BUSINESS IN THE COMMUNITY

THE PRINCE'S RESPONSIBLE BUSINESS NETWORK

Smart growth:

Achieving the 2°C economy

April 2017

01 INTRODUCTION

It is hard to believe that ten years have passed since HRH The Prince of Wales launched the Mayday Network, hosted by Business in the Community (BITC), to galvanise collaborative business action to tackle the global challenge of climate change.

The same year that the United Nations concluded climate change was 'unequivocal' in its 4th Assessment Report and the year after Al Gore's film, 'An Inconvenient Truth', set out the challenge in stark detail.

A decade later and the climate change landscape has altered significantly. Leading companies have made substantial progress: measuring and reducing carbon emissions, engaging customers, suppliers and employees, rethinking lifecycles of products and starting to plot a path towards net zero carbon. The end of 2015 saw two significant new developments: the Sustainable Development Goals set climate change as a key challenge for all of us, if we are to enable people around the world to live healthy, productive and prosperous lives; and 195 countries reached the first legally binding global climate agreement at COP21 in Paris, aiming to limit global warming to less than 2°C, with an aspirational goal of 1.5°C.

However, the journey towards a 2°C economy still has a very long way to go, and the journey isn't getting any easier. The last fifteen years have seen an annual reduction in carbon emissions of 1.3% a year globally. To achieve the 2°C target this will need to more than quadruple to 6.5% per year. In addition, the political and legislative landscape has become more complex and uncertain. The world's population continues to grow, increasing the demand for water, energy, food and other resources. Businesses are operating in an increasingly interconnected, digital world and are rightly being held to greater account by customers, investors, employees and communities. Driving innovation that helps to achieve a low carbon economy is almost becoming a license to operate.

This report maps the journey our members have taken over the last ten years; their successes and challenges, and how they have changed the landscape along the way. We highlight where the best businesses are on this journey right now, and identify the key challenges and opportunities for smart growth. Informed by thirty in-depth interviews and key data, we have documented what UK businesses are doing both to address climate change and become net carbon neutral. Thank you to all those who supported the research; a list is appended to this report.

I hope that you find it an interesting and useful read. We would be delighted if you would share your feedback and your own stories with us. Ultimately, we all want the same thing. And to quote HRH The Prince of Wales in the Ladybird Expert Book, 'Climate Change': "The planet won't take care of us if we don't take care of it". Thank you to all the companies that have been leading the way to tackle climate change. Please keep doing so!

Amanda Mackenzie, OBE
Chief Executive Officer
Business in the Community

02

EXECUTIVE SUMMARY

In 2017 businesses are operating in a very different landscape of climate change policy and practice compared to the world of 2007. Then, the UK Government was seen as a driving force in tackling climate change, whereas now businesses feel that they are leading the agenda.

This report is based on research and interviews conducted in early 2017 by Business in the Community and Bean Research to better understand how BITC members have taken that agenda forward through their climate change policies, practices, approaches and adaptation.

It sets out some of the significant progress member businesses have made through reducing emissions, understanding the impact of climate change on their business, measuring the carbon and water footprints of their products, and by engaging leaders, employees, customers and suppliers on that journey.

This focus on environmental issues has helped companies transform the way they construct, produce and design for the future, as well as enabling connections between sustainability departments, leaders, boards and finance teams that seemed impossible ten years ago.

The resulting culture and language shift has brought sustainability into the heart of business operations by providing a vehicle for the future proofing that is critical to long-term success.

Diagram 1 sums up the key steps Business in the Community members report taking over the last ten years:

Diagram 1:

BITC members and climate change action

- Measuring & reporting
- Reduction of direct emissions
- Target setting & reporting
- Engaging the business
- Value chain analysis
- Engaging customers & suppliers
- Mitigation of risks
- Collaboration
- Integration
- Innovation
- Business adaptation
- Future proofing

02

By 2030 the UK needs to have delivered on its commitment to limit global warming to 2°C, something many consider only possible by achieving a net zero carbon economy. The business case for action has moved from efficiency and cost savings towards longer-term risk profiling, adaptation and investment in low carbon technology. It will be companies that see tackling climate change as part of future proofing their business that prosper in this changing world.

We identify eight themes which sustainability experts in business consider key for the next ten years. These are:

ENERGY SECURITY AND RENEWABLES

SCOPE 3 EMISSIONS: WORKING WITH CUSTOMERS AND SUPPLIERS

SCIENCE-BASED TARGETS

AN INNOVATIVE AND DIGITAL FUTURE

FUTURE PROOFING THE BUSINESS

SOCIETAL SUSTAINABILITY

ACCOUNTING FOR CLIMATE CHANGE

COLLABORATIVE ACTION

Underlining these is a sense that, while some aspects of environmental management are becoming more technical (such as measuring scope 3 emissions, setting science-based targets and developing financial carbon measures) in general businesses see ‘the environment’ less as a separate business area and more as a cornerstone of innovation and resilience across the business as they seek to address global trends.

Companies report that the social and environmental aspects of sustainability are becoming more entwined as this happens – from creating positive social change through offsetting and disaster resilience building, to developing skills for a low carbon economy or meeting the changing health needs of an ageing workforce and a world affected by climate change. There has also been a greater interest in combining forces on these issues, as companies see beyond the competitive edge that comes with a proactive approach to climate change, and recognise the value of collaboration. This, combined with reporting and accounting trends and the recent Taskforce on Climate-related Financial Disclosures recommendations, will offer opportunities for companies ready to step up to this whole company approach.

03

THE LAST TEN YEARS...

In 2007, the United Nations Intergovernmental Panel on Climate Change (IPCC) produced the most detailed summary of the evidence around climate change so far (AR4) assessing over 6,000 peer-reviewed scientific studies concerning climate change.

Their conclusion was that evidence of "warming of the climate system is unequivocal", and "most of the observed increase in global average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations."

Against this backdrop, The Prince of Wales's Mayday initiative on Climate Change emphasised the need for businesses action, with 5,500 individual business commitments to action made and over a thousand business leaders attending The Prince of Wales's Mayday Business Summit in 2007. At the time, many reported the need to address poor awareness and understanding of climate change in many businesses and amongst staff, customers, suppliers and the general public.

> We already had a good idea of our emissions having reported them since the mid 1990's using a reporting tool we developed. We saw Mayday as an opportunity to add our contribution to the wider pot, driving it towards a critical mass to encourage others to take action.
>
> **Dr Keith Colquhoun**
> *Climate Change and Sustainability Strategy Manager*
> Thames Water

It is no surprise then that in 2017 many companies consider their most significant progress has been to make environmental sustainability a core part of the business, engaging stakeholders, reducing emissions and demonstrating the business case. For some this has proven to be the catalyst in transforming their business, developing new products and working with others in new ways.

