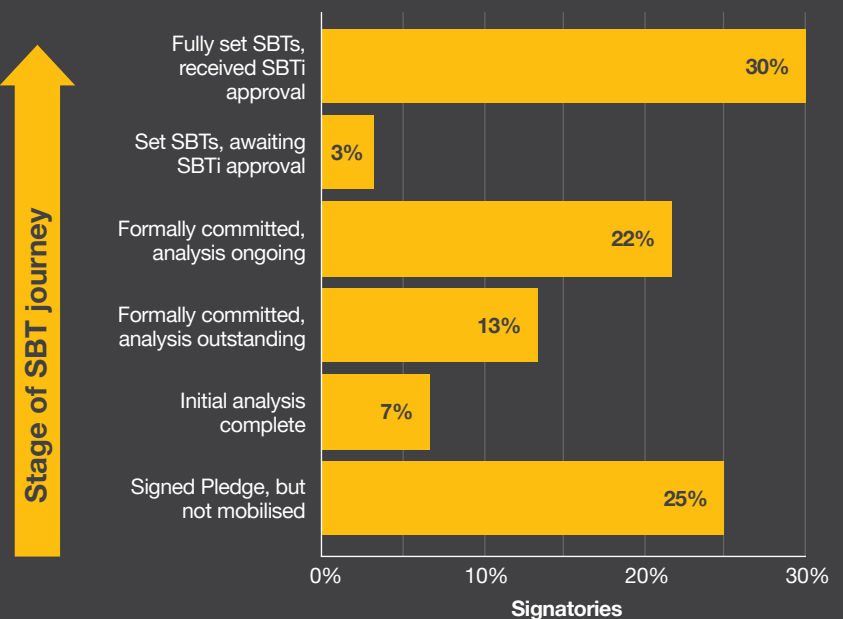
62 companies, across 11 sectors, have signed the Low Carbon Pledge. Analysis of the questionnaire responses provides insights and demonstrates the progress made by the signatory companies in setting science-based targets (SBTs) and detail their specific journeys towards decarbonising their operations across the entire value chain.

Main factors for signing up to this more ambitious Pledge are



Progress of signatories on the journey to science-based targets (per stage)

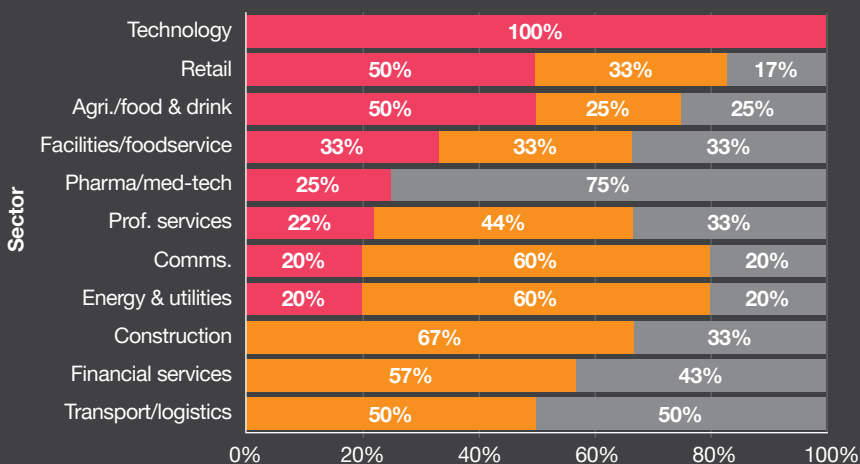
The Pledge signatories have shown real ambition and progress towards setting SBTs.



Progress of signatories on the journey to science-based targets by sector

Signatories within the technology, retail and agribusiness/food & drink sectors are the most advanced on the journey to SBTs.

- Have SBTi-approved SBTs
- Formally committed to SBTi
- Signed Pledge but not formally committed to SBTi



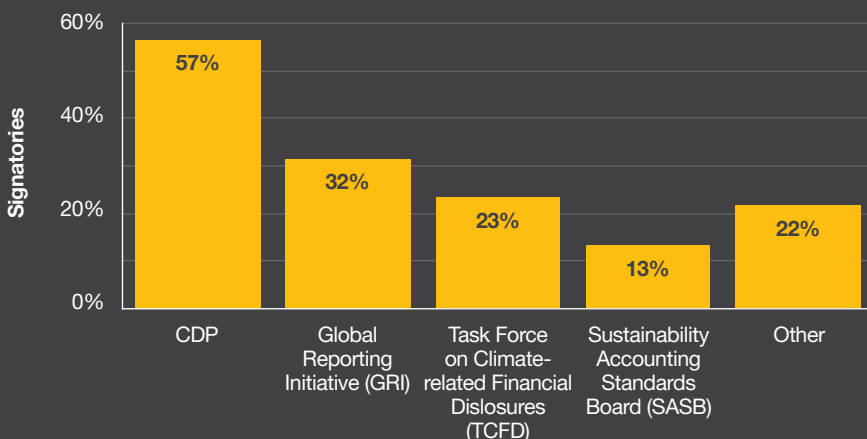
Signatories within the agribusiness/food & drink sector have shown that it is possible to move ahead, even if formal SBTi sectoral guidance is not available.

Non-financial reporting

Non-financial reporting has moved from something that used to be a 'nice-to-have', to something that stakeholders now expect. External verification ensures emissions data is both robust and accurate.



Signatories used a variety of non-financial reporting frameworks. The selection was typically based on the frameworks impactfulness, transparency and credibility.



Challenges The Pledge signatories are facing

The most common challenges signatories face, across all 11 sectors, when measuring/reporting scope 3 emissions and setting SBTs are:

1 Data accessibility

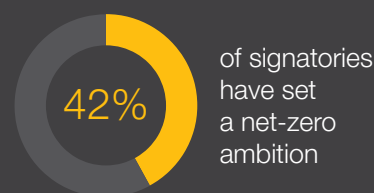


2 Complexity of the assessment



Net-zero

Science-based targets are short to medium-term targets which are viewed by the signatories as stepping-stones to achieving their longer term net-zero ambitions.



The timeframe for the net-zero commitment varied based on whether only scope 1 & 2 emissions were considered. Positively 41% of respondents have set scope 3 net-zero targets for 2030 or earlier, which is significantly more ambitious than the national trajectory of 2050.

| | 2030 or earlier | Beyond 2030 |
|-------------------------|-----------------|-------------|
| Scope 1 and 2 emissions | 56% | 44% |
| Scope 3 emissions | 41% | 59% |

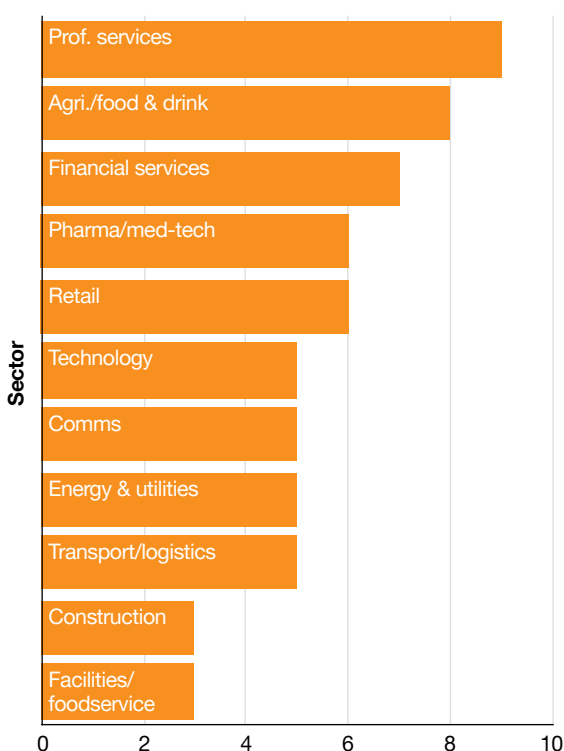
Low Carbon Pledge

Results Overview

4.1 Introduction to The Pledge Signatories

Since commencing the Low Carbon Pledge, there has been an annual increase in the number of signatories, and this trend has continued. This is a promising sign as we continue to see more businesses addressing the issue of climate change. 62 companies have signed this year's more ambitious Pledge (see table 1), up from 58 signatories in 2020. The signatories span 11 different sectors, with professional services firms being the largest sector group.

Figure 4: Signatories per sector



Business model resilience was the main driver for signing this more ambitious Pledge, with 40% of companies citing this reason. The global pandemic has challenged businesses and has forced many to innovate and rethink their business model, in order to survive and thrive. This trend will continue as we decarbonise our economy, and thus business will have to continually adapt. Reputation followed closely, with 24% of signatories recognising it as a driving factor. In recent years we have seen consumers putting pressure on companies to embrace more sustainable business practices and offer alternative choices. The modern consumer is more educated and becoming increasingly aware of unsustainable business practices. Companies need to work harder to maintain their reputation and retain their customer base. Other drivers for signing The Pledge included stakeholder pressure, corporate and social responsibility, policy and regulation. Some cited signing up because it was simply the right thing to do.

of signatories saw business model resilience as the main driver for signing the Low Carbon Pledge

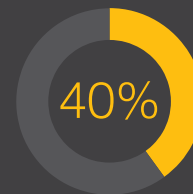
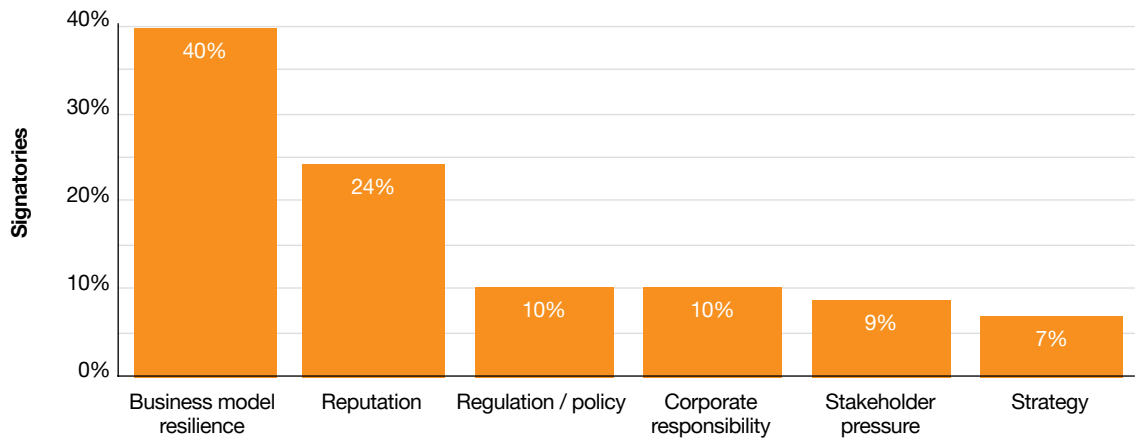


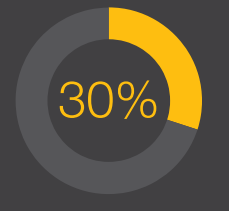
Figure 5: Main factors for signing the Low Carbon Pledge



4.2 The Journey to Science-based Targets

The journey to science-based targets (SBTs) can be challenging, however The Pledge signatories have shown real ambition. In many cases significant progress has already been made with 30% having successfully set SBTs and had them approved by the Science Based Targets initiative (SBTi). A further 38% have formally committed to setting SBTs, 3% of which have set them and are awaiting approval. This means that 68% of the signatories are well progressed to setting SBTs by 2024. Of the remaining signatories (32%), 7% have already completed an initial analysis. It is important to note that the majority of those who have not yet set SBTs, have set emission-reduction targets, which is an important step towards setting SBTs.

of signatories have set and approved SBTs



In terms of fully setting SBTs and receiving approval from the SBTi, the technology sector is the best performing with all five companies having achieved this benchmark. Both the retail and agribusiness/food & drink sectors are also progressing well, with 50% of signatories having fully set and formally submitted SBTs.

