



Climate scenarios and consumer business

Speakers



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Agenda

- Welcome
- Climate and consumer business: our starting point
- Introducing our new report
- Scenario analysis in practice
- What could it mean for you?
- Q&A

Our starting point

Consumer businesses have a huge role to play in driving the world to a more sustainable future

Re-designing

Products and processes to make manufacturing and distribution more efficient

Re-imagining

Product brands as service providers
Consumers as citizens

Re-educating

Buy less, buy better
Conscious over convenient

8%

of global emissions are produced by the fashion industry. Fast fashion garments are worn an average of 7 times

43%

of consumers already actively choose brands due to their environmental values

1 in 3

calories are wasted globally

Introducing our report

Introducing the new report

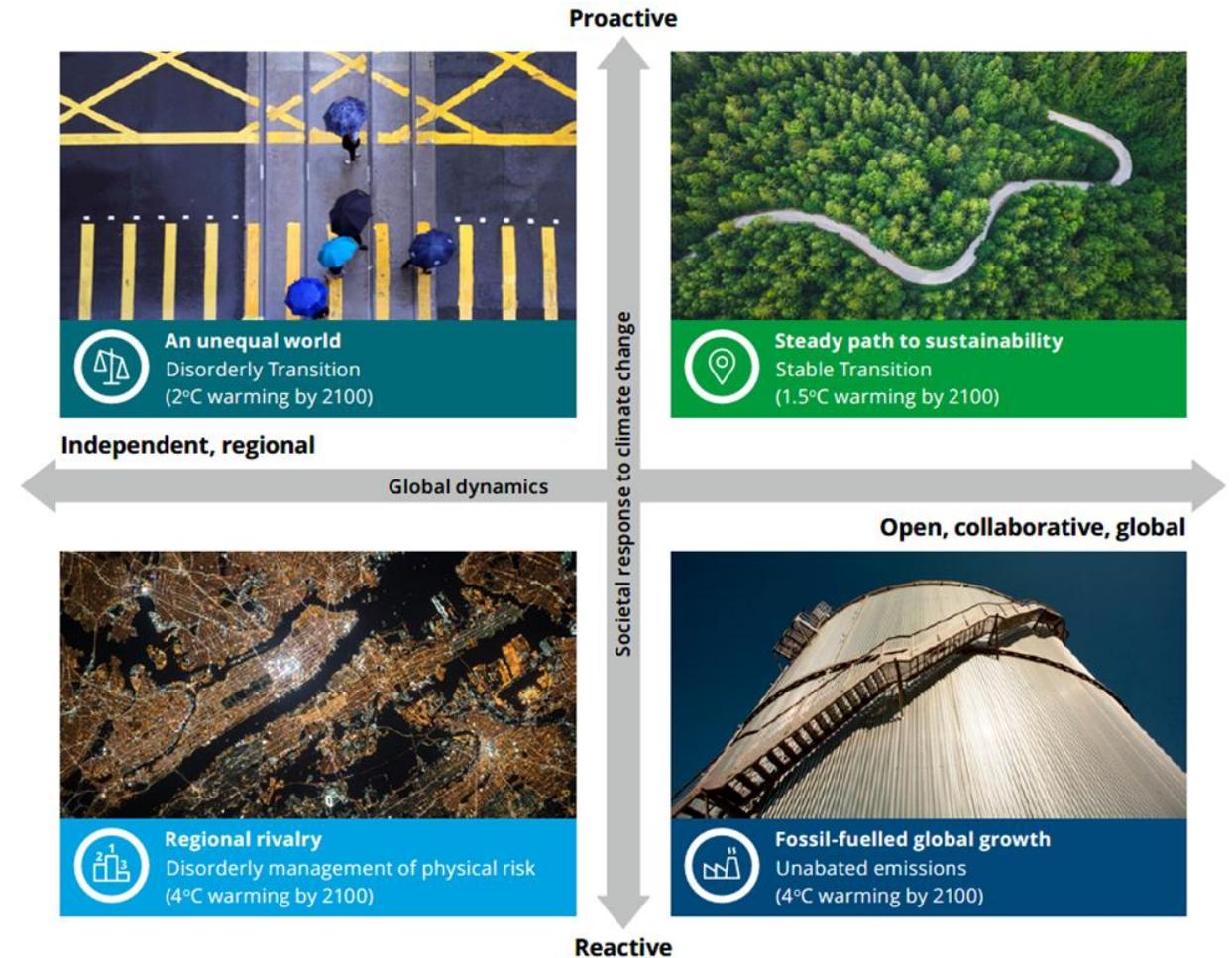
“A framework for businesses to consider some of the possible impacts of climate change on their infrastructure, operations, supply chains and markets.”