> Journey is a good description. It gave us permission to think in ways that made long term sense and to pilot and experiment. But our 10 year commitment was a stone in the shoe – a constant reminder to stay on the case.
>
> **Richard Ellis**
> *Vice President CSR*
> Walgreen Boots Alliance

The World Economic Forum runs an annual global risk survey and ten years ago, no environmental risks featured in the top five either by impact or likelihood. Now, five of the ten top spots are occupied by environmental issues including extreme weather events, major natural disasters and failure of climate change mitigation and adaptation.

> In 2007, there was a fixation on counting what is done internally. Now there is an external, big picture outlook on what are acknowledged as global problems.
>
> **Ian Bowman**
> *Head of Sustainability UK*
> Siemens plc

So...

In the last decade, what have been the great successes?

Where have businesses seen the greatest progress?

What were the triggers that proved a catalyst for the journey?

Both initial reduction and long term targets for carbon have helped companies build the business case for action, bringing financial savings and better engaging employees, customers and suppliers. Working together to tackle this new issue has also fostered innovation in product cycles and value chains, encouraging experimentation, collaboration and ultimately enabling the whole company approach required.

REDUCING EMISSIONS

Much of the early focus was on understanding business carbon use – measuring, reporting and setting targets. Tackling what now seems the low-hanging fruit of reducing emissions gave businesses a new understanding of their processes and the unique contribution that they could make. This was reflected in Carbon Clear's 2016 report, which shows the number of companies reporting on emissions steadily increasing. All companies we interviewed had significant success in reducing emissions, particularly initially across direct operations

> Implementing our CSR Strategy and cost reduction were key drivers, saving significantly on fuel and lighting costs for example. One of our subsidiaries, Capula, reduced office costs by 30% as a result of a focus on office rationalisation, improved heating and lighting and better controls.
>
> **Mike Moss**
> *Business Improvement Manager*
> Imtech

BT

In 2015/16, BT achieved an 81% reduction in its climate stabilisation intensity (CSI) measure compared to a 1996/97 baseline, achieving the 80% target set for 2020 four years ahead of schedule. Since 2013, BT has helped its customers reduce carbon emissions by 1.6 times the impact of its business, making BT a net positive carbon company. By 2020, BT's goal is to help customers reduce their carbon emissions by at least three times BT's end-to-end impact.

Marks & Spencer

Marks & Spencer launched their first climate change targets as part of Plan A in 2007. The aim was to reduce emissions, procure renewable energy and offset remaining emissions until replacement technologies became available. Marks & Spencer UK and ROI operations became Carbon Neutral in 2012, and extended to worldwide in 2014. Today, M&S remains the world's only major carbon neutral retailer.

Hilton Worldwide

Hilton Worldwide have instigated over 23% carbon reduction across their portfolio of hotels in the last ten years.

Dairy Crest

Dairy Crest has made good progress in reducing greenhouse gas emissions from energy used in manufacturing with relative emissions reducing by more than 30% in the last 5 years. This progress has been achieved through energy demand reduction and by reducing reliance on fossil fuels through the installation of biomass boilers at their Davidstow Creamery. Biomass provides more than 80% of the heat for the Creamery, meets more than one third of companywide energy demand and reduces emissions from fossil fuels equivalent to around 4,000 typical UK homes.

RE-THINKING PRODUCTS & ASSETS

Once businesses had understood their environmental footprint, hitting reduction targets meant re-thinking production techniques; applying circular economy and life-cycle thinking and using assets such as plants, offices and buildings more effectively.

Adnams

Building on their environmental management, in 2006 Adnams conducted an in-depth carbon footprint analysis of every aspect of the brewing process. This process was an eye-opener for the company, discovering that the main source of carbon emission wasn't the beer, but the production of the bottle itself.

They used the findings to create a super-lightweight bottle for their beer; reducing the carbon emitted not just in production, but also through transportation.

By 2015 they had gone on to assess the carbon footprint of all their cask, bottled and canned beer. They then took this environmental footprinting further by assessing their water footprint which is now being used to inform future business planning.

Ricoh

Ricoh, provider of managed document services, production printing and IT services is active in 180 countries. It developed 'GreenLine' which aims to minimise the environmental impact of raw materials input by life-extending existing products.

Copiers and printers returning from the leasing programme are inspected, dismantled, and go through an extensive remanufacturing process before re-entering the market under the GreenLine label with the same warranty scheme that is applied to new devices.

Linklaters

Linklaters are proud of their One Silk Street premises, a 'BREEAM In-Use 'Excellent' rated building where carbon emissions have been reduced by 42% relative to 10 years ago. The firm achieved this through top management support, particularly in the early years when a visionary COO was intent on investing in energy efficiency initiatives.

As a result, £3.5m of investment has since been channelled to lighting, chiller, boiler and air handling unit upgrades as well as technology improvements such as linking the Building Management system to the lighting and cooling systems. As a result, the firm spends £1.2m less per year on energy (at today's prices) relative to 2007.

LINKLATERS SPENDS £1.2M LESS PER YEAR ON ENERGY (AT TODAY'S PRICES) RELATIVE TO 2007.

CHANGING THE CULTURE: PILOTING & EXPERIMENTING

Tackling carbon and climate change has had a surprising impact on organisational culture: connecting teams, engaging employees and senior leaders and encouraging creativity and innovation. Longer term target-setting has been a significant driver of this change; giving companies time to translate the language of carbon from technical jargon to more familiar terminology, and to embrace environmental responsibility more widely.

Interviewees were in no doubt that the transformational challenge of adapting to the impact of a low carbon economy and a changing climate would be impossible without the culture shift achieved in the past ten years.

Here are just some examples of how members have engaged their colleagues, customers and suppliers:

> When I started in 2010, the conversation was convincing the workforce of the importance of the environment. That's now a given.
>
> **Joel Magande**
> *Group Environment Manager*
> Unipart plc

> Amey's approach to sustainability is less hierarchical, it's not all about a top-down policy. It's more creative – people spot the opportunities and work within their spheres of influence. This is a strength. If you've got an idea, and particularly if it's something that will being value to our customers, you can run with it.
>
> **Emily Davies**
> *Head of Social Impact*
> Amey

Land Securities

Land Securities launched Sustainability Matters training for staff to encourage the whole business to get behind their ambitions. This ranged from e-learning (with 95% staff now having participated) to 3 half day programmes for specific functions - such as what sustainability means in marketing, HR, finance and building management.

And they report that having top leadership support has made a big difference, with strong support from the CEO, Robert Noel who chairs the sustainability committee, and Chairman, Dame Alison Carnwath.

Walgreens Boots Alliance

Over ten years ago, Boots (now WBA) set up a fund to which line management could apply if the cost of 'doing the right thing' was more expensive than like for like replacements. Conditions were agreed if funds were needed, so that effective pilots took place. If a case was proven through reduced carbon and associated cost savings too, then that became the new norm for purchasing specifications and the way to run the business. This fund was critical to their success. As individual cases were made, the business began to see that attention to carbon reduced running costs. The investment was net positive. "It was about cultural and behaviour change, not just 'kit' or equipment changes".