Figure 6: Progress of signatories on the journey to science-based targets (per stage)

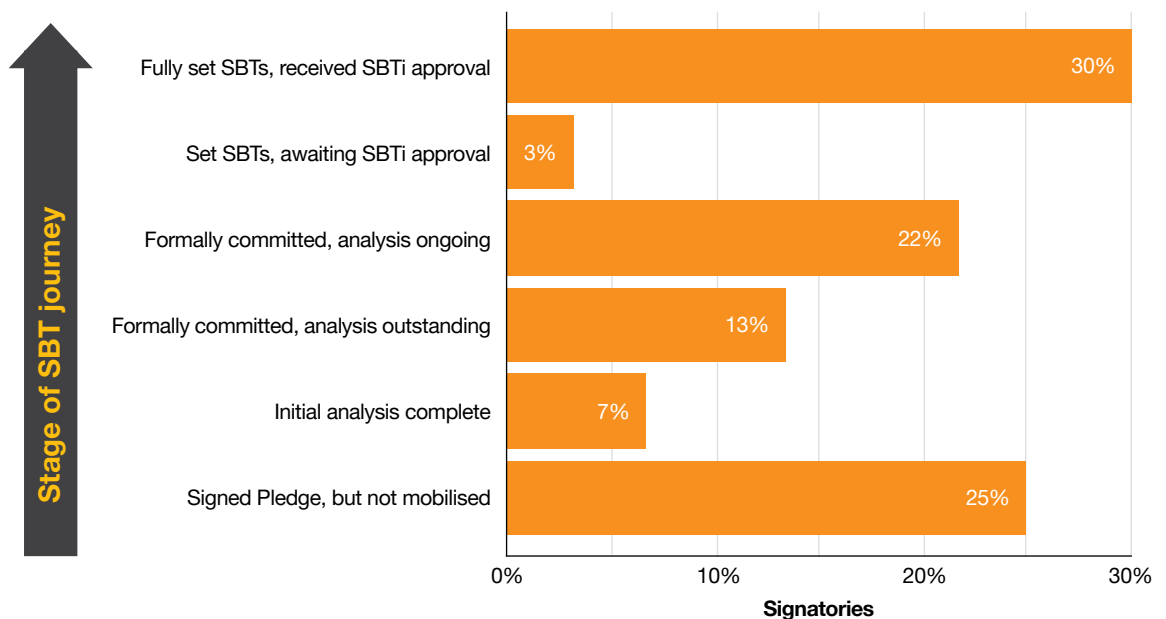
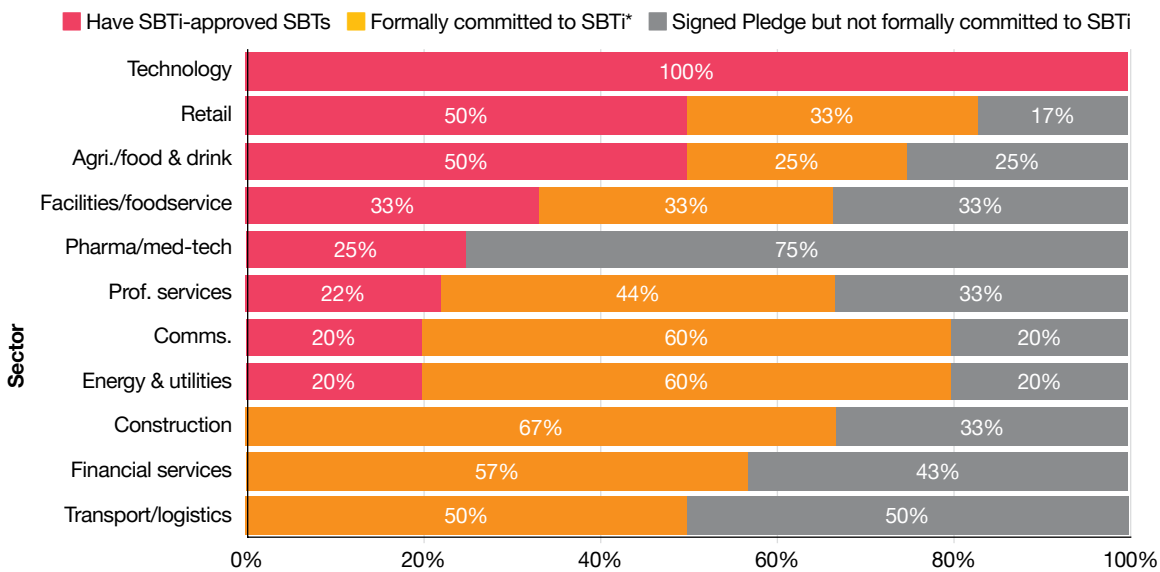


Figure 7: Progress of signatories on the journey to science-based targets (per sector)



*Note: "Formally committed to SBTi" covers those who have submitted the official letter, establishing intent to set a science-based target, but have not received approval on targets submitted.

Different sectors have different challenges when it comes to setting SBTs, stemming from either the nature of the sectoral emissions profile or sometimes with specific aspects of the SBTi methodology. No signatories within the following sectors have yet set SBTs: construction, financial services and transport/logistics. Three signatories within the pharma/med-tech sector have signed The Pledge but have not started their journey to submitting SBTs.

Signatories within the technology, retail and agribusiness/food & drink sectors are the most advanced on the journey to science-based targets

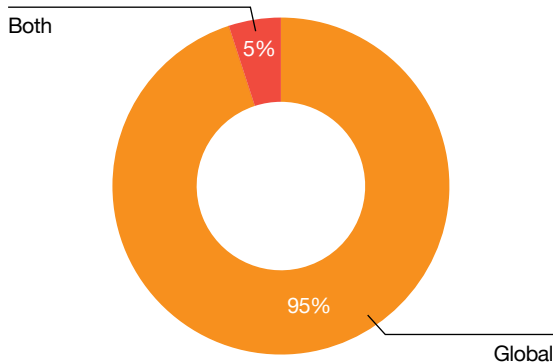


Signatories who have set science-based targets

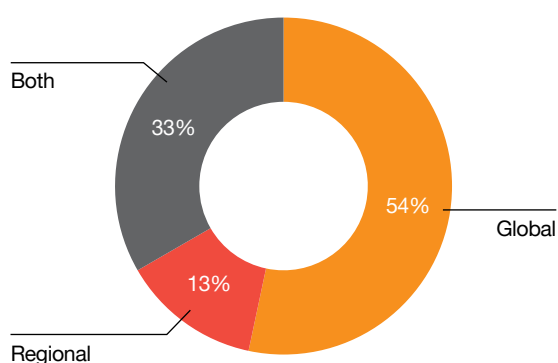
For global companies a decision must be taken as to where targets are set. In some instances the high level targets are set at a global level, with regional units then charged with determining the specific regional/country pathway. Figure 8 (below left) shows that almost all signatories who have fully set and approved SBTs, have set them at a global level. One signatory, in the technology sector, has their approved SBTs set on both a global and a regional level. Figure 8 (below right) shows that those in the formal SBT process (but have not received approval) are increasingly making submissions on a regional level.

Figure 8: Level at which respondents are setting their science-based targets

Respondents with SBTi-approved SBTs (%)



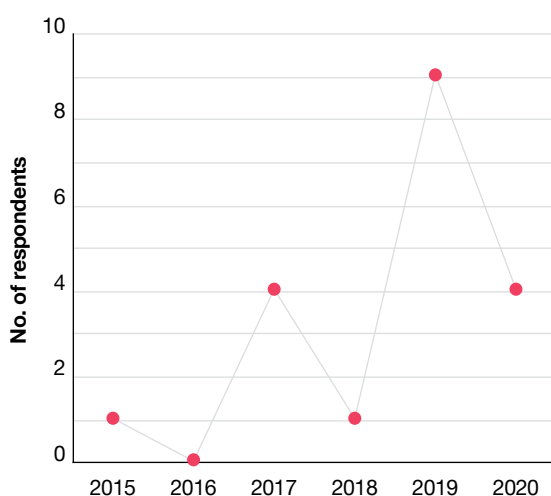
Respondents who have formally committed to SBTi (%)



Note: 'Both' means set at both a global and a regional level

The number of signatories making formal submissions to the SBTi is increasing year-on-year. Of the 20 signatories that have approved SBTs, one signatory in the agribusiness/food & drink sector was very much a leader in this space, having made their submission back in 2015. The remainder submitted their targets from 2017 onwards. The significant escalation of interest in sustainability over the last 24 months is also evidenced in this area (see figure 9). The drop in SBT submissions in 2020 may be as a result of the challenges and uncertainty businesses faced during the pandemic. As we progress into 2021 and beyond, we expect more submissions from our Pledge signatories.

Figure 9: Science-based targets submissions by year among respondents



Companies were asked about the coverage of their SBT ambition i.e. whether they related to scope 1, 2 or 3 emissions. All have set SBTs for scope 1 and 2 emissions, with 82% also setting SBTs for scope 3 emissions. Setting SBTs to scope 3 emissions is compulsory if a company's relevant scope 3 emissions are 40% or more of its total carbon footprint.

When setting SBTs, companies must also select the timeframe over which to achieve the targets. The most common timeframe chosen was 10 years. A 10-year timeframe means that the majority of respondents are set to achieve their SBTs by 2030 or earlier. This date is significant both at global and national level with our own climate action plan targets calling out significant decarbonisation targets on a sectoral basis. For many, a 5-year timeframe may be too challenging to achieve while a 15-year timeframe may not sufficiently signal ambition to customers, employees or regulators.

Table 2: Timeframe chosen by respondents when setting science-based targets

| | 5 years | 10 years | 15 years |
|-------------------------|---------|----------|----------|
| Scope 1 and 2 emissions | 25% | 45% | 30% |
| Scope 3 emissions | 31% | 44% | 25% |

4.3 Net-zero

Science-based targets (SBTs) are short to medium-term targets, which can be used as a stepping-stone to achieve longer term net-zero ambitions. Therefore, although this report is primarily focused on setting SBTs, net-zero commitments are also considered.