The four scenarios

“Scenarios describe what the future could look like, and are created to challenge conventional wisdom and drive better decisions.

They are not predictions about what will happen, but rather hypotheses about what could happen, designed to highlight new opportunities or hidden risks.”



What is in each scenario?

In focus: Consumer behaviour

- Consumer demand remains strong globally, driven by the large growth in middle class consumers with greater disposable income throughout the 2020s and into the 2030s.
- A growing, and increasingly prosperous, population worldwide drives increased demand for products considered to be part of a developed country lifestyle.
- Individualism and expressions of personal identity drive consumer behaviour. As a result, high carbon emitting brands and sectors continue to thrive; global demand for meat and carbon-heavy diets increase, food waste continues to be a problem and fast fashion remains popular.
- However, by the 2030s, consumers are becoming increasingly aware that their lifestyles may be disrupted due to the effects of climate change. This leads to some adjustments in what consumers value, with reliability and quality valued just as much as price.

Our consumers under this scenario



Darren's rented accommodation is flooded twice in short succession. A government-backed scheme helped Darren to regain his possessions and the property is covered by a new, more robust flood prevention scheme. However, he is now more cautious with his limited savings in case things go wrong again.

Darren notices that the cost of his weekly shop has gone up. A combination of drought in southern Europe, along with unprecedented flooding in other agricultural zones means that food prices have risen significantly.



Lori and Patrick spoil their niece on her eighteenth birthday. They pay for a round the world trip making sure that she sees sights at threat from climate change that she might not otherwise get to see in her lifetime.

Patrick joins Lori in having an SUV. However, there is a huge delay on getting hold of the new vehicle. Disruption to the supply of critical components due to adverse weather conditions means that final assembly is significantly delayed.

Lori and Patrick's house is flooded in the winter, but the summer sees water shortages across southern England and they are told they can't fill their swimming pool.



Despite the world seemingly going in a different direction, Grace and a significant minority of her generation have stuck to their convictions and continue to live environmentally sustainable lives.

A number of large consumer businesses have come out in support of a geoengineering initiative that claims to help stabilise weather around the world and boosting profits for those companies. Grace is appalled – what if it goes wrong? She is part of a mass movement boycotting the companies who support the initiative.

Grace sources her food locally and clothes from sustainable boutiques. She encourages her parents to do the same, but they are shocked at the cost.

We explore the implications for supply chains and consumers

In focus: How might supply chains evolve?

Supply chains



Supply chains are still global and interconnected in order for businesses to remain competitive and meet consumer demand.



By the 2030s, the supply of commodities, production facilities and international shipping are subject to increasingly variable weather and often severe weather-related disruptions.



Agricultural regions and production facilities in already vulnerable climate danger zones – such as low lying deltas and equatorial regions become economically unviable.



Companies, alongside suppliers, are required to make significant investments in hard adaptation measures to protect infrastructure in the long term. However, companies must accept that it will not always be possible to prevent significant periods of business disruption.



By the 2040s, there are significant challenges associated with the supply of commodities. Certain commodities are in short supply, while greater seasonal variability has resulted in greater price volatility, as well as worsening levels of inefficiency.

What is in each scenario?