> Tesco set carbon reduction targets for 2020 and are on course to meet them. I'm most proud of how these targets have changed behaviour across the business, engaging our property, treasury and store colleagues in carbon reduction. The Executive Board oversees our climate change agenda, including signing off energy efficient investment, which delivers remarkable savings.
>
> **Kene Umeasiegbu**
> *Head of Climate Change and Sustainable Agriculture*
> Tesco plc

ENGAGING OTHERS

Companies have also been working hard to engage stakeholders across their value chain.

GSK

In 2010 GSK assessed that the three most materially important environmental impacts were carbon emissions, impact of water use and waste across the entire value chain. This was a six month exercise which involved consulting with internal and external stakeholders.

Since then GSK have been working to reduce emissions from their entire value chain while extending access to their products for the people who need them. For example, more than 350 of their suppliers now use their award-winning online Supplier Exchange Platform to share best practice on reducing carbon emissions. The biggest carbon impact from customer disposal of GSK products comes from inhalers because there is often a small amount of propellant (greenhouse gases) left in them after use. Since 2012, GSK has encouraged UK patients to return more than 900,000 used inhalers to pharmacies where they are sent back to GSK to be recycled.

SINCE 2012, GSK HAS ENCOURAGED UK PATIENTS TO RETURN MORE THAN 900,000 USED INHALERS TO BE RECYCLED.

Marks & Spencer

Like many service sector companies, over 95% of Marks & Spencer's carbon footprint is embedded across its global supply chains. Marks & Spencer directly contract with over 1,200 factories in 53 countries as well as thousands of farms and raw material suppliers.

All suppliers are engaged in supporting the delivery of Plan A's climate change objectives through a Supplier Exchange 'best practice' network, Food Factory Sustainability Scorecards and Clothing Factory Eco-standards. Marks & Spencer also works with a range of specialist partners including WRAP, WWK-UK and Oxfam to help suppliers address these challenges.

M&S LAUNCHED PLAN A, REPORTING A £185M NET FINANCIAL BENEFIT FOR THE BUSINESS BY 2015/16.

Anglian Water Group

At Anglian Water Group (AWG), there was a coming together of lots of separate events that led to real behaviour change within the business. Leadership were behind making ambitious targets public and AWG report that this provided the glue that bought everything together in 2010 and made it part of everyone's responsibility to take action. This triggered a shift in the way AWG stakeholders engaged and worked more collaboratively with their supply chain.

They ran internal workshops and carbon masterclasses for all engineers to demonstrate that reducing carbon reduces cost. Innovation started to emerge and generated real reductions. AWG report that many thought a 50% reduction target by 2015 was not achievable. In the end, they achieved a 54% capital carbon reduction in 5 years.

AWG ACHIEVED A 54% CAPITAL CARBON REDUCTION IN 5 YEARS.

These changes have also bought financial benefit, initially through reduction in energy use and the associated costs. These savings have been central to the business case and capturing leadership attention, but increasingly the financial benefits of action are also being seen in enhanced corporate worth.

In 2014, the Carbon Disclosure Project reported that corporations that actively manage and plan for climate change achieved an 18% higher return on investment than companies that weren't planning for climate change, and 67% higher than companies that refused to disclose their emissions.

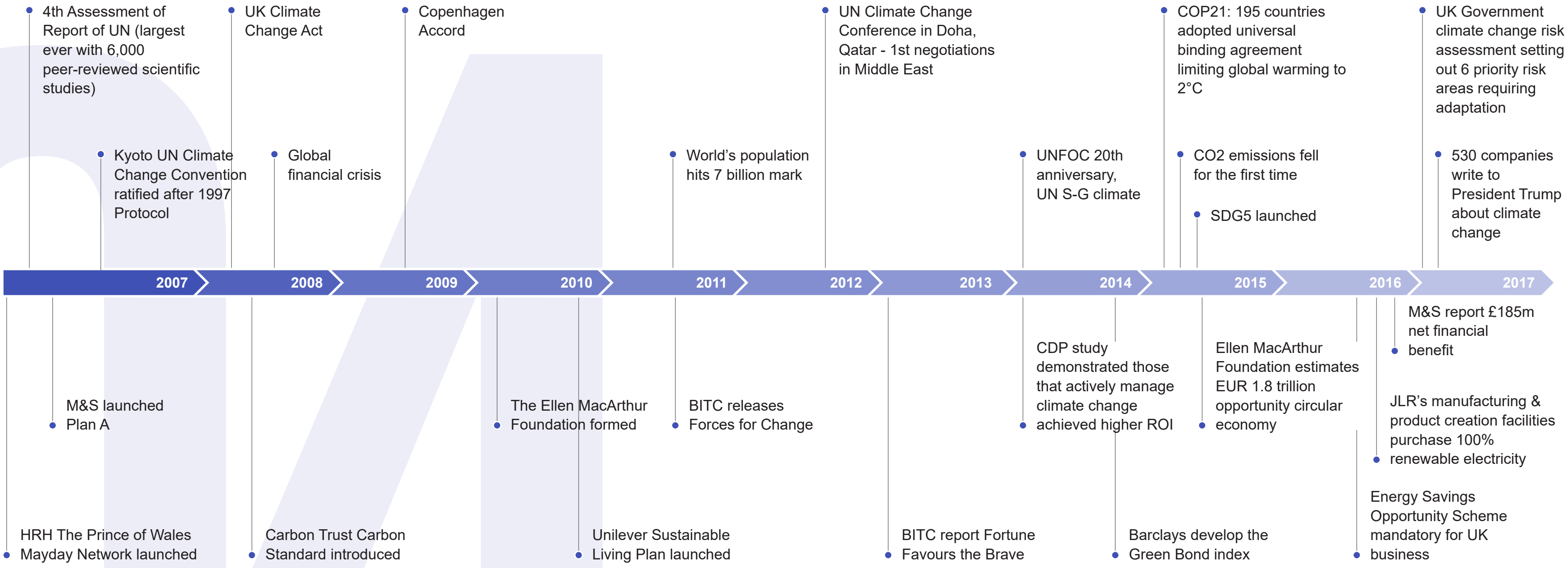
"

I've seen the 'environmental impact' weighting within tenders increase consistently during the past 10 years. In 2007 environmental impact reduction was typically a low-scoring (or non-scoring) 'nice-to-have'. It's now a higher scoring area and, in many cases, is a mandatory expectation from clients that we must be a strong performer around sustainability.