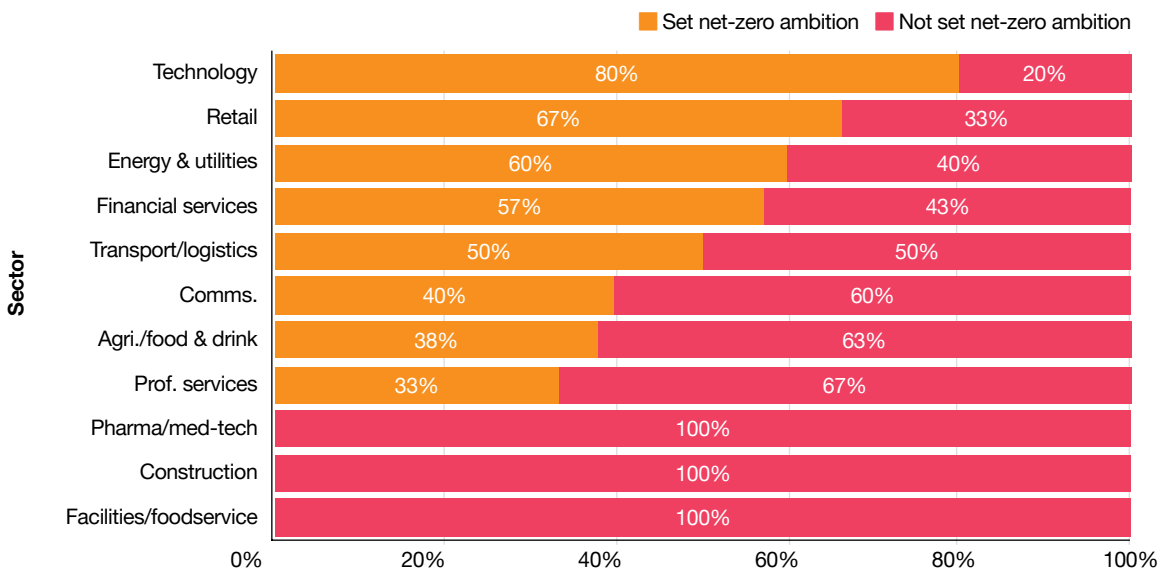
Very significantly, 42% of The Pledge signatories have set a net-zero ambition. Of the signatories that have not set a public net-zero ambition, 66% plan to do so. One signatory, within the agribusiness/food & drink sector, commented that net-zero (including scope 3) is currently not viable for their sector. This is somewhat aligned to the national conversation on net-zero for the agricultural sector. Across all sectors, the main challenges to setting a net-zero ambition were found to be complexity of the assessment and data availability.

of signatories have set a net-zero ambition

42%

The sectoral breakdown of those who have set public net-zero ambitions is similar to that of SBTs. The technology sector had the highest share, with four out of five signatories having a net-zero ambition with the remaining one planning to do so. Over 50% of signatories within the retail, energy & utilities, financial services and transport/logistics sectors have made a public net-zero commitment. On the other hand, no signatories within the following sectors have yet declared a net-zero ambition: pharma/med-tech, construction and facilities management/food service.

Figure 10: Public net-zero ambitions per sector



Signatories who have set a net-zero ambition

Similar to SBTs, net-zero ambitions are often set separately for scope 1 and 2 and scope 3 emissions. See table 3 for an overview of timeframes. As expected, the majority of respondents have set their scope 1 and 2 ambitions to 2030 or earlier. Scope 3 emissions are again proving more difficult to reduce, with slightly over half choosing a timeframe beyond 2030. Positively 41% of respondents have set scope 3 net-zero targets for 2030 or earlier, which is significantly more ambitious than the national trajectory of 2050. One signatory, within the financial services sector, explained that they plan to get to net-zero for their loan book emissions (scope 3) by 2040, with the exception of agriculture, which is in line with the national trajectory.

Table 3: Timeframe chosen by respondents when setting net-zero ambition

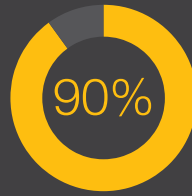
| | 2030 or earlier | Beyond 2030 |
|-------------------------|-----------------|-------------|
| Scope 1 and 2 emissions | 56% | 44% |
| Scope 3 emissions | 41% | 59% |

4.4 Approach

Companies were asked about their sustainability strategies and how they were structured to deliver on these strategies. Of the respondents, 90% have a defined sustainability strategy. Of those, 94% have integrated their sustainability strategy into their corporate strategy and have an associated roadmap/implementation plan. In addition, 93% of signatories have a dedicated sustainability lead within the firm, and 66% of which are at the executive level. Support from the top is critical for any change programme and these findings illustrate how seriously this group is taking sustainability.

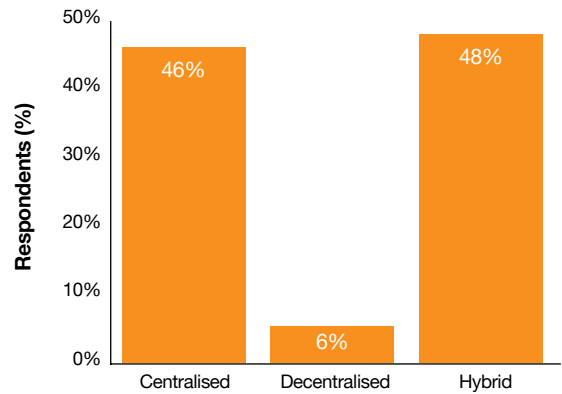
Notably 90% of signatories consider climate and ESG in their strategic and operational decision-making process, with 62% also factoring this into acquisition and disposal decisions. This is important as it is recommended that science-based targets (SBTs) are recalculated to reflect significant changes, such as to company structure and activities (e.g. acquisitions, divestitures), that may compromise the relevance and consistency of the targets. Signatories also attach importance of climate and ESG in the attraction and retention of staff, appropriate risk management, and asset management and supply chain planning. This clearly illustrates how integral these topics have become to all aspects of running a business.

of signatories consider climate and ESG in their strategic and operational decisions, while 62% consider these factors when considering acquisitions or disposals



Respondents were asked a number of questions that related to how they are structured to deliver on their sustainability strategy and SBTs. Typically an organisation may have started with a central dedicated Sustainability team, however, they may look at alternate models as they begin to drive out significant change across the organisation. The majority of organisations have adopted either a centralised or hybrid approach to delivering their sustainability strategies. Of the three respondents that have a decentralised approach (where sustainability is embedded at a business unit level), one is in each of the following sectors: pharma/med-tech, professional services and agribusiness/food & drink.

Figure 11: Approach to delivering sustainability strategies among respondents



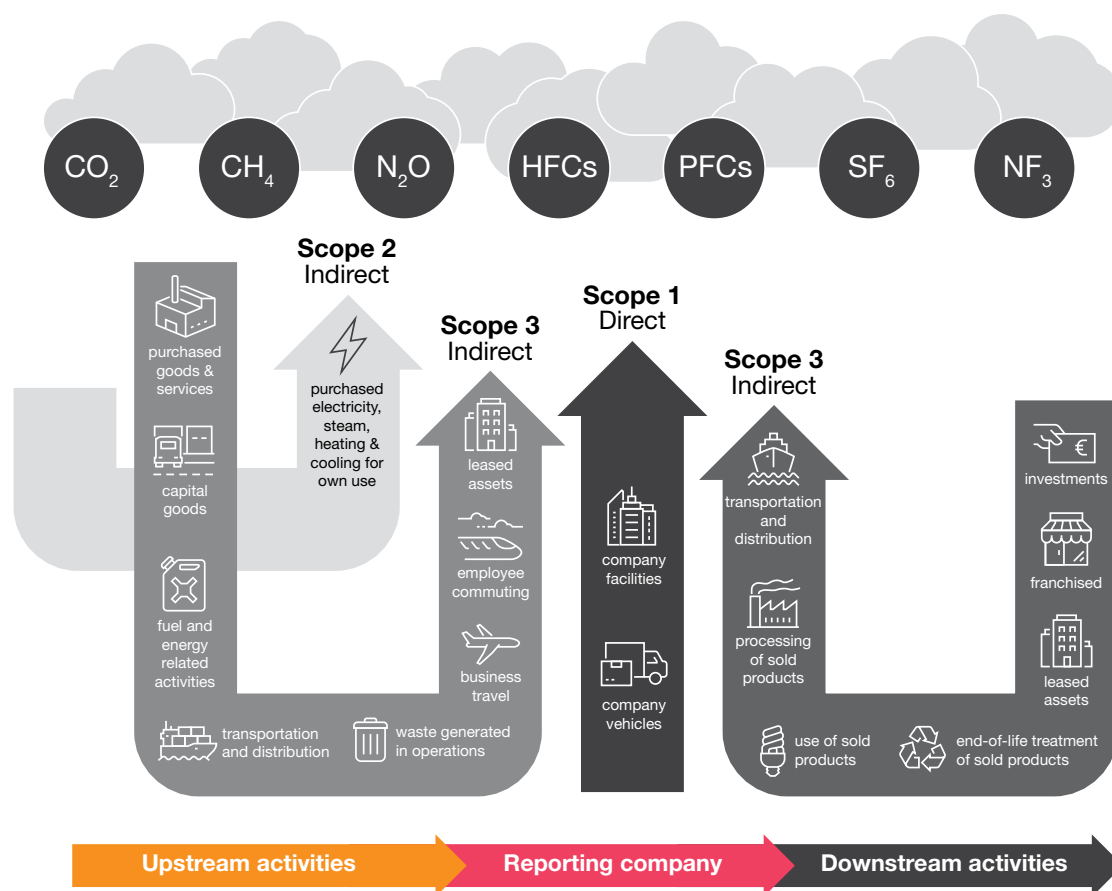
Although organisational approach is important when delivering a business' sustainability goals, signatories also recognise that these ambitions must be present throughout the firm. To that effect, 100% of signatories stated that they engage their employees in their sustainability approach.



4.5 Carbon Accounting

Carbon accounting is the process of measuring the quantity of greenhouse gas (GHG) emissions an organisation is responsible for. It is also known as GHG accounting or carbon footprinting. An organisation's carbon footprint is usually measured in kg or tonnes of carbon dioxide equivalent (CO₂e). Carbon accounting can be challenging, and companies need adequate resources and robust data in order to correctly measure their carbon footprint.

Figure 12: Overview of GHG Protocol scopes and emissions across the value chain²⁰



Scope 1 and 2 emissions

The main source of scope 1 emissions among the signatories is from stationary combustion (e.g. natural gas and other fossil fuels) and for scope 2 the principal source is purchased electricity. These findings are consistent with the results reported in last year's report.

Scope 3 emissions

Respondents reported that the most significant sources of scope 3 emissions were purchased goods and services and business travel. This is similar to last year's findings, where 91% of reported scope 3 emissions were linked to business travel (air travel and car transport). The questionnaire found that one third of signatories did not yet know what percentage of their entire carbon footprint was made up of scope 3 emissions. One quarter of signatories stated that scope 3 emissions make up over 80% of their carbon footprint. This highlights the importance of focussing on reducing scope 3 emissions, which clearly requires that companies are first in a position to accurately measure all material emission sources.

²⁰ Source: Greenhouse Gas Protocol, Scope 3 Standard

4.6 Challenges Companies are Facing

The Pledge signatories face a number of challenges when it comes to measuring/reporting scope 3 emissions and setting science-based targets (SBTs)²¹:

1 Data accessibility



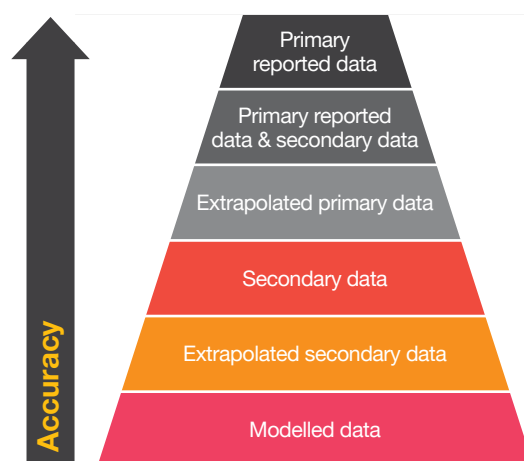
2 Complexity of the assessment



These were the most common challenges across all 11 sectors. Lack of guidance was also a challenge among professional services firms when it came to setting SBTs. 100% of signatories in the following sectors stated data accessibility to be the main challenge when it came to measuring/reporting scope 3 emissions: professional services, agribusiness/food & drink, pharma/med-tech, retail, financial services and facilities management/ foodservice. The main challenges when setting a net-zero ambition reflected those mentioned above. However, “cost” was also considered a challenge by one third of respondents. This may be linked to the purchase of offsets to remove residual emissions²², in order to be fully net-zero.

It is important that companies overcome the challenge of data accessibility when calculating and reporting scope 3 emissions. These indirect emissions are difficult to calculate and are often where the majority of a company’s carbon footprint lie. When carbon accounting and baselining emissions data, companies should use the highest quality data that is available. There are different types of data that companies can use: primary reported data²³, secondary data, extrapolated data²⁴, modelled data or a combination (see figure 13). Some sectors have specific guidance, such as the Partnership for Carbon Accounting Financials (PCAF) “general data quality scorecard” for financial institutions²⁵, which recognises the lag in receiving required data (e.g. emissions data for borrower) and enables financial institutions to develop a strategy to improve data over time.

