

Think:Act

Roland Berger



A new competitiveness paradigm

Decarbonization
is an opportunity
for companies,
not a threat

Roland
Berger



THE BIG 3

20%

of greenhouse gas emissions are already covered by a carbon pricing mechanism.

→ P. 10

EUR 100/t

is the price of carbon needed by 2030 to meet the Paris climate goals.

→ P. 11

Up to 50%

of companies' profits could be at risk unless they take action.

→ P. 12

1 – PAGE 4 Action on climate change is a matter of urgency. The goals of the Paris Agreement remain a major challenge. **2 – PAGE 6** Pressure on companies is growing. Consumers, investors and regulators are pushing for climate-friendly solutions. **3 – PAGE 10** A new competitiveness paradigm. The price of carbon is an opportunity for companies. **4 – PAGE 16** Strategic recommendations. Companies that change now can get an edge on the competition. **PAGE 18** Conclusion

1 – Action on climate change is a matter of urgency. The goals of the Paris Agreement remain a major challenge

IT IS WIDELY ACKNOWLEDGED that the planet is headed for a climate catastrophe unless we take action now. Levels of atmospheric CO₂ are continuously rising, locking in climate changes for future generations. Global temperatures have already gone up by about 1°C and most scientists expect that figure to reach 1.5°C sometime between 2030 and 2050 – an increase considered the gateway to dangerous warming. Urgent action is called for, particularly with regard to the two major contributors to rising atmospheric CO₂ levels: burning fossil fuels for energy and emissions caused by industrial processes.

Climate change is a particularly pressing threat because of the speed with which it impacts society and nature, for example through biodiversity loss. When a new piece of technology arrives on the scene, its effect on users is gradual. It was almost 70 years before airplanes affected the lives of 50 million people, and despite more than a century of use, electrification remains a major issue today in some parts of the world. Similarly, industrial revolutions have a long "ramp-up" time, often lasting two or more generations. But it is generally agreed that we have at most a decade left in which to halve greenhouse gas (GHG) emissions if we hope to limit global warming. Unless we take action within the next few years, drawing