James Deacon
Head of Corporate Responsibility
Ricoh

04

TIMELINE OF KEY EVENTS 2007-2017



4th Assessment of Report of UN (largest ever with 6,000 peer-reviewed scientific studies)
Kyoto UN Climate Change Convention ratified after 1997 Protocol
UK Climate Change Act
Global financial crisis
Copenhagen Accord
World's population hits 7 billion mark
UN Climate Change Conference in Doha, Qatar - 1st negotiations in Middle East
UNFOC 20th anniversary, UN S-G climate
COP21: 195 countries adopted universal binding agreement limiting global warming to 2°C
CO2 emissions fell for the first time
SDG5 launched
UK Government climate change risk assessment setting out 6 priority risk areas requiring adaptation
530 companies write to President Trump about climate change
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
HRH The Prince of Wales Mayday Network launched
M&S launched Plan A
Carbon Trust Carbon Standard introduced
The Ellen MacArthur Foundation formed
Unilever Sustainable Living Plan launched
BITC releases Forces for Change
BITC report Fortune Favours the Brave
CDP study demonstrated those that actively manage climate change achieved higher ROI
Barclays develop the Green Bond index
Ellen MacArthur Foundation estimates EUR 1.8 trillion opportunity circular economy
Energy Savings Opportunity Scheme mandatory for UK business
JLR's manufacturing & product creation facilities purchase 100% renewable electricity
M&S report £185m net financial benefit

05

WHERE ARE WE NOW?

The last 18 months have seen important changes in the landscape for climate action. In 2015, the UN launched the Sustainable Development Goals for 2030 with 17 aspirational "Global Goals" (SDGs) on poverty, equality and environmental projection.

The SDGs gave business a shared framework for action. The COP21 agreement, signed in Paris later that year, provided the first ever universal, legally binding global climate agreement, limiting global warming to below 2°C and working towards 1.5°C, compared to pre-industrial temperatures.

That same year, worldwide CO2 emissions fell for the first time in a period of economic growth, a promising step against a backdrop of calls to accelerate the decarbonisation rate and improve climate change adaptation.

In March 2017, the Lancet Commission on Health and Climate Change confirmed the link between climate change and health, reporting that climate change is set to alter disease patterns and bring new illnesses to unprotected communities, requiring greater stockpiling of medicines and vaccines for use in pandemic situations.

The 2017 UK Climate Change Risk Assessment report has re-emphasised the role of government in ' enabling, facilitating and supporting private sector adaptation through policies, regulation and other supportive measures such as information sharing and raising awareness'. If so, there seems some catching up to do: many of the business leaders interviewed for this report feel the Government was a driving force in carbon reduction 10 years ago, whereas now it is business taking the lead and calling for more emphasis on carbon reduction by Government, particularly if the EU focus on climate change is lost post-Brexit.

Several recent reports and business surveys indicate that climate risks are becoming increasingly serious for firms, often acting as a 'risk multiplier', aggravating existing resource constraints or production vulnerabilities. While 80 of FTSE100 say climate change is a considerable risk, many are still unclear what that risk looks like. Carbon Clear report an 11% rise in the number of companies assessing the risks that climate change poses to their business from 2015 to 2016.

Climate change reporting by business is changing, reflecting the growing importance placed on the issue. Companies take a range of approaches to reporting their approach to climate change, but overall the trend is towards greater transparency and more consistency in use of metrics. Above all, companies are trying to capture how climate change action impacts on their future commercial success.

> Best practice now is looking to the future, considering sustainability throughout the business and having it as an integral part of running the organisation.
>
> **Richard Hardeman**
> *Environment Manager*
> Birmingham Airport

EDF Energy

Since 2007, by transitioning its generation mix to predominantly low-carbon nuclear power, EDF Energy has reduced the carbon intensity of its electricity generation by over 90%.

In 2017, EDF Energy is launching The Better Plan – their new framework for being a sustainable and responsible energy business. It focuses on three strategic goals:

- Better Lives – innovating to transform people's lives with skills and job opportunities.
- Better Experience – innovating to help all customers manage energy better and;
- Better Energy – innovating to lead the UK's transition to safe, low-carbon energy.

The framework is an integral part of EDF's 2030 vision – to be the efficient, responsible electricity company, champion of low-carbon growth.

The Better Plan will help EDF Energy to drive innovation, achieve profitable business growth, save costs and manage the risks of doing business in an increasingly volatile world – and, importantly, it will ensure that this is done in a sustainable and a responsible way.

> Best practice now is about taking a stand, declaring intent, and making the case for action even if we don't have all of the answers on how we're going to get there. Collectively we need to decarbonise in an uncertain world. At EDF Energy we are committed to playing our part, as Britain's biggest generator of, and investor in, low-carbon electricity.
>
> **Paul Spence**
> *Director of Strategy and Corporate Affairs*
> EDF Energy

Veolia

Veolia is Business in the Community's Responsible Business of the Year 2016-2017. Its core business strategy 'Resourcing the World' aims to develop access to, preserve and replenish resources on a global scale. It focuses on creating green products and energy through innovative solutions to tackle one of the biggest challenge we're to face: resource scarcity as our planet's population rapidly rises.

To help make the switch from the linear approach of consumption 'make – use – dispose' to a more sustainable loop 'make – use – recycle – reuse', Veolia manufactures innovative green products and energy, and helps customers reduce their carbon impact by providing solutions for the most complex challenges they face.

From discovering precious metals in obsolete pharmaceuticals that previously would have been mined; converting inedible ice cream into green energy to power homes; and investing in facilities that transform recycled plastic back to food grade pellets ready to be blown into new plastic milk bottles, business change has already begun.

Veolia is putting the once theoretical circular economy business model into practice and has set ambitious sustainability targets as part of business strategy - already 25% of Veolia's business is circular with a target of 40% by 2020.

In order to ensure sustainability becomes business as usual, objectives have been embedded into every employee's individual objectives. This means business success is measured by the added social and environmental value the company generates, as well as financial.

It also uses a circular dialogue method to encourage collaboration across the business and 350 senior managers have been trained to cascade down Veolia's messages about the circular economy, helping to create 14,000 sustainability ambassadors.

Veolia believes by embracing the circular economy we can meet the needs of the present without compromising the future of the generations to come.