Figure 13: Hierarchy of sustainability data



For some sectors and industries, the Science Based Targets initiative (SBTi) has developed separate sector-specific methodologies, frameworks and requirements. The following table gives an overview of their status:

Table 4: Status of SBTi sector-specific methodology guidance²⁶

| Sector |
|------------------------------------------------|
| Aluminium |
| Apparel and footwear |
| Chemicals |
| Financial institutions |
| Forest, Land and Agriculture (FLAG) |
| Information and Communication Technology (ICT) |
| Oil and Gas |
| Power |
| Transport |

■ Finalised ■ In development ■ Scoping phase

For sectors not listed or not yet finalised, the SBTi recommends using their core methodologies and resources to set targets. It is worth noting that significant progress is being made and any gaps are expected to be closed rapidly. In addition, it is evident among signatories that even in the absence of sector-specific guidance, setting SBTs is still possible. As seen in section 4.2, the agribusiness/food & drink sector is one of the sectors most advanced on the journey to SBTs, even though the guidance for Forest, Land and Agriculture (FLAG) is still in the “scoping phase”. A lack of clear guidance or a framework today should not stop businesses becoming decarbonisation leaders.

²¹ Both those who have set science-based targets, and those who have not.

²² ‘Residual emissions’ are the remaining emissions after all technically and economically feasible opportunities of reduction in all covered scopes and sectors have been implemented. Source: C40

²³ Primary reported data: taking emissions data directly calculated and reported by the organisation.

²⁴ Extrapolated data: taking emissions data from a sample of activities and scaling up to cover the full scope.

²⁵ See PCAF, “The Global GHG Accounting & Reporting for the Financial Industry Standard”, pg. 39,40

²⁶ Source: SBTi website, Sector Guidance



Signatories within the agribusiness/food & drink sector have shown that it is possible to move ahead even if formal SBTi sectoral guidance is not available



Post-pandemic, most signatories will see a reduction in business travel and continued use of digital platforms for hybrid working



4.7 COVID-19 - Challenges & Lessons Learned

Since the pandemic began a year ago, significant portions of the world have been working from home. The adoption of digital technologies and changing work practices has brought both opportunities and challenges for many of the Low Carbon Pledge signatories.

Table 5: Opportunities and challenges of the COVID-19 pandemic as reported by the signatories

| Opportunities | Challenges |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> Greater focus on the climate agenda Reduced carbon footprint - less business travel (in particular air travel) and reduced employee commuting, paper use, waste and energy consumption Accelerated digitalisation Increased focus on employee wellbeing | <ul style="list-style-type: none"> Unclear how to account for the emissions of remote working (i.e. employees working from home) Replacing reusable products with disposable ones for health & safety reasons Adapting to remote working |

The global shift to remote working, aided by digital platforms, has been a huge success for many companies. For this reason, the majority of the signatories stated that the biggest change to their business post-pandemic will be a significant reduction in both business travel and employee commuting. Many signatories are creating sustainable travel policies, which call out a more limited requirement for essential travel.

4.8 Carbon Offsetting

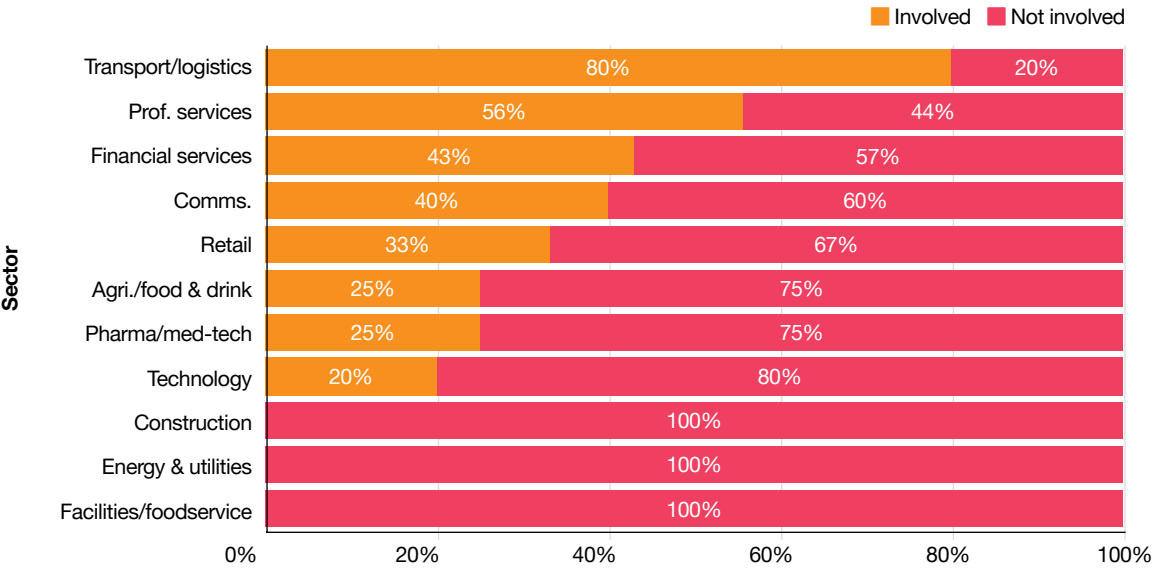
Note: The use of carbon offsets is not permitted to achieve science-based targets (SBTs). The Science Based Targets initiative (SBTi) requires companies to achieve SBTs based on actual emission reductions, through direct action within their own operations and value chains. Offsets, however, are often considered by companies looking to achieve net-zero targets in the near term.

A carbon offset is a reduction in carbon dioxide emissions in order to compensate for emissions made elsewhere. They reduce, remove or avoid greenhouse gas (GHG) emissions but can also bring a host of positive co-benefits, e.g. empowering communities or protecting ecosystems. Overall, 1/3 of signatories are involved in carbon offsets. Of these, 60% use offsets as part of their net-zero strategy. The involvement in offsetting is primarily focused in the transport/logistics and professional services sectors.

1 in 3
Signatories are involved in carbon offsets.



Figure 14: Involvement in carbon offsetting per sector



Interestingly, 90% of companies prioritise offsets within Ireland. Many of those sourcing offsets out of country do so because they are part of global organisations where HQ centrally selects appropriate offsets for use across the group.

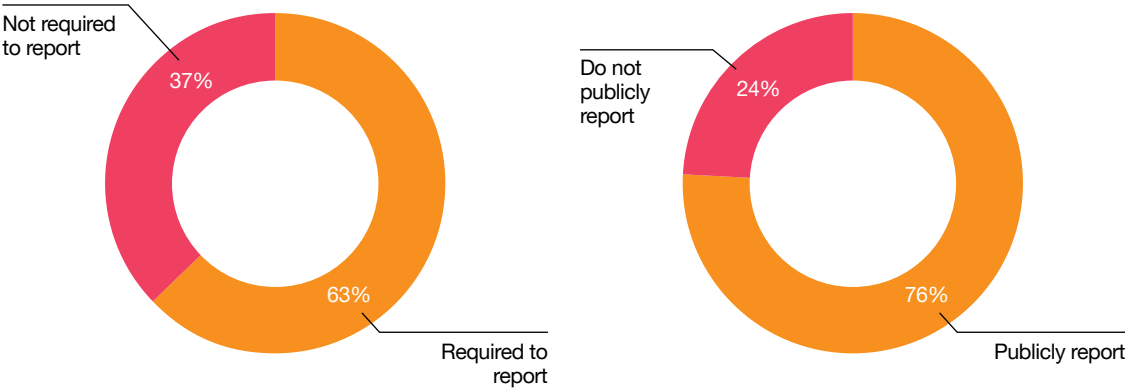
4.9 Reporting

Three quarters of the signatory companies publicly report non-financial data, which is slightly above the portion (63%) that are obligated to do so. All signatories in the technology, energy & utilities, retail and financial services sectors report non-financial data. A high level of reporting exists among signatories in the agribusiness/food & drink and

pharma/med-tech sectors, with 75% reporting non-financial data, despite only 33% being required to do so. The most reported scope 3 category is business travel, with 77% of signatories reporting on this category. Emissions from waste generated in operations and purchased goods and services also have high levels of reporting.

Companies are publicly reporting non-financial data on a voluntary basis

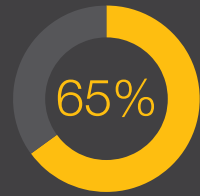
Figure 15: Reporting non-financial data among signatories



Non-financial data is most commonly disclosed on company websites or public sustainability reports. A number of signatories also publish this data in their annual reports. When asked if their sustainability reporting is explicitly driven by contracts with customers or suppliers, only 5% of signatories said it was, indicating that the majority of firms report this data in order to meet the expectations of other stakeholders.

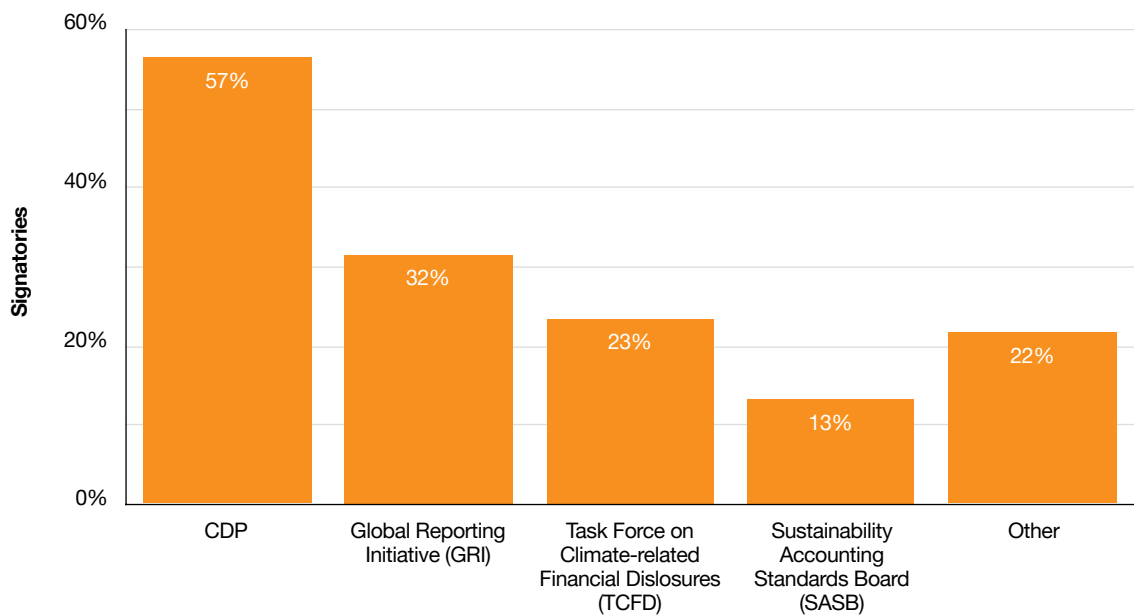
Non-financial reporting has moved from something that used to be a 'nice-to-have', to something that stakeholders now expect from companies. With this external focus comes the risks associated with inaccurate and incomplete reporting. Ensuring that the verification, both internally by the company and externally by a third party, of emissions data is robust and accurate is the best method to mitigate against these risks. 65% of this year's signatories receive external verification of their emissions data, compared to 53% last year.