We examine specific topics relevant to each scenario

Carbon pricing: Sharing and bearing the cost of climate change in an unequal world



In the 'unequal world' scenario, a lack of coherent policy or action on climate change in the early part of this decade means that more drastic action is required in the late 2020s to manage decarbonisation and mitigate the most extreme impacts of climate change.

As a result, governments will likely begin to take unilateral actions, relying on market-based mechanisms to drive change, either in the form of carbon trading schemes.

While on aggregate, carbon pricing raises revenue, there is a risk that it could disproportionately weigh more heavily on lower incomes. This is because low-cost goods are more subject to greater proportional increases in price, increasing inequality.³⁷

To illustrate the challenges that businesses face in this scenario, we examine the impact of carbon pricing on common, high-carbon consumer products such as a long-haul flight. In both cases, carbon pricing has the potential to impact consumer habits dramatically and re-structure the financial landscape of entire sectors.

a burger from a fast-food restaurant could experience a price rise of 12 per cent, in comparison the price of a shop bought burger could increase by 54 per cent.³⁹

How could climate change affect the vulnerability of coastal assets?



Ocean conditions

Changes to wind, wave height and storm intensity in some regions (e.g. high latitudes) will increase the vulnerability of ocean-based industries, risking loss and damages to shipping and coastal and offshore structures.²⁷ Adaptation options include limiting activities to particular times of the year or developing strategies to decrease vulnerability of structures and operations.²⁸ Changing conditions caused by climate change will also open up new trade routes and opportunities for international supply chains. For example, the decline of Arctic sea-ice coverage may extend seasonal accessibility to high-latitude shipping routes. By 2050, the frequency of navigable periods is projected to double for standard open water vessels, as routes across the central Arctic becoming available.²⁹

A mean sea level rise of 0.25m is estimated by 2050 (likely range 0.19-0.32m).²⁴ Sea level rise will continue to occur to 2100 and well beyond.²⁵

This will affect the viability of existing shipping routes and ports, with serious implications for international supply chains.

By 2050, the frequency of navigable periods in the Arctic Ocean is projected to double for standard open water vessels, as routes across the central Arctic become available.



What is in each scenario?

We summarise implications for the four scenarios for consumer sectors

Sectoral implications

Retail



In the short term, physical retailers lose a disproportionate share of the market to dotcom retailers as consumers become increasingly focused on convenience.



By 2050, there is growing international consensus around the need to explore geoengineering as a potential solution. Grocers voice concerns around the potentially disastrous consequences of a failed geoengineering attempt on crop yields.

Consumer goods



UK fashion and luxury brands maximise their growth by focusing on the developing middle class in countries where economic growth is unabated. The heritage of UK brands makes them popular across the globe and the value of these companies grows accordingly.



Demand for meat and carbon heavy diets increase. In order to cope with this demand, regulations are eased and the sector becomes responsible for producing a disproportionate share of carbon emissions.

Automotive



EVs continue to grow at a steady rate, due to strategic investments made in the 2020s.



Incumbent OEMs dominate the market after investing heavily in manufacturing technology.



Economic growth opens up new geographical markets to premium and luxury brands.

Travel & Hospitality



Climate change affects the desirability of some regions and tourist destinations. Tourism companies that invested in fixed assets such as hotels and local infrastructure struggle to survive.



Rather than trying to reduce their emissions, travel companies pay increasingly high prices to offset their carbon footprint.

Considerations for business leaders

- Does this scenario describe a world that you are preparing for?
- What is the potential impact of this scenario on your business or sector?
- What aspects of the scenario stand out? What surprises you?
- What are some 'no-regret' actions that you could take that would mitigate risks presented by this scenario?
- What capabilities, partnerships and strategies would you require in order to adapt to the scenario?
- Will your post COVID-19 recovery plans strengthen your resilience to this scenario?



Exploring the physical impacts of climate change

How could more frequent and severe heatwaves impact retail demand?