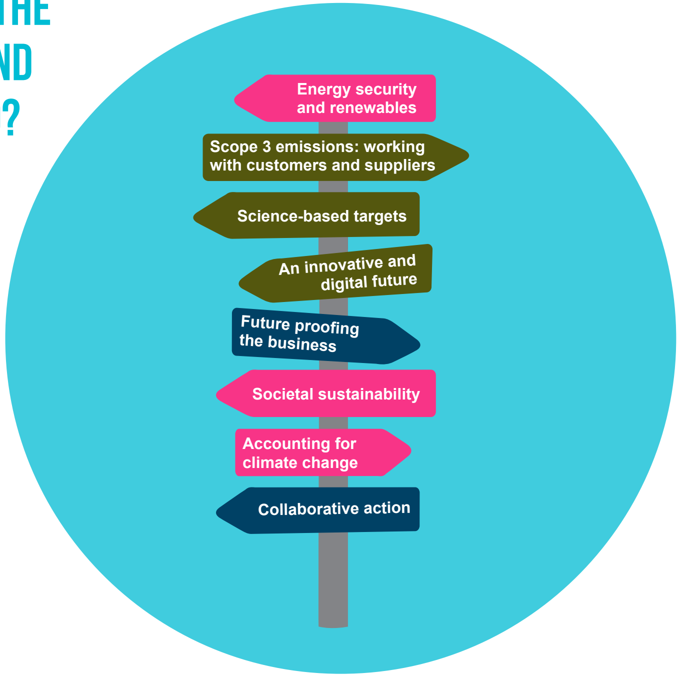
THEIR APPROACH TO RESPONSIBLE BUSINESS RESULTED IN A 7.69% INCREASE IN UK PROFITS FROM 2014 TO 2015.

06 LOOKING FORWARD...

Over the coming decade, the resources and processes that business take for granted will be increasingly disrupted. The decarbonisation of the UK's economy looks set to continue, with the UK government confirming its intention to ratify the Paris Agreement.

But there are questions about the status of the EU Emissions Trading System and whether climate action will feature in the Government's Brexit negotiations with the EU.

WHAT DO SUSTAINABILITY & ENVIRONMENT SENIOR MANAGEMENT SEE AS THE MAJOR CHALLENGES AND OPPORTUNITIES AHEAD?



ENERGY SECURITY /RENEWABLES

Internationally binding targets for climate change and carbon imply a fully decarbonised power system by 2050. Securing a sustainable energy supply is therefore a crucial long-term consideration for many businesses.

The use of purchased renewables has increased steadily since 2012, but 2016 saw a large increase in companies buying renewable energy. Ten of the FTSE 100 have now signed up to global RE100, a campaign to get large companies to commit to using 100% renewables. In the UK, the Renewables Obligation requires all electricity suppliers who supply electricity to end consumers to increase supply from eligible renewable sources. The Obligation scheme has now been extended to 2037.

10 OF THE FTSE 100 HAVE NOW SIGNED UP TO GLOBAL RE100

Sainsbury's

Energy security is an issue being looked at by Sainsbury's, in addition to its commitment to reduce energy consumption while growing its business. As such, the retailer has invested in technology and now has 98 biomass boilers and 27 ground source heat pumps, alongside nine combined heat and power engines and 170,000 solar panels. These help produce energy for heating and electricity on site.

As a result, Sainsbury's has a number of stores which can operate 'off grid', including its Cannock branch which is powered entirely by food waste, thanks to a direct connection with a local anaerobic digestion plant. Sainsbury's also operates 'Triple Zero Stores' in Leicester and Weymouth. As well as being water neutral and sending zero waste to landfill, these stores are fitted with a CHP engine, meaning that energy is generated at the store. Renewable gas, fed into the grid from the company's anaerobic digestion facilities, offsets the gas used at store, meaning these stores are also carbon neutral.

Land Securities

In 2016, Land Securities became the first property company in the UK to switch to 100% renewable electricity.

Jaguar Land Rover

All of Jaguar Land Rover's UK manufacturing and product creation facilities now purchase 100% renewable electricity.

SCOPE 3 EMISSIONS: WORKING WITH CUSTOMERS & SUPPLIERS

While businesses have already made significant progress engaging customers and suppliers, a key challenge identified in this research is extending emission reduction and targets along the value chain to scope 3 emissions.

At present, less than half the FTSE100 report on scope 3 emissions beyond business travel, seven more than in 2015. While scope 1 and 2 cover direct emissions sources, scope 3 emissions cover all indirect emissions due to the activities of an organisation. These include emissions from both suppliers and consumers. A value chain footprint encompasses all of these.

Tesco

Tesco committed to the long-term goal of becoming a zero-carbon business by 2050 and worked with the Carbon Trust to identify the steps needed each decade to achieving that.

This long-term commitment serves as the North Star to guide their climate change action and investment.

TESCO COMMITTED TO THE LONG-TERM GOAL OF BECOMING A ZERO-CARBON BUSINESS BY 2050.

BT

BT is one of few companies to have measured and reported full GHG Protocol Scope 3 emissions against all 15 categories that detail emissions both upstream (e.g. from purchased inputs) and downstream (e.g. distribution to the point of sale).

To understand the total end-to-end impact, BT estimates the emissions associated with its supply chain using a model developed with Small World Consulting. This includes emissions from BT's extended supply chain and draws on data from the Carbon Disclosure Project (CDP) and the BT Better Future Supplier Forum. BT has also worked with the Carbon Trust to measure the full life-cycle carbon emissions of three of its flagship consumer products which has informed BT and helped the company reduce impacts.

SCIENCE-BASED TARGETS

Aligning carbon targets to the shared ambition of 2°C warming is a a key part of the business response to the 2015 Paris agreement. Targets adopted by companies to reduce GHG emissions are considered "science based" if they are in line with the level of decarbonisation required to keep global temperature increase below 2°C.

The Science Based Targets (SBTs) initiative independently assesses and approves companies' targets. The majority of businesses in this research identified SBTs as one of the biggest challenges for the next few years. So far, six of the FTSE100 have set SBTs, and more are planning on doing in the future.

> Understanding what targets to set and how these ratchet-up every few years as the need to reach zero emissions is accelerated, is critical.
>
> **Rowland Hill**
> *Sustainability and Reporting Manager*
> Marks & Spencer

Land Securities

Land Securities has a new 'science-based target' of 40% reduction in carbon & energy intensity by 2030, meaning the company now has a clear pathway for its commitment to cut emissions by 80% by 2050 compared to 2014 levels.

The company also commits to engage with all main contractors (lead construction partners) to encourage them to set science-based targets by 2023, so that the embodied carbon from key materials can be reduced in line with what is required for a 2°C pathway.

LAND SECURITIES HAS A NEW 'SCIENCE-BASED TARGET' OF 40% REDUCTION IN CARBON & ENERGY INTENSITY BY 2030.

International Tourism Partnership

The International Tourism Partnership (ITP) has worked with the world's leading hotel groups for the past 25 years, producing resources and supporting them to drive greater sustainability throughout the industry.

ITP's goal for the future is for the industry to embrace Science Based Targets. Their research shows that to meet the 2°C cap for climate change the industry needs to aim for carbon reductions in line with 66% by 2030 and 90% by 2050.

ITP'S GOAL FOR THE FUTURE IS FOR THE INDUSTRY TO EMBRACE SCIENCE BASED TARGETS.