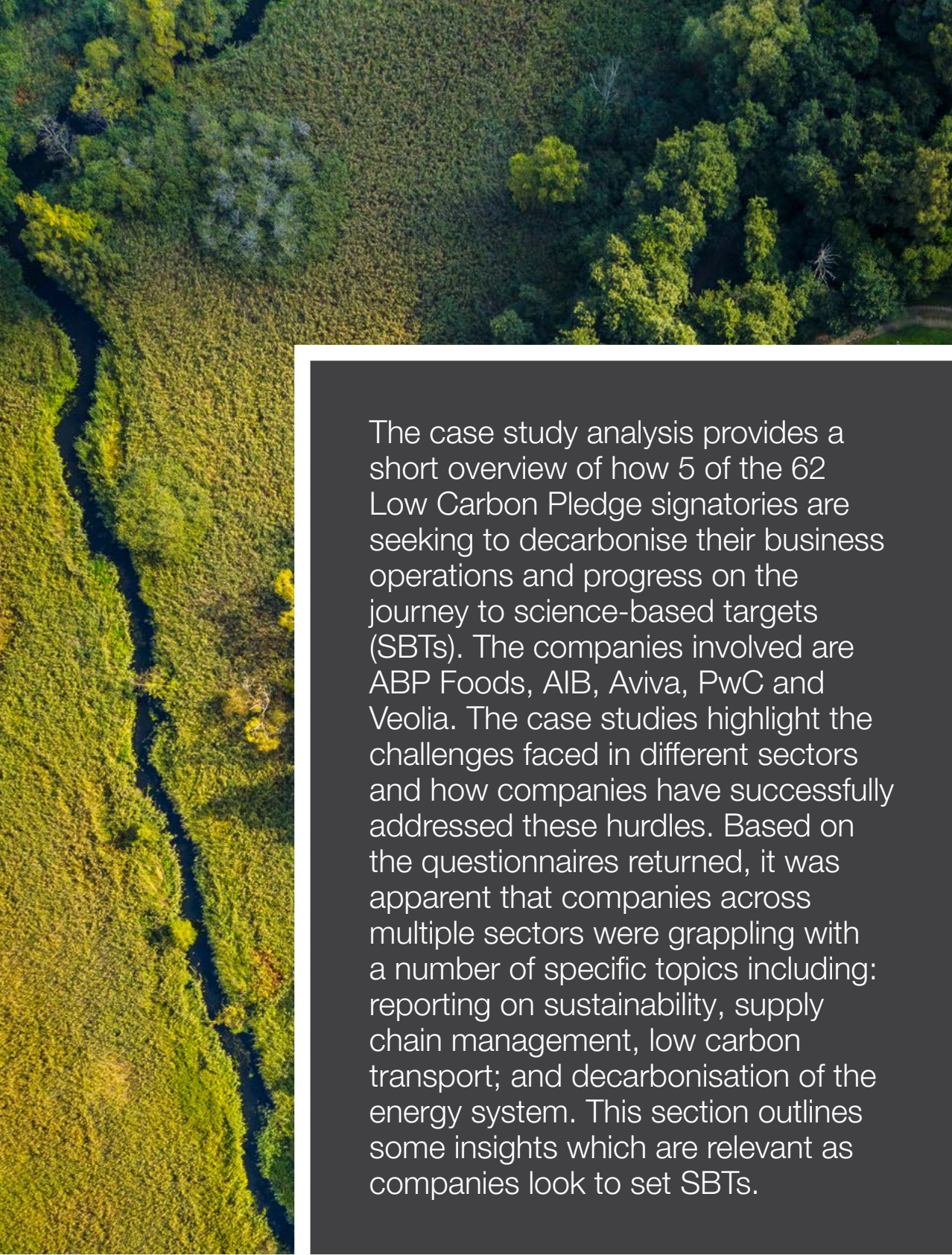
of signatories have their non-financial data verified by third parties, compared to 53% last year



CDP is the most popular reporting framework among signatories, with 57% of signatories submitting data. Other commonly used reporting frameworks are the Global Reporting Initiative (GRI), Task Force on Climate-related Financial Disclosures (TCFD) and Sustainability Accounting Standards Board (SASB). A small number of signatories indicated they report to the International Integrated Reporting Framework and Carbon Trust. Many of the respondents said that impactfulness was a key reason for reporting against certain frameworks, while transparency and credibility were also important. Reporting on sustainability is further discussed in section 5.6 of this report.

Figure 16: Non-financial reporting frameworks among signatories





The case study analysis provides a short overview of how 5 of the 62 Low Carbon Pledge signatories are seeking to decarbonise their business operations and progress on the journey to science-based targets (SBTs). The companies involved are ABP Foods, AIB, Aviva, PwC and Veolia. The case studies highlight the challenges faced in different sectors and how companies have successfully addressed these hurdles. Based on the questionnaires returned, it was apparent that companies across multiple sectors were grappling with a number of specific topics including: reporting on sustainability, supply chain management, low carbon transport; and decarbonisation of the energy system. This section outlines some insights which are relevant as companies look to set SBTs.

5

Case Study

Analysis

5.1 ABP Foods



The agribusiness/food & drink sector has a difficult challenge ahead of them. It has a complex supply chain, with many stakeholders. The following case study focuses on the importance of stakeholder engagement for ABP Foods on the journey to their science-based targets (SBTs) set and beyond.

ABP Food Group is one of Europe's leading agribusiness companies employing more than 11,000 people in nine countries. ABP is a fully integrated agribusiness. As a very large player in the meat production sector, ABP Foods has had a significant focus on sustainability for many years. ABP Foods set group sustainability targets back in 2008. Like many others, these initial targets were internally focussed. These targets drove change across the whole business and thus sustainability became a central narrative for the company. Using efficiency and cost (savings) as a lever, ABP very quickly engaged all site general managers and operations teams in the process and thus managed to scale improvements across sites. It is important to note

that financial benefits often come with environmental benefits making the attainment of these initial targets relatively straight-forward across the group. However due to their scale, and prominent position within the supply chain, ABP Foods wanted to increase their sustainability ambition and they decided to set SBTs. The intention was to bring more rigour and transparency to the definition and execution of their decarbonisation approach. However, SBTs were quite new at this time and the level of knowledge or expertise within the sector was relatively low. ABP Foods were determined to take a leadership role within the sector and get ahead of the inevitable consumer and regulatory focus on carbon reduction. They started this journey by engaging external parties, such as Carbon Trust, to help them navigate through the science-based target (SBT) process. Many major retailer partners followed in setting SBTs and in 2019, ABP Foods had their scope 1, 2 & 3 SBTs formally approved. When determining the preferred pathway, it was important

to consider technical feasibility and maturity of industry standards, which ultimately defined the level of ambition. A 2°C pathway was chosen for scope 3 over 1.5°C due to the complexity of where the scope 3 emissions in this sector are produced, and the technological and societal challenges associated with changing farm practices. This is consistent with Irish and European pathways where agriculture pathways typically run beyond 2050. An investigation was conducted into what would be required to move closer to the 1.5°C target. They found that there were two challenges with the Science Based Targets initiative (SBTi) methodology for this sector which made this pathway unattainable: (1) it does not account for sequestration and (2) it does not accept biogenic methane as being a short-lived greenhouse gas. If either of these methodological rules change, ABP Foods may revisit their ambition.

Circular approach

While ABP Foods main business division is beef, it has three other divisions which help lay the base for a circular approach: pet foods, proteins and renewables. This unique structure ensures that there is no waste from the processing of meat, with all by-products fully utilised by the supporting divisions. This is called 100% by-product recovery. The so-called “waste” material is converted into biofuels and other products of value. Tallow and “waste” oils are converted into biodiesel by the renewables division, while waste meat products are used in the pet food division.

Scope 3 requires a different approach: Engaging stakeholders on the journey to science-based targets

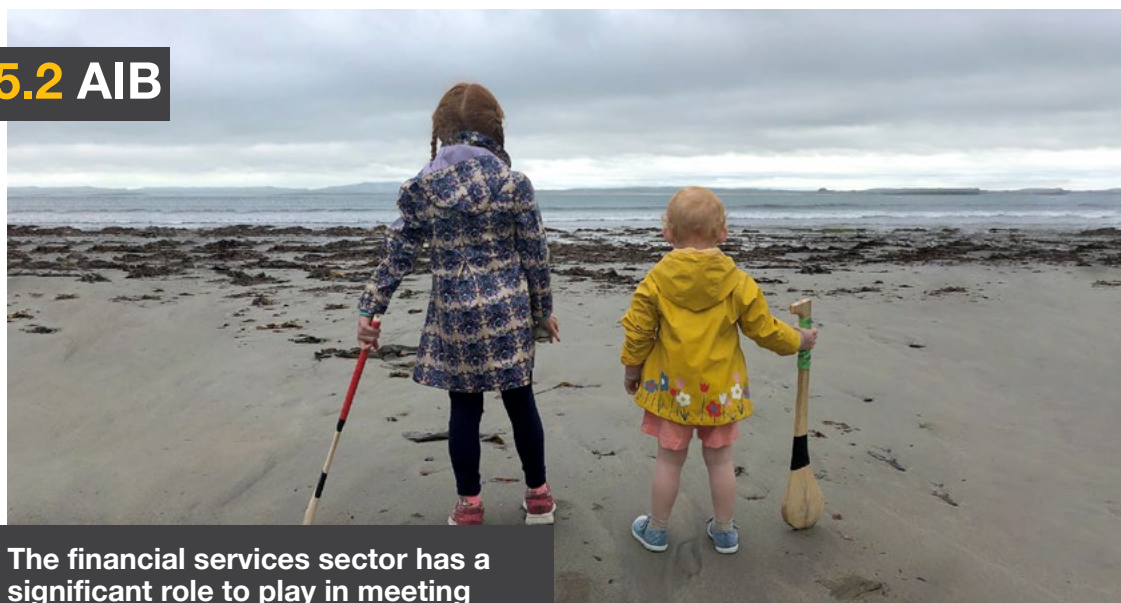
Stakeholder buy-in for scope 1 and 2 was relatively straightforward as it was an extension of existing internal business practices and the operating model. The systems were in place, support was received from the executive board, and they all went on the journey from the exploration phase to the final application. A comprehensive, externally focussed, data gathering exercise with external parties was conducted. The initial assessment revealed that scope 1 and 2 emissions represented only 2% of the full carbon footprint. The majority of the scope 3 emissions related to purchased goods and services (cattle, sheep, meat products). In order to tackle these emissions, an entirely new set of external stakeholders had to be engaged. The agriculture team was involved from the start. It also meant more engagement with a wider array of authorities/industry bodies (e.g. Teagasc, ICBF, department officials). Organisational changes were also required within the company to send the right message about the importance of this topic to ABP Foods, including bolstering agricultural resources, with specific

focus on sustainability. They appointed a Group Sustainability Director, who also has responsibilities across compliance, food safety and agricultural R&D / innovation. This sends the signal that sustainability is core to the business and not simply a CSR type activity.

A longer term planning horizon is critical to net-zero strategy definition. It is important to look forward and scenario plan based on existing, but more importantly, projected challenges such as emerging consumer trends. ABP Foods is now seeing the benefits of the early adoption of sustainability targets and the resulting change in farm practices. An example of this is genetic, feed and processing changes which have resulted in much more efficient animals which are yielding better financial results for the farmer and lower carbon emissions per kg of meat produced. In order to continue on this journey, they intend to continue to prioritise R&D, applied through demonstration farms and a collaborative approach of engagement with external expertise, such as universities and key national bodies and institutions (e.g. ICBF and Teagasc). Independent industry authorities are vital to help communicate, articulate, enable, support and fund activities across the whole industry.

For companies in this sector, it is important to consider the pace of change set by policy makers. Setting an appropriate path for Ireland will require a collective effort by all stakeholders across the livestock sector, meat processing industry, policy makers, national research institutions, etc. ABP is highly active in playing a leading role in developing and delivering against this requirement.