When COVID-19 emerged as a threat to the UK population, a combination of panic buying and stockpiling by consumers put a major strain on retail supply chains. The empty shelves were a stark reminder about the vulnerability of a 'just-in-time' retail supply chain designed to cope with continuous, predictable levels of demand.

A 'steady path to sustainability' scenario offers the greatest hope that there will be a coordinated international effort to mitigate the impact of climate change. However, in spite of the actions that are taken to prevent further damage, our previous actions mean that there is a greater chance of hotter, drier summers in the UK, with an increase in the likelihood of extreme weather conditions, such as heatwaves.⁶¹ As climate change increases the chance of extreme weather events, the likelihood of further shocks to the system grows.

Indeed, not only are heatwaves expected to become more common, they are also expected to be more severe and longer lasting.⁶² Retailers will need to address this by building increased resilience into their supply chains and adapting to changes in the volume and timing of consumer demand for different products.

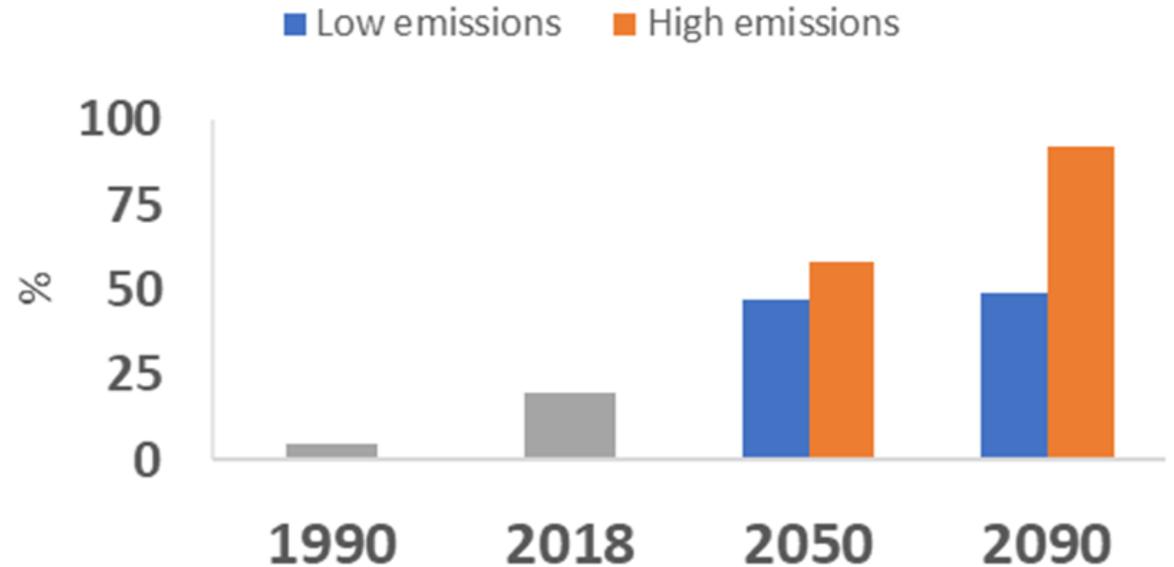
Heatwaves to become more
A heatwave is widely understood as unusually hot weather. A heatwave climate describes a heatwave a in which the daily maximum temperature defined for recognised UK counties is 28°C, which are based on local

Throughout the summer of 2018 which was the joint hottest on record, spells of daily maximum temperature. Anthropogenic climate change: a 2018 summer temperature analysis showed that heatwaves of this intensity are more likely than in 1750.⁶⁴

Even within the 'steady path to sustainability' scenario, summers are expected to become warmer, by 2050 there is a chance of a heatwave of equivalent magnitude to other summer.⁶⁵ The heatwave from July through August in the UK is expected to last through September by 2050.⁶⁶

We also expect to see regional differences across the UK. For example, the changes in summer temperatures are expected to be greater in the south of the UK, with greater increases in temperatures over the south, and the highest summer temperatures

Chance of exceeding Summer 2018 temperature



Insights from the Met Office in developing the report:

01

Climate change is already happening so there is a requirement for businesses to adapt to our future climate as well as reduce emissions.