AN INNOVATIVE & DIGITAL FUTURE

Innovation will remain a key component of businesses leadership on climate change. Carbon Clear's analysis of the FTSE100 in 2016 shows that the key differentiator from the top 10 and the rest of the FTSE100 was the ability to innovate. It identified Unilever as the leader among FTSE100 for driving innovation.

Unilever

Unilever's Sustainable Living Plan launched in 2010 aimed to decouple growth from environmental impacts. They aim to halve their environmental footprint of the making and use of products, to become 'carbon positive' in operations and source 100% of their energy from renewable sources by 2030. Unilever's sustainable living brands are growing 30% faster than the rest of the business and delivered nearly half its total growth in 2015.

UNILEVER WAS IDENTIFIED AS THE LEADER AMONG FTSE100 FOR DRIVING INNOVATION.

Costain

Costain has launched a revolutionary new tool designed to reduce the environmental impact of the construction and infrastructure sectors, which currently accounts for more than 50% of the UK's emissions.

The Carbon Infrastructure Transformation Tool (CITT) is the first programme of its type and automatically detects carbon emission hot-spots in the earliest stages of delivering a complex project by flagging them on a computer dashboard. The open-source plug-in works with all industry standard project planning tools and enables project managers to make decisions about how to minimise the amount of carbon they generate.

Over the next ten years opportunities to capitalise on new technology will increase significantly. In 2017 Business in the Community's 'Brave New World' report with Accenture Strategy details how the digital transformation is both an opportunity and a challenge for responsible businesses.

DIGITAL SOLUTIONS COULD HELP REDUCE GLOBAL OIL CONSUMPTION BY 70% AND CARBON EMISSIONS BY 20% IN 2030.

THE UK LOW-CARBON SECTOR IS CURRENTLY WORTH OVER £46 BILLION, AND THIS GROWTH IS SET TO CONTINUE.

> We will certainly see a maturing of emerging technologies - those technologies that are not yet developed and proven at a scale ready for commercial roll out. These present a number of benefits including the opportunity to achieve a step change in energy demand, for example in the core technologies used widely across our sector to process milk. Scaling up these emerging technologies is a key challenge.
>
> **Matt Bardell**
> *Group Sustainability Manager*
> Dairy Crest

> Data processing has already advanced beyond the ability of human analysis and machine learning is now dominating the landscape. A vast amount of data is being collected through the Internet of Things. In the future, we'll be able to monitor industrial activities more closely to provide a heightened optimisation of resources.
>
> **Richard Kirkman**
> *Technical Director*
> Veolia

> Increasingly agile and mobile workforces combined with the Internet of Things will change how humans interact with buildings. These smart buildings will utilise technology which will further reduce energy use. We will be operating in a much more connected world, perhaps a generation of people who use their laptops as a window to the world and fly less. With the fourth industrial revolution, ten years away looks very different!
>
> **Leilani Weir**
> *Senior Manager: Global Environmental Sustainability, H&S and Operations*
> Linklaters

FUTURE PROOFING

Business as usual is not an option for companies hoping to be sustainable in the longer term, and building resilience for the climate change coming over the next 20 to 50 years is crucial. Environmental action has helped businesses understand the material challenges ahead in reaching zero or negative carbon, and how the next ten years will be crucial in realising the opportunities, and future proofing the business. The opportunity to transform the business to be future ready is huge.

WHILE 80 OF FTSE 100 COMPANIES CONSIDER CLIMATE CHANGE A 'CONSIDERABLE RISK' TO THEIR BUSINESS, ONLY 17% SPECIFICALLY MENTION AN ADAPTATION STRATEGY. CDP, 2016

It is crucial that businesses accept that our climate and weather patterns are going to change. Over the next ten years, businesses need to be preparing for the impacts of climate change, or at least understanding what they might be. Businesses that do not do this may be vulnerable to climate change in the future.

Adam Freeman
Environment Advisor
Manchester Airport Group

Sodexo

In 2017, Sodexo will be launching their revised Better Tomorrow 2025 which will be launched at a global level and integrate the UN Global Goals requiring collaboration across countries with differing legislation, environmental and economic drivers. As many sites are not directly managed by Sodexo, the focus on the Better Tomorrow 2025 is to work collaboratively with clients on long term investment and targets, requiring a 'whole company' approach. In this way, at their heart of its new strategy, is recognition that their ambitions cannot be achieved in isolation.

United Utilities

Years of drainage of the UK uplands has caused 5,000 year old peat bogs to dry out and erode releasing sediment into watercourses and millions of tonnes of carbon dioxide into the atmosphere. In order to stabilise this trend and ensure high quality water available in the future, United Utilities have developed the Sustainable Catchment Management Programme (SCaMP) - the first England and Wales water industry sustainable land management initiative to restore and enhance water catchment and moorland areas and to introduce more sustainable land management practices. The programme is supported by the tenant farmers who have changed their farming practices to improve water quality and have also benefited from the programme.

WSP

WSP designs projects from the new Alder Hey Children's Hospital to Bond Street's Crossrail station. Many of its projects have long lives – up to 110 years for railways and roads – and thinking that far ahead isn't always part of standard design codes. WSP's Future Ready programme is changing that by giving staff an understanding of key long term environmental, social and technology changes relevant to its projects and markets, then challenging them to work with clients to offer designs that are ready for this future, delivering resilient, flexible, low carbon, low waste solutions.

For example, Future Ready designs anticipate that London's new rail schemes will experience 40°C peak summer temperatures, 50% heavier rainfall, and higher river levels over their design life. Responsibility for the delivery of Future Ready lies with WSP's Technical Leadership Teams, with internal communication a key part of driving the programme across 37,000 staff worldwide. Every staff member is challenged to embrace Future Ready as a way to make a contribution to a sustainable society through their projects. Future Ready has helped WSP win many of the firm's largest projects and is a key point for recruitment, staff engagement and purpose.

SOCIETAL SUSTAINABILITY

Perhaps reflecting the increasingly whole-business approach, over half of businesses in this research believe that there will be more focus on societal sustainability issues, including skills needed for a low carbon economy, increased demand for food and water, an ageing workforce and supporting disaster-prone vulnerable communities. Most businesses also talked about increasingly bringing together these issues under the sustainability banner rather than looking at environment and society as two different issues.

A growing area of interest is how we can align our traditional environmental programme with our wellbeing agenda. We have a long-standing travel reduction target to help us reduce our carbon footprint and we have found this resonates most when people also consider that extensive travel can impact an individual's health and productivity. We are now taking this concept further and seeing how our sustainable buildings agenda can be enhanced by considering wellbeing design. The environmental efficiencies will payback relatively fast while the wellness programme should improve productivity and morale for years to come.

Gavin Harrison
Senior Manager, Internal Sustainability
Deloitte UK

Freshfields

Freshfields has been carbon neutral since 2007, offsetting its emissions through various projects: biomass projects in China, Turkish wind farms, efficient cook-stoves, and Lifestraw water purification in Kenya. In 2015, the firm made a commitment to remaining carbon neutral for the next 10 years and launched its offset project, Freshfields Reforestation in East Africa Programme (REAP).