5.2 AIB



The financial services sector has a significant role to play in meeting global and national climate and wider sustainability targets. As the majority of the emissions in this sector are located in their investment portfolios, companies will need to look at how they can decarbonise these portfolios and service offerings. AIB is one of the largest banks in Ireland and here it shares its journey to setting ambitious climate targets aligned to science-based targets (SBTs) and how it plans to deliver on its wider sustainability ambitions.

Last year, AIB became the first Irish bank to commit to becoming carbon neutral in its own operations by 2030. That “net-zero” commitment was significant, and the bank is making good progress to achieve this target. However, in order to maximise the impact it can have on wider societal decarbonisation, financial institutions must look beyond their own operations. The greatest impact AIB can have on the global carbon footprint is by supporting all customer groups in their transition to a low carbon economy. To do this, AIB has developed a range of green finance-related products and propositions, including green mortgages, green consumer loans, an electric vehicle proposition, and sustainability-linked loans. AIB also has a dedicated team focussed on financing renewable energy and other infrastructure to support the transition to a net-zero economy. In addition, AIB is greening its funding model and last year became the first Irish bank to issue a green bond. In May, the bank raised a further €750 million when it issued its second green bond bringing to €1.75 billion raised from green bonds in less than a year. A main challenge across the industry is to define what is considered “green” and “transition” lending within a bank’s lending portfolio and AIB is continuing to develop appropriate frameworks and standards to overcome this challenge.

Having already established its scope 1 and 2 baseline, AIB has also completed an initial sector level emissions assessment of its scope 3 loan book emissions. This is a critical first step in determining the scale of the challenge on a sector by sector basis and forms the baseline dataset. AIB’s ambition is that 70% of its new lending will be “green” or “transition” by 2030 and that the whole loan book will achieve net-zero by 2040 (with the exception of agriculture which will follow the government’s trajectory of 2050).

AIB’s key piece of advice is that a clear tone from the top is critically important. Tackling climate change is not easy. There will be many hurdles and challenges on the journey to net-zero and so it is vital that everybody across the whole organisation understands the importance and the urgency of this agenda and how it aligns with the corporate strategy. Another key message is the importance of accelerating the capture and reporting of related emissions data and integrating this into lending and management information systems. AIB ensures that its sector plans are developed over the short (3 year) and longer term (10 year) horizons to ensure they are not too narrow when considering future policy and regulations.

The trajectory from baseline to targets and tracking of progress allows the lending teams to plan and customise specific propositions to drive the business on the appropriate low carbon path. Critical to this is setting ambitious, but also commercially realistic targets, in the short, medium and long-term.

As the Science Based Targets initiative (SBTi) guidance for Financial Institutions (FIs) is quite new and still undergoing development, FIs face a number of challenges. It can be difficult to have the required emissions data at an individual property, counterparty and customer level in order to set accurate targets in which the organisation can have confidence. It has been challenging to translate the climate science and

technical SBTi guidance into language and concepts that the business, and ultimately the customer, can practically engage with. The specific SBT assessment tool must be relevant for the specific circumstances (both in terms of national/regional basis and with respect to the sectoral coverage within the FI) and loan book of each bank. It is all about finding the right balance between targets that are stretching and ambitious for the lending institution but that are also viable in terms of bringing customers on that journey to a decarbonisation pathway that is consistent with the Paris Agreement and our national targets.

The role of the financial sector in meeting global and national sustainability targets

The financial services sector plays a central role in the green transition which is why AIB is so invested in the issue of climate change. Partnerships are critical to build a “coalition” of the willing. For residential customers this partnership is based on the availability of green products that align with the most material consumer buying decisions which are typically house

or car purchases. AIB engages with its business customers to understand the challenges they face in their particular sectors (e.g. via industry groups, meetings, round tables and other events). The bank also regularly reviews the external environment and engages with key stakeholders to ensure they are aware of the latest policy and regulatory developments in the sector. AIB believes it is also important to support the communities in which it operates. For example, AIB partners with FoodCloud to help match surplus food with charities and community groups that need it most. AIB believes that education and awareness is critically important in reaching climate targets and central to its role in this space is its annual sustainability conference which is attended by thousands of stakeholders from all key public and private sector groups. AIB’s credentials as a leader in sustainability are also recognised by key Environmental Social and Governance (ESG) ratings agencies and the Carbon Disclosure Project (CDP) where AIB has achieved leadership rating for the last five years - the only bank in Ireland and the UK to feature on the Global A list for 2020.

5.3 Aviva

Financial institutions are key to unlocking the system-wide change needed to lower global emissions and limit global warming to 1.5°C above pre-industrial temperatures. As providers of the capital, they have a unique influence over other actors and can play a significant role in greening our economies, the communities that we live in and our day-to-day lives. Aviva, a global insurance provider, shares its story about its journey to setting ambitious climate targets (aligned to science-based targets (SBTs) criteria) and how it plans to drive those ambitions to achieve a greener future for us all.



Aviva has a strong background in terms of sustainability, which is exemplified by the company’s commitment to carbon neutrality in its operations since 2006. Aviva has further committed to being net-zero in its supply chain and operations by 2030 and in all its business activities by 2040. The company has also made a formal commitment to set SBTs and is in the process of defining them. The rationale behind the commitment to SBTs is that Aviva views short-term milestones as an important mechanism to build towards achieving its longer term sustainability

and net-zero objectives. Aviva has found that setting SBTs has been more challenging for certain business activities and that a variety of approaches are required. Some areas of the methodology are inherently easier to follow than others. Aviva finds its own scope 1 and 2 emissions for its operations are relatively easy to monitor, while monitoring scope 3 emissions or assessing the impacts of its products, services and investments often presents the greatest challenge.

Similar to other organisations that have committed to setting SBTs, data accessibility can be a challenge for Aviva and pragmatic approaches to filling data gaps are required. The company has also faced challenges with the interpretation of recently drafted SBTi methodologies that pertain to financial institutions. Early, and proactive engagement with the relevant standards authorities was key to working through the various issues that inevitably arise. Waiting for perfect clarity isn't always possible and Aviva has found that, in many cases, it is necessary to define your path guided by your sustainability objectives in parallel with the finalisation of the global standards. While net-zero and SBTs are critical, it is also important for management to maintain a focus on your other sustainability objectives including compliance with the significant volume of newly developed ESG regulations. Putting adequate effort into planning for the associated IT systems and process can at least minimise the total cost of delivery.

Like many international organisations Aviva has set targets at a Group level and then allows each geography to define specific pathways to achieve the agreed metrics which align with the overarching net-zero target. Ireland is a core market in Aviva's operations. Aviva believes that companies that are further along the sustainability maturity curve have a responsibility to grow awareness amongst brokers, consumers and companies that they engage with. At a local level, sustainability initiatives encompass both push and pull elements. The company's customers have differing levels of knowledge and awareness when it comes to sustainable products and solutions. Aviva aims to bring those without comprehensive knowledge on an educational journey and help them to make more informed product selection decisions with the aid of their financial and insurance broker and ultimately reduce their own carbon footprints.

A company-wide approach to sustainability

Aviva's objective is to integrate sustainability frameworks and plans into the strategies of life and general insurance businesses in Ireland. Aviva believes that sustainability must be embedded into every relevant aspect of its businesses if it wants to be a true climate leader in Ireland. Climate action is not just a short-term expedient or means to gaining commercial advantage for Aviva, rather it is the appropriate response to an existential crisis. In this regard, Aviva is employing a number of initiatives across its businesses to foster the company's sustainability approach and to help it to achieve its climate and sustainability goals. In addition to a focus on insuring against adverse events, Aviva is focussing on risk mitigation. Runaway climate change would undermine many industries that are essential to a functioning society as well as exposing many individual companies to substantial financial losses. In order to help drive out the right responses Aviva is creating a range of climate-orientated products and services which are available now in its life business and will be available from 2022 in its general insurance business.

Even in a world of virtual working, Aviva recognises the importance of engaging and educating colleagues throughout the business in its approach to sustainability. The company has launched or is planning to launch a number of sustainability initiatives for employees, such as climate training, a green committee, climate champions and regular communications updates internally. Aviva has been adopting a top-down & bottom-up approach when it comes to involving staff at all levels in the company's sustainability initiatives. In addition, sustainability-based goals are now embedded into metrics such as Aviva's business plans and risk framework. Aviva has also included carbon intensity objectives and action to reduce carbon in its long-term plans and aims to be the one of first insurers to include detailed performance against climate and sustainability goals in its annual review. This holistic approach to sustainability will be further expanded in the coming years to ensure that climate is embedded into all aspects of Aviva's business.

5.4 PwC

Professional services firms can play a key role in the fight against climate change due to their global reach and potential to influence businesses in all sectors. PwC recognises this responsibility and has made significant progress towards a sustainable future for its clients and the societies within which it operates.

PwC has been working on sustainability for many years with a focus on how their direct and indirect actions can help solve some of the most important challenges of our time. The initial approach allowed each territory firm to set their own sustainability targets. As an example of this approach, PwC Ireland has made good progress in reducing its carbon footprint and by 2018 had halved their scope 1 and 2 emissions. While this approach was bearing fruit it was felt that more could be done and that by taking stronger action at a global level PwC could have a greater impact. The global firm made commitments in October 2020 to reduce total carbon emissions (including scope 3) by 50% by 2030 while also reaching net-zero by this point through the application of appropriate carbon offsets. The firm also committed to signing up to Science Based Target initiative (SBTi). At a global level, the firm outlined the required reporting approach and set guidance on possible approaches to achieving net-zero. Each territory must now submit a detailed plan, with supporting data, which shows how the targets will be achieved. This approach allows different territories to chart different pathways which take account of local specifics such as availability of renewable electricity in that area.

PwC Ireland

The first step involved measuring the full carbon footprint and defining the required yearly reductions per category out to 2030. This trajectory is more challenging as the business has an underlying growth

strategy which makes the carbon targets even more challenging. Scope 1 and 2 reductions are driven by procurement of renewable electricity and gas.

The evolution of business travel

As a global professional services firm, business travel is the most significant contributor to the firm's carbon footprint. It is also the most challenging to address. In order to track emissions related to travel within Ireland, PwC found that data collections had to be enhanced to accurately capture and report on the associated emissions. While road and rail related emissions are material, a range of initiatives linked to electric vehicle use plus greater use of digital tools to enable remote working are anticipated to significantly reduce the related carbon footprint. The more significant element of business travel emissions relates to air travel with intercontinental business travel being the most challenging subset.

PwC's business air travel can be broken down across three key areas: client meetings, PwC network events, and specialist staff training. The COVID-19 pandemic has forced businesses to totally reimagine the way they operate and a range of digital collaboration tools have been deployed within PwC which allow for virtual teams to work productively without ever meeting face-to-face. However PwC does anticipate that face to face meetings will still be required, but these will be much less frequent and when they do take place more thought will be put into maximising their impact. As an example, a physical meeting which used to happen every 6 weeks with a specific client in California is now replaced with shorter weekly catch up video calls to track project progress. Physical meetings now take place twice a year with a number of sessions organised over consecutive days which focus on longer term planning.

PwC is looking to focus on the social, collaborative and networking aspects of in person meetings. This philosophy of maximising digital technologies while 'getting more from less' when flights and physical meetings are required are anticipated to allow PwC to reduce emissions associated with business travel by 50% by 2030 while also managing to grow their business. PwC also noted an interesting perspective on how the increasing focus on sustainability is having a 'virtuous circle' effect. As PwC looks to reduce its business travel emissions it has found that many clients are similarly looking to achieve their own net-zero commitments. The clients on this path are therefore also incentivised to make sure that their suppliers reduce the carbon footprint associated with the provision of services. This 'push and pull' creates even greater pressure to reduce emissions.