02

There are opportunities for businesses who are early adopters and able to change to meet future demand or address supply chain issues.

03

Softer interventions (both in adapting businesses and reducing emissions) could give a near immediate return on investment. For example: training procurement staff, making sure climate is factored into all business decisions, or embedding weather forecasts in decision making.

What does it mean in practice?

How does climate scenario analysis benefit business?

 Fuller assessment of value at risk and future valuation

 More informed strategic decisions and investments

 Clearer understanding of future business model

 Drives efficiency and innovation

 Enhances stakeholder engagement

What do retailers need to prepare for?

Example implications of a changing climate:



Supply chain
disruption



Damage to assets



Decreased labour
productivity



Economic
downturn

Example implications of low carbon transition:



Carbon pricing



Enhanced
regulation and
standards



Product / service
innovation



Shifting consumer
behaviour

Material impacts for:

- Revenue
- Opex
- Capex
- Asset impairment
- Cashflow
- Increased insurance premiums

What changes for consumers in each of our four futures?

Lori & Patrick

'High-flying couple'

Ages: 49 & 50

Occupation: Lawyers

Household income: £600k per annum

Family: No children of their own, but spoil their niece when they get the chance



- High level of international business class travel with work
- Regular international breaks – they especially look forward to their annual winter ski break
- Both own high performance cars
- Significant spend on luxury fashion

A: Fossil-fuelled global growth

Global, reactive

- **'Last chance' tourism:** embark on a round-the-world trip with their niece, as an 18th birthday present – to see sites threatened by climate change
- **Supply chain disruption:** extreme weather disrupts the final assembly of Patrick's new SUV
- **A vulnerable home:** Patrick and Lori's house is flooded in the winter, but the summer sees water shortages

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B: An Unequal World

Independent, proactive

- **Higher cost of living:** the goods that Lori and Patrick buy become more expensive
- **Commitment to going green:** Lori and Patrick have a higher awareness of green issues and put their money where their mouth is – they expect brands to do the same.
- **Greenwashing:** Lori is disappointed to find that products sold to her as 'green' and 'sustainable' aren't – they lose her trust.

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C: Regional rivalry

Independent, reactive

- **Less connected:** Lori and Patrick have fewer international clients and so have less need to travel, thanks to the fragmentation that climate change has contributed to.
- **Safety:** uncertainty and unrest in this scenario means that there are a smaller range of destinations that they feel are safe to travel to.
- **Buy British:** Lori and Patrick focus on buying high quality products made in the UK – they seem more dependable these days.