The firm's long-term commitment has enabled carbon offsetting with positive societal change, enabling thousands of East African farmers to create new sources of income and better cope with the risks and impacts of climate change.

IN 2015, THE FIRM MADE A COMMITMENT TO REMAINING CARBON NEUTRAL FOR THE NEXT 10 YEARS.

Our adapting to a 1.5°C campaign enabled us to focus on the key environmental impacts where we can make the biggest difference. Linked into this, we have also started focusing on our wider stakeholders and the next generation through launching our Green Pioneers programme in partnership with Outward Bound which aims to educate pupils about the part they can play in protecting the environment. To date, 131 young people have completed this programme across five of our partner schools.

Mike Pickering
Community and Sustainability Manager
The Midcounties Co-operative

ACCOUNTING FOR CLIMATE CHANGE

Financial measurement of carbon risk and climate change measures is increasing, and investors are taking notice. The financial disclosure and accounting methodology will significantly change the way companies report and investors request data.

> Investors' interest in climate-related financial disclosure is close to a tipping point. Companies will need to be open and transparent with investors about how their company will operate and present scenarios for both a 2degree or a 4degree world. This will finally lead us to quality comparable data and ensure that addressing climate change issues become long term drivers of value.
>
> **Geoff Lane**
> *Partner - Sustainability and Climate Change*
> PWC

In response to a G20 request to consider the financial stability risks arising from climate change, the Financial Stability Board created a taskforce on climate-related financial disclosures, headed by Michael Bloomberg. Its purpose is to develop voluntary, consistent disclosures to help investors, lenders and insurance underwriters manage material climate risks.

Its final report is expected in June 2017 at the G20 Leaders' Summit, providing consistent disclosure recommendations for use by companies in providing information to investors, lenders, and insurance underwriters about their climate-related financial risks.

> We believe that financial disclosure is essential to a market-based solution to climate change. A properly functioning market will price in the risks associated with climate change and reward firms that mitigate them. As its impact becomes more commonplace and public policy responses more active, climate change has become a material risk that isn't properly disclosed. Climate-related disclosures could be transformative for 21st-century markets.
>
> **Mark Carney & Michael Bloomberg**
> *The Guardian*
> December 2016

> Taking steps to limit global warming below 2ºC is critically important for all parts of society - for people, businesses and communities. The financial services sector has an opportunity to be at the heart of this, by encouraging market mechanisms that support social and environmental outcomes alongside financial returns. At Lloyds Banking Group, we have developed innovative financing models to support our clients to meet their sustainability agenda. An example of this is our £1bn lending commitment, which has been designed to help our commercial real estate clients to improve energy and carbon efficiency across their offices and buildings.
>
> **Andrew Bester**
> *Group Director & CEO Commercial Banking*
> Lloyds Banking Group

National Grid

National Grid's natural capital accounting has enabled it to prioritise action and target investment to deliver the greatest environmental, social and economic returns. The Natural Grid programme conducts 'scenario analysis' through a natural capital valuation tool which compares different management options for each site over a 30 year period.

This helps them to target investment and work with local partners to determine the route which will deliver the greatest social and environmental benefits. This has been accompanied by work to raise awareness of natural capital within their business.

Barclays

Barclays' recent research report 'Sustainable investing and bond returns' reveals a positive link between high-ESG (Environmental, Social & Governance) corporate bond portfolios and performance. Over a seven-year period, ESG factors produced a small but steady performance benefit in corporate bond portfolios.

The study concludes that as ESG considerations play out over a long horizon and increasingly become a priority for company managers, they may help alleviate the pressure of short-termism and encourage a focus on long-term value creation. An ESG focus is to the mutual benefit of the company, its investors, and the world at large.

IN 2014 BARCLAYS DEVELOPED THE GREEN BOND INDEX WITH MSCI WHICH PROVIDED A WAY TO INVEST IN ESG BOND MARKETS.

COLLABORATIVE ACTION

All the business leaders in this study confirmed the need for collaboration within and across sectors, engaging smaller businesses and suppliers as the landscape to address climate change continues to evolve.

> There is a need for senior leaders in front line retailers to 'link arms' and work together to impact on positive change.
>
> **Paul Irwin-Rhodes**
> *Group Safety, Health & Environment Manager*
> Greggs

> We have set ourselves the toughest target to be Carbon Neutral without offsetting by 2050. We don't have all the answers yet but we do have a routemap for what Carbon Neutrality looks like and we will make a genuine attempt to get there. The way the business operates will undoubtedly change in that time. We will need to influence others to get us to the target, the days of doing this in isolation are gone.
>
> **Chris Newsome OBE**
> *Director of Asset Management*
> Anglian Water Group

Manchester Airport Group

Less than 10% of airport-related emissions are within Manchester Airport Group's direct control. Other key emission sources are aircraft operations and surface access - passengers and staff travelling to and from the airport. At Manchester Airport, the largest in the Group, its surface access strategies have seen the recent installation of two additional rail platforms and the introduction of Manchester Metrolink trams.

The airport has also pioneered Collaborative Environmental Management with airlines and air traffic controllers to tackle indirect emissions from aircraft and in doing so add value to its customer relationships. It also works collaboratively with passengers and the local communities in which it operates.

LESS THAN 10% OF AIRPORT-RELATED EMISSIONS ARE WITHIN MANCHESTER AIRPORT GROUP'S DIRECT CONTROL.

THE ROADMAP TO 2°C AND BEYOND: WHAT DOES THE FUTURE HOLD?

IN 2020...

The Climate Change Act 2008 committed the UK government to reducing greenhouse gas emissions by at least 34% of 1990 levels by 2020.

China is due to launch a national carbon-trading programme.

BY 2025...

Global steel demand is expected to rise to more than 2 billion tonnes per year, a 50% increase over 2012.

BY 2030...

The deadline to achieve The UN Sustainable Development Goals, including building the resilience of those in vulnerable situations and reducing vulnerability to climate-related extreme events; implementing resilient agricultural practices that increase productivity and strengthen capacity for adaptation to climate change, doubling the global rate of improvement in energy efficiency, halving per capita global food waste at the retail and consumer levels and improving education, awareness and capacity on climate change mitigation, adaptation and impact reduction.

BY 2050...

The Climate Change Act 2008 commits the government to reducing greenhouse gas emissions by at least 80% of 1990 levels.

The world's population will reach 9.7 billion.

3D printing in supply chains by 2050 could reduce tooling and production mobilisation from 70% of production costs to 10%.

34% of the European population are estimated to be aged 60 years or over.

55% increase in global water demand expected by 2050.

70% of the world's population will be living in urban areas by 2050.