PwC has also committed to being carbon neutral by 1st July 2021, which will require availing of appropriate carbon offsets. PwC notes that this is in addition to, and not in place of, SBTi aligned net-zero trajectories. These offsets are seen as appropriate

interim measures where technical solutions to enable net-zero in particular sectors are not currently available. An example of this is air travel. While short hop electric flights and carbon neutral synthetic fuel powered long haul flights are anticipated they are many years away from commercial deployment. PwC has employed rigorous assessment methodologies to ensure that any selected offset is truly additional and furthermore aligns with PwC's specific sustainability goals. It points out that 'not all offsets are equal' and careful attention must be paid to both the selection, and the ongoing application of the offset strategy.

PwC has a stated purpose to 'build trust in society and solve important problems' and they believe that climate change represents the pre-eminent challenge of our day. Having charted a clear path to net-zero, PwC is working closely with its clients to help them on their own net-zero journeys through the provision of a range of services including strategy, business transformation, non financial reporting and assurance.

5.5 Veolia



Developing a circular approach to your business will be key in driving your transition to decarbonising your operations across your supply chain. Veolia are leaders in the circular revolution and can show the impact that this has had to date and what to expect going forward. For all companies, across all sectors, business-as-usual is not enough to achieve the ambitious climate targets that have been set. Transformational change will be required in how we operate, and a circular approach will be key towards this transformation.

Veolia's stated purpose, which is centred around "contributing to human progress through ecological transformation, via the alignment of the UN Sustainable Development Goals (SDGs), in order to achieve a better and more sustainable future for all", is the driving force behind their decision to set science-based targets (SBTs). Veolia has a significant focus on circularity, which they believe is key in driving companies' transition to decarbonising their operations across their supply chain. Veolia formally set SBTs at a global level in 2019 and committed to reduce absolute scope 1 and 2 emissions by 22% by 2034 from a 2018 base year. As a global



organisation this decision was made at a group level. In order to ascertain what would be appropriate targets a large amount of modelling was completed at sample sites. Scenario planning which took account of regional specifics was a key element of setting appropriate targets. Veolia Ireland will set its own pathway to achieving the agreed regional targets and will continuously keep the Group appraised via comprehensive performance and KPI reporting, which allows for an aggregate global perspective on progress.

When considering the challenges that companies should take into account when looking at SBTs, Veolia highlights the importance of ensuring a consistent approach to interpretation of boundaries between different scope types and companies within a value chain. As Veolia operates many facilities on behalf of its clients, the organisation sees first-hand the criticality of parties holding a shared clarity on ownership of reporting each class of emissions. It can be challenging to determine where to draw the line of who accounts and reports for which emissions, and ensuring this is done consistently across geographies and international organisation structures. For its own part, Veolia is working to validate where those boundaries lie with its clients and to ensure alignment across the two sides of reporting. Ensuring consistent interpretation of the SBTs methodologies is another key factor highlighted by Veolia, both internally amongst its own teams and externally across multiple clients and sectors. To address this, Veolia puts emphasis on strong collaboration through

the value chain, as well as on training and education programmes to maximise consistent application. Robust reporting also assists in the identification of potential areas of misalignment of interpretation.

Veolia has found that there is very good alignment between focussing on circular solutions, rather than the traditional 'linear' approach, and reducing emissions in line with SBTs. The following are a number of examples which illustrate the power circulatory.

Thermal hydrolysis

One of the tenets of circularity for Veolia is minimising waste; reusing and using things more efficiently. Through a co-development with Irish Water, they created a financial and environmental case for a non-traditional approach to sludge handling and processing. The original approach involved burning natural gas for sludge drying which had a material carbon footprint. Working in collaboration with their client, Veolia proposed to replace the sludge dryer with an advanced anaerobic digestion process using thermal hydrolysis to precondition the sludge. The sludge is now processed in the thermal hydrolysis plant before the anaerobic digestion and converted to biogas. The drying site has been decommissioned and is no longer in use. Thanks to the new process, natural gas consumption reduced from 35 GWh per annum to zero and saved 8,500 tonnes CO₂ per annum. In addition to the environmental benefits of the project, the sludge produced from the thermal

hydrolysis process has a high phosphorus content that is readily bioavailable and is much easier to handle, transport and spread than traditional wastewater sludges and therefore can be used as a sustainable nutrient-rich fertiliser and soil conditioner in the agriculture sector. This engagement with Irish Water created a greener and more cost-effective solution to an underperforming process delivering benefits to both the asset owner and operator. While the positive financial business case was important, so too were the additional sustainability benefits.

Carbon energy funds

A key component of Veolia's business is providing services and products in an energy efficient manner. Veolia was awarded the first Carbon Energy Fund Ireland (CEFI) contract for The Mater Misericordiae University Hospital and a second for St. James' Hospital. These solutions can provide attractive funding options in combination with longer time horizon planning, which minimises the lifetime carbon footprint by considering the operational footprint from the outset. The contracts are typically 15 or 20 years, with an ongoing partnership being developed. Both hospital projects will achieve a 30% reduction in their scope 1 and 2 emissions through their heat and electricity savings. The contracts are a tri-party agreement between Veolia (the contractor), the hospital (the client), and the capital provider (specialist energy-efficiency funds). The project includes the replacement of inefficient boilers, lighting, heating system pumps and air conditioning units. The investment also includes building fabric upgrades to reduce energy losses and new assets for efficient onsite power generation through combined heat and power (CHP) solutions. This innovative investment model is underpinned with continuous monitoring, KPIs on all the installed assets and guaranteed financial savings.

Hazardous liquid waste

Some industries produce a large volume of hazardous liquid waste which can be both complex to dispose of and responsible for significant carbon emissions through their production and distribution. In Ireland this is a significant issue for the pharmaceutical and hi-tech manufacturing industries. Veolia, working with a large technology manufacturer and many of its industrial clients, has designed and implemented a circular solution which results in yearly recovery of 13,500 tonnes of solvent waste. These merchant recovery solutions convert one class of waste solvent back to its original state to be reused within industry and another class of solvent (11,000 tonnes) to a secondary liquid fuel which is used as a replacement for fossil fuels in industrial production.

Once again early engagement is key to optimising the level of recovery possible. This can involve engaging in segregation strategies for their hazardous liquid waste, or reviewing the material chemistry and value at the process design stage. Historically, companies engaged Veolia's services after their processes had already been defined, which restricts the level of recycling possible. A focus on upfront design largely driven by engagement with clients on this topic, combined with a greater client emphasis on measurement and reporting, has seen Veolia getting involved much earlier in the design process delivering much better and more circular outcomes.

Reporting on sustainability



**PwC reporting lead:
Fiona Gaskin**

To succeed and be sustainable in the long-term, organisations need to understand and manage the impact of their footprint on society and the environment as well as demonstrate how they create value for society and their shareholders. They also need to understand and assess the impact of the environment on their organisation. This includes

incorporating sustainability considerations into the standard risk assessment process and considering related threats and opportunities, for example, those related to climate change. Organisations are coming under increasing pressure to comply with expectations from their stakeholders, as well as the push from regulators and authorities to focus on sustainability issues with regard to Environmental, Social and Governance (ESG) commitments.

Transparent, accurate and complete reporting on the management of sustainability risks and opportunities is the most powerful means for organisations to 'tell their story' and to gain the support of stakeholders; investors, regulators, lenders, customers, rating agencies and others.

Currently there are many voluntary sustainability reporting frameworks in the world that are being used by organisations to report on their sustainability commitments, for example the GRI, TCFD, SASB and IIRC. Recently there has been a great deal of dialogue around the need for comparable, consistent, mandatory and independently assured sustainability information to enable stakeholders to make informed decisions on organisations and assess their performance in relation to others. Due to this, legal frameworks and rules around corporate reporting of sustainability information are rapidly evolving and it is critical for companies to pay attention to these changes.

Presently, in the European Union, there are the Non-Financial Reporting requirements (NFRD) that are mandatory for large public-interest companies with more than 500 employees. These companies must report on their performance and material issues relating to environmental, social and employee matters, respect for human rights, anti-corruption and bribery matters.

As part of the European Union's Green Deal, the EU has set the ambitious goal of achieving net-zero greenhouse gas emissions (or 'climate-neutral') by 2050. The recently published Taxonomy Regulation, adopted by the European Parliament in June 2020, sets out the world's first 'green list' of sustainable business activities. The taxonomy is a classification system for sustainable business practices and will provide investors and other stakeholders with a universal set of sustainability metrics. Companies who currently report under NFRD will need to report certain metrics on their 2021 numbers using the taxonomy. The intention is to enable direct comparisons between companies, and also inform investment decisions, on the social and environmental impact of the business.

The proposed EU Corporate Sustainability Reporting Directive (CSRD), which was issued in April 2021, is set to amend the existing reporting requirements of the NFRD and strengthen the nature and extent of sustainability reporting in the EU. The proposal extends the scope to all large companies and all companies listed on regulated markets (except listed micro-enterprises) as well as requiring the audit (assurance) of reported information. It introduces more detailed reporting requirements, and a requirement to report according to mandatory EU sustainability reporting standards. It also requires companies to digitally 'tag' the reported information, so it is machine readable and feeds into the European single access point envisaged in the capital markets union action plan.

For UK premium listed commercial companies, the UK Financial Conduct Authority has published a rule and guidance promoting better climate-related financial disclosures with alignment to the Task Force on Climate-related Financial Disclosures (TCFD). The FCA has indicated the scope is likely to expand beyond premium listed companies.

The above examples show a clear direction of travel in terms of the extension of sustainability reporting requirements. It is imperative that companies remain attentive and ensure that they are reporting in line with their stakeholder requirements, which includes focussing on material threats and opportunities, as well as complying with relevant reporting rules and regulations. Given the focus on non financial information, the accuracy and credibility of this reporting should be front of mind. Appropriate assurance of this reporting, commensurate with the criticality of this data to stakeholders, should be considered.

Supply chain management



PwC supply chain lead: Mark McKeever

The supply chain management discourse is changing. Whilst it is still focussed on ensuring cost effective and uninterrupted supply to customers, the way in which businesses go about achieving these objectives is coming under increased scrutiny.

Consumers, investors and governments are

challenging businesses to address the environmental and social implications of their operations, and for many businesses the physical supply chain is where they have the greatest impact. Carbon emissions and unfair labour practices, for example, are just two areas in which business operations can have a negative impact on our planet and on our communities.

Reducing or eradicating the negative externalities associated with supply chain operations must start at the top - at a strategic or corporate level - and it must address not only internal operations but also the operations of suppliers and even suppliers' suppliers. For businesses large and small, this requires a principled and collaborative approach that sets out

what a business sees as its role in, for example, the fight against climate change, and what it expects of its partners.

Principles, however, are not enough to instigate change. Converting them into action requires a detailed understanding of how a business directly or indirectly contracts labour, sources material inputs and transports its products. With a clear view of the breadth and depth of its supply chain, a business can then build a roadmap for change - creating new partnerships, raising internal and supplier capabilities, working with customers to redesign goods and services, creating sustainability-related incentives in procurement and harnessing the power of technology to increase operational efficiency and ensure transparency across the supply chain.

For many businesses, addressing the challenge of sustainability in the supply chain will ensure their longevity. It will reduce the risk associated with business operating models that directly or indirectly rely on, for example, fossil fuels and it will open the door to new consumers and investors that are equally principled in their purchasing and investment decisions. Sustainability in the supply chain is, therefore, an opportunity as much as it is a necessity.

Transport



PwC sector lead: Yvonne Thompson

Road transport

Transport is the largest energy consuming sector in Ireland, requiring 36% of the country's primary energy demand, two thirds of which are attributed to road transport. Electric vehicles (EVs) powered by renewable energy are a logical solution for decarbonisation of road transport, but face significant challenges.