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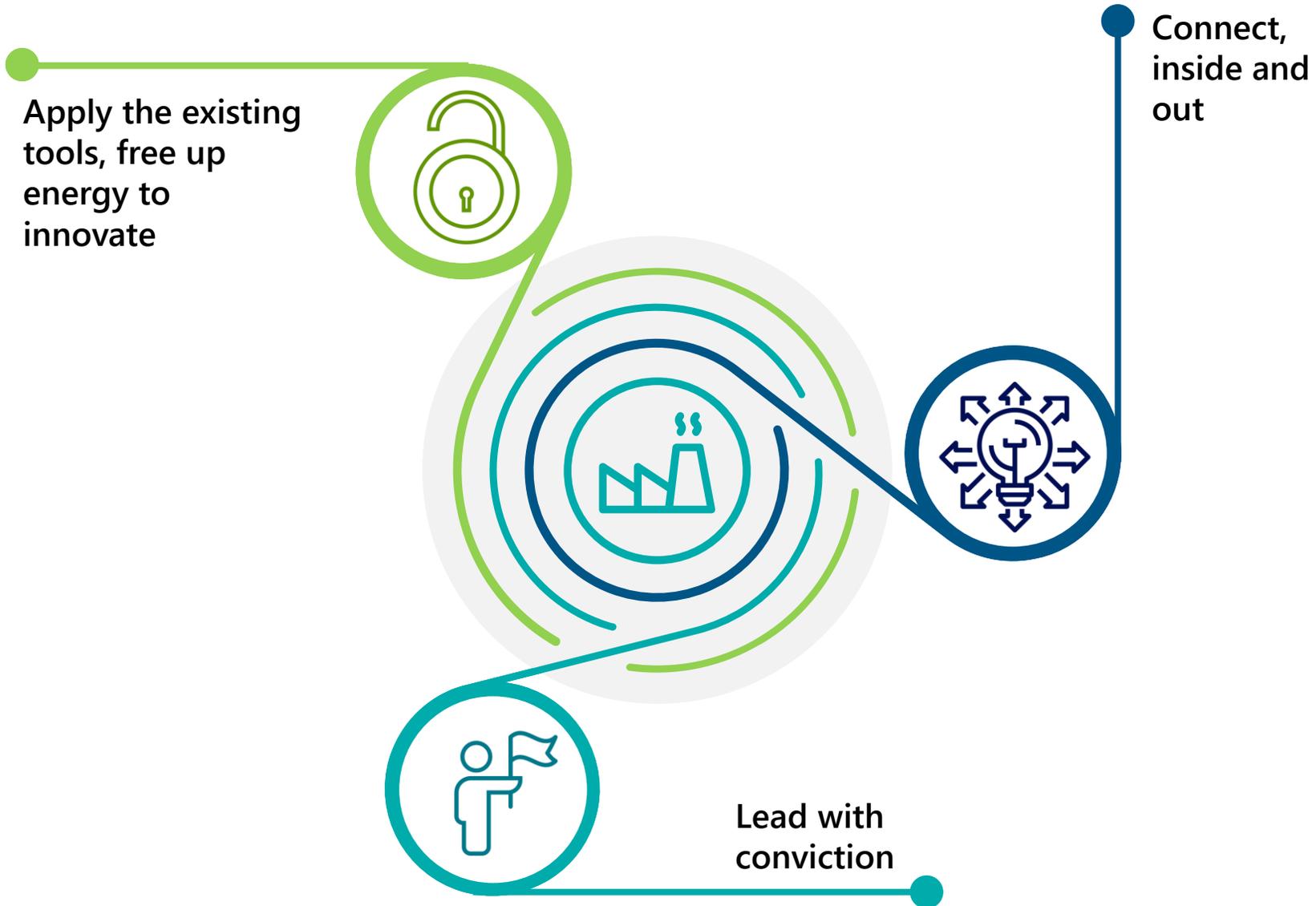
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D: Steady path to sustainability

Global, proactive

- **Wellbeing:** Patrick and Lori attention shifts to focusing on wellbeing, rather consumption
- **Happy to pay:** Patrick and Lori now value the true cost associated with goods – they are happy to pay more to know it has been sourced in a sustainable manner
- **Nomads:** with their ability to catch a jet to a far-flung destination restricted, Lori and Patrick now spend extended periods travelling, blending work and holiday.

What your business can be doing



What could it mean for you?

Questions to consider on climate risk

01

Who's responsible for climate risk in your business?

02

Are they in a position to effect change?

03

Have you fully engaged with the climate-related risks and opportunities facing the business?

04

Do you have a clear view of how your place in the value chain could change in the future?

05

Do you understand the financial implications of climate risks for your business?

06

Do you have a compelling message for investors in how climate risk is being managed?

Climate scenarios and consumer business

Download report

<https://www2.deloitte.com/uk/en/pages/consumer-business/articles/climate-scenarios.html>



Climate scenarios and
consumer business

Four futures for a changing sector

CHANGE

↓

Climate change represents the defining challenge of the 21st Century, for business and wider society. This is especially true for consumer businesses, which are vulnerable on two fronts.

Firstly, physical assets and supply chains are exposed to a changing climate. Second, because consumer businesses are

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