07

WHAT'S THE ROLE FOR BUSINESS IN THE COMMUNITY?

As part of this research, Business in the Community's members were asked to identify how Business in the Community could further support them in their journey towards a 2°C economy.

Bringing companies together to facilitate the sharing of good practice and providing tools and guidance to help them understand what will be required remains key. Collaboration and shared learning are also vital and members are looking to Business in the Community to facilitate them. In addition, providing the collective voice for business in promoting good practice, creating an enabling policy environment, and challenging more companies to better understand the challenges and risks of climate change for their business are all called for.

> Convening and engendering collaboration and networking. BITC is well placed to bring together key corporates, government, partners and universities.
>
> **Ian Bowman**
> *Head of Sustainability UK*
> Siemens plc

> BITC should continue the good work it does to facilitate businesses to get together and share ideas collaboratively.
>
> **Caroline Hill**
> *Head of Sustainability*
> Land Securities

Members are also looking to Business in the Community to help companies understand the societal challenges and opportunities in adapting to a more volatile climate and reducing carbon emissions, and in linking social and environmental issues.

> BITC should exercise its convening power both in the UK and globally to keep drawing attention to this and other related issues.
>
> **Richard Ellis**
> *Vice President CSR*
> Walgreens Boots Alliance

> Subtle and effective pressure on doing the right thing, 'what next, where are we going, what are the impacts, systems thinking, how is your business engaging in sustainability'. Keep moving the debate forward.
>
> **Leilani Weir**
> *Senior Manager: Global Environmental Sustainability H&S and Operations*
> Linklaters

> We need a continual evolution. Are you measuring, are you constantly trying to improve what you're doing? There can only be one leader but there can be many, many achievers.
>
> **Dr Keith Colquhoun**
> *Climate Change and Sustainability Strategy Manager*
> Thames Water

08

SO WHERE NEXT?

This report demonstrates that businesses are committed to playing their part in building a restorative, 2°C economy. The themes identified outline a path that will help us get there. The next step is to develop the individual and collaborative action plans to support 'smart growth' and drive progress by all businesses, regardless of size or sector.

BITC IS COMMITTED TO SUPPORTING BUSINESS ON THIS JOURNEY AND HAS SET AMBITIOUS GOALS FOR THE NEXT FIVE YEARS TO:

- **SUPPORT ALL BITC MEMBERS TO ALIGN THEIR BUSINESSES TO CONTRIBUTE TO A RESTORATIVE, 2°C ECONOMY**
- **WORK WITH LEADING COMPANIES TO SUPPORT 5,000 BUSINESSES TO ACT ON ENERGY, RESOURCES AND CLIMATE RESILIENCE THROUGH VALUE CHAINS AND/OR IN PLACES**

We hope that you are inspired to join us, to maximise the benefits for your business and help accelerate progress towards a prosperous and sustainable future. As a starting point we are calling on businesses to:

1. Make a commitment that your business will be part of delivering a restorative, 2°C economy.
2. Evaluate the risks and opportunities for your business and identify the 'material' areas where your business needs to act to help achieve this.
3. Set science based business targets for each of these areas of 'material contribution', working not just on areas of direct impact/contribution, but also up and down your value chain, with suppliers, customers and the communities you serve.
4. Issue an annual public report on progress.
5. Work with BITC to get the support you need, learn with your peers, collaborate to solve shared challenges, scale up to maximise collective impact and celebrate success.

Gudrun Cartwright
Environment Director
Business in the Community

For more information or to get involved please contact Gudrun.cartwright@bitc.org.uk.

THANK YOU...

This research was co-ordinated and managed by Bean Research Ltd, and conducted between January and March 2017 by both Bean Research and Business in the Community to better understand members' journeys towards zero carbon and their climate change policies, practices, approaches and adaptation.

Thank you very much to all those who contributed to the research:

Emily Davies	Head of Social Impact	Amey
Andy Brown	Head of Sustainability	Anglian Water Group
Sarah D'Arcy	Sustainability Manager	Anglian Water Group
David Riley	Carbon Manager	Anglian Water Group
Vedant Walia	Data Analytics and Reporting	Barclays plc
Richard Hardeman	Environment Manager	Birmingham Airport
Ben Bishop	Sustainability Manager	British Sugar
Paul Harvey	Energy Manager	British Sugar
Gabrielle Giner	Environmental Sustainability	BT
Rachel Hunter	Communications Manager	Carbon Clear
Amy Shuffleton	Group Environment Manager	Costain
Matt Bardell	Group Sustainability Manager	Dairy Crest
Gavin Harrison	Senior Manager, Internal Sustainability	Deloitte
Karen Elgy	Sustainability Performance Manager	EDF Energy
Paul Spence	Executive Director	EDF Energy
Jason Hall	Group HSE Manager	Frank Roberts & Sons
Katie Henry	Corporate Responsibility Manager	Freshfields
Paul Irwin-Rhodes	Group Safety, Health & Environment Manager	Greggs
Matthew Wilson	Head of Environmental Sustainability Centre of Excellence	GSK
Claire Whitely	Senior Sustainability Manager	Hilton
Mike Moss	Business Improvement Manager	Imtech
Paul Crewe	Head of Sustainability, Energy and Engineering	J Sainsbury
Caroline Hill	Head of Sustainability	Land Securities
Leilani Weir	Senior Manager: Global Environmental Sustainability, H&S and Operations	Linklaters
Andrew Bester	Group Director & CEO Commercial Banking	Lloyds Banking Group
Rowland Hill	Sustainability and Reporting Manager	Marks & Spencer group
Adam Freeman	Environment Advisor	Manchester Airport Group
Stuart Bailey	Group Head of Environmental Sustainability Safety, Sustainability & Resilience	National Grid
Mike Pickering	Community and Sustainability Manager	The Midcounties Co-operative
Geoff Lane	Partner	PWC
Jon Hampson	Head of Sustainability Measurement & Reporting	PWC
James Deacon	Head of Corporate Responsibility	Ricoh
Ian Bowman	Head of Sustainability UK	Siemens
Rachael Mason	Environment Manager	Sodexo
Kene Umeasiegbu	Head of Climate Change and Sustainable Agriculture	Tesco
Dr Keith Colquhoun	Climate Change and Sustainability Strategy Manager	Thames Water
Joel Magande	Group Environment Manager	Unipart
Chris Matthews	Head of Sustainability	United Utilities
Tatiana Stotz	Senior CR Manager	Veolia
Richard Ellis	Vice President CSR	Walgreens Boots Alliance
David Symons	UK Director of Sustainability	WSP

Business in the Community
137 Shepherdess Walk
London N1 7RQ

T +44 (0)20 7566 8650
E information@bitc.org.uk

www.bitc.org.uk

BUSINESS IN THE COMMUNITY

THE PRINCE'S RESPONSIBLE BUSINESS NETWORK