Despite EV range and cost of ownership (with grants) matching internal combustion engine (ICE) vehicles, consumer (and business buyer) attitudes and awareness remain low. In addition, Ireland has relatively few charging stations, making public charging a significant challenge for consumers. The availability of these public chargers has been shown to be the best predictor of urban EV uptake in the EU. However, private investment into charging infrastructure requires an abundance of EVs, but EVs require an abundance of

charging stations. A key focus, therefore, is the need for both publicly funded and business/workplace charging stations in order to facilitate the deployment of EVs in line with the Climate Action Plan. While electrification of light duty vehicles is anticipated other solutions may be required for Heavy Goods Vehicles (HGVs). The solutions in the near term will probably be linked to CNG and biogas/biofuels with hydrogen or synthetic fuels forming the longer term solution. The challenge for businesses is their reliance on supporting policy and infrastructure to enable these solutions to be delivered at a pace that is in line with companies', often more ambitious, decarbonisation trajectories.

Aviation & shipping

Reducing the carbon emissions associated with shipping presents very similar challenges to those faced by HGVs with a range of technical options available, all at different stages or market maturity. Increased low carbon fuel production costs combined with changes to how they are taxed will increase the cost of transporting goods by sea. Policy makers are keen to avoid creating situations in which the aviation and shipping solutions

implemented at a country or regional level in effect penalise companies operating within their borders by creating policy arbitrage scenarios with jurisdictions with less stringent environmental policies.

The aviation sector, like many industries across the board, are committed to reducing carbon emissions. Although aviation only accounts for 2.4% of total emissions, there is a strong focus on the industry's impact, now and into the future, by airlines, manufacturers and governments. Air travel is expected to increase, while the carbon footprint of other sectors decreases, meaning that aviation is likely to account for a greater proportion of global emissions, potentially closer to 10% in the coming years. Reducing carbon emissions has been a focus of the industry for many years. For example, the fuel-burn efficiency of the new

narrow body aircraft is 70% better than the equivalent first-generation jet airliners operating 50 years ago, and twice as fuel-efficient as their counterparts 25 years ago. Continued improvement in traditional technologies is not enough to deliver the change required to avoid aviation becoming a larger contributor, even with the expected impact of post COVID-19 air travel behaviours. It will require investment in electric and hydrogen technologies and alternative fuel sources.

Mass adoption of net-zero solutions across shipping and aviation will be incentivised by policy makers however significant progress is not anticipated until 2030 at the earliest. Companies with material exposures to transport related emissions may need to look to carbon offsets in the short to medium term.

Energy system



**PwC sector lead:
Kim McClenaghan**

Ireland's commitment to a long-term (2050) zero-carbon economy, coupled with EU objectives of a climate neutral EU, requires significant abatement policies and activity. Ireland's energy system is dominated by fossil fuel use within four key sectors: industry, transport, home heating and electricity generation. Decarbonising

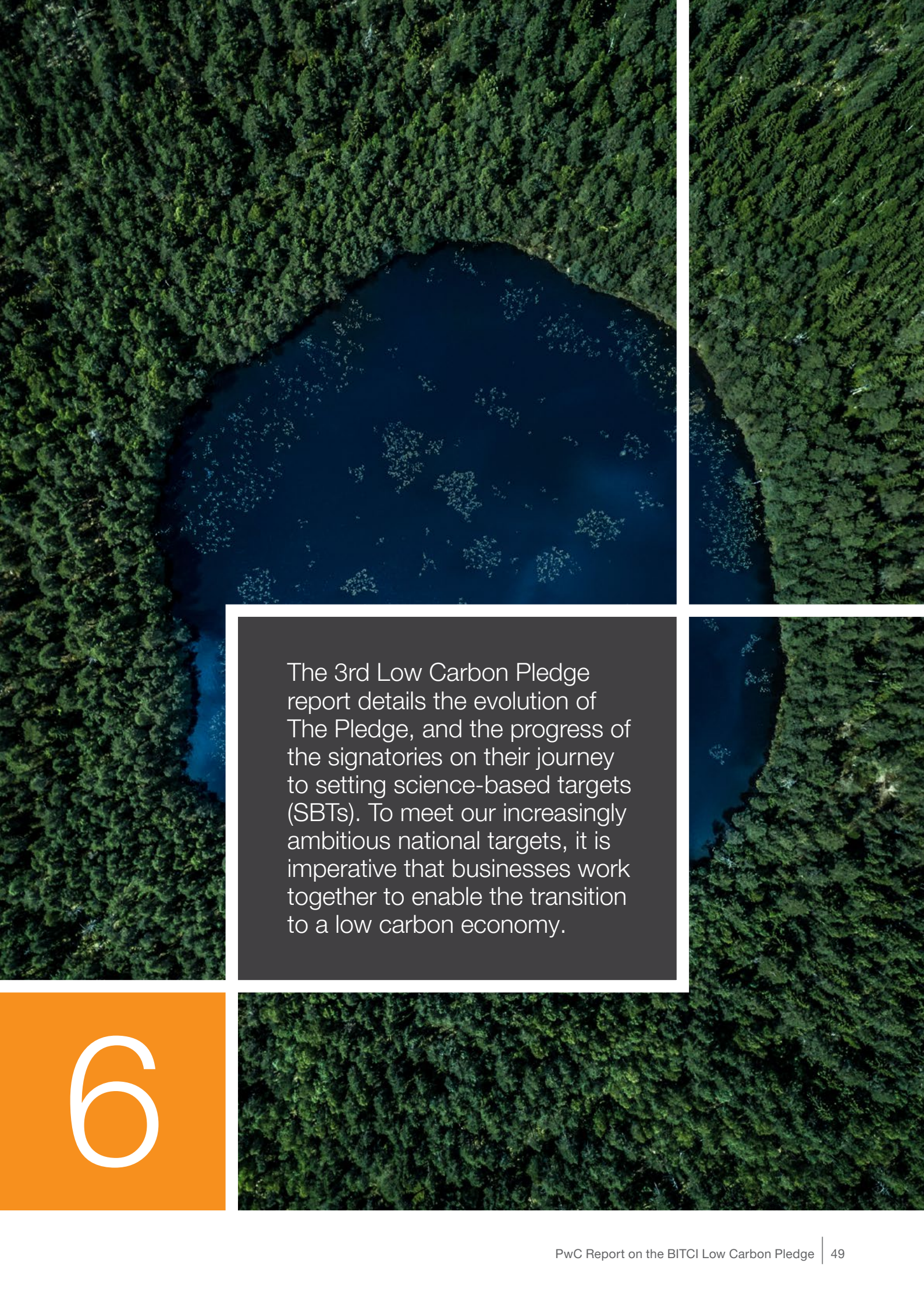
these sectors is essential to meeting this target.

As Ireland transitions towards a zero-carbon future, Ireland's policy makers and principal sectoral actors must ensure the decoupling of future economic growth and emissions growth. This challenge is accentuated by the expected need to deliver increased energy demand relative to today in order to drive future growth. Ireland's energy demand has seen considerable increase post 2015, underpinned by buoyant economic activity and a growing population. While advancements in energy efficiency will continue to deliver benefits, the energy needed to support Ireland's forecast future growth and economic activity is expected to increase from 170 TWh in 2020 to circa 205 TWh in 2050.

Ireland's geographical position, an island on the edge of Europe, requires Ireland to solve a slightly different problem to that facing many of our European peers with a greater obligation to find national solutions to meet electricity demand. This will require significant deployment of wind, solar and storage energy infrastructure. The near-term priority for policy makers is to significantly increase the percentage of renewable electricity produced, up from just over 30% to at least 70% by 2030, while in parallel looking to the electrification of significant portions of the heat and

transport demand. This is essentially a two-dimensional challenge as we are chasing a much bigger percentage of a much bigger number. This is made more difficult as we continue to build out electricity intensive industries. In the case of data centres further development may require greater consideration be given to sharing data processing between facilities in different countries, and looking to meet electricity demand through on site power generation. Where companies are looking to reduce their scope 2 emissions they typically buy indigenous 'green' electricity which is linked to the actual production of renewable electricity. Some companies go further and actually fund new renewable projects which ensures that their offsets are truly additional and not simply displacing a renewable purchase that another buyer would make.

Businesses are significant users of energy in Ireland. In many cases, where companies are looking to decarbonise their heat/transport/process energy demand, electrification may not be an option. Examples include HGV transport, high temperature processes and space heating of legacy buildings not suitable for retrofitting. It is anticipated that a zero-carbon gas solution will be required both for heat and transport applications but also as a fuel for electricity generation to address periods of low wind speed and poor solar irradiation. In essence, the future energy system will see much higher levels of electrification complimented by availability of a 'clean' gas. Policy makers are determining what this 'clean' gas system will look like but the solution will, in all likelihood, rely heavily on biogas and green hydrogen. It is important that companies ensure that they have sufficient clarity on emerging policy, and the deployment of national energy infrastructure, to appropriately feed into their individual plans to reduce scope 1 and 2 emissions. This will enable them to make the right investment decisions which will minimise the costs associated with their net-zero commitments.



The 3rd Low Carbon Pledge report details the evolution of The Pledge, and the progress of the signatories on their journey to setting science-based targets (SBTs). To meet our increasingly ambitious national targets, it is imperative that businesses work together to enable the transition to a low carbon economy.

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Conclusion and Recommendations

The increased ambition in this year's Pledge is laudable as is the increased number of signatories. The business community is clearly taking a leadership role in the transition to a low carbon economy. The Pledge signatories continue to make significant progress in reducing their carbon emissions. The case studies clearly signpost that while each sector faces particular challenges when setting science-based targets (SBTs), innovative approaches exist to surmount these obstacles.

A number of insights and observations have been collated while writing this report.

Recommendations



Establish your true baseline

Before determining how quickly you can move on the pathway to net-zero, accurately assess your full carbon footprint. This can be done by using accepted methodologies to determine your scope 1, 2 and 3 emissions, to understand what are the material factors driving these emissions for each. This will provide you with clarity as to where the challenges lie.



Understand your operating environment

Once you have clarity on your emissions, it is important to consider your regulatory/commercial operating environment. What commitments are your peers making? What do your customers expect? Are regulatory or policy changes anticipated? This will inform how quickly you will need to adapt.



Set ambitious targets

Set an ambitious target. While it will not always be possible to know exactly how you will achieve your net-zero target, a robust review of your operating environment, and detailed examination of your emissions profile will allow you to set 'stretch', but achievable targets. Set both long and short-term targets to provide appropriate milestones for your net-zero journey. It is important to understand the risks and opportunities resulting from these targets. It is important to develop actions to mitigate and adapt to the identified priorities.



Align your corporate strategy to net-zero

Corporate strategies should be reviewed to ensure their full alignment with your net-zero ambition. This will require decoupling the business from carbon intensive assets and activities. Companies will need to target climate-related opportunities, while at the same time ensuring sustainable growth in the short to medium-term. This will require that your net-zero targets are integrated into your strategic planning and risk management frameworks. Care should also be given to enhancing governance frameworks to drive the required change.



Report and verify

Targets should be underpinned by appropriate standards/measurement methodologies, such as SBTs, and attention should be given as to how best to report progress against your net-zero, and wider sustainability objectives. Having selected the appropriate reporting framework, such as Task Force on Climate-related Financial Disclosures (TCFD) or Global Reporting Initiative (GRI), define how you will communicate progress with stakeholders. In order to provide confidence to those outside the organisation, it is important to get external validation of your non-financial data. This will confirm the accuracy and credibility of your reporting through appropriate assurance, commensurate with the criticality of this data to your stakeholders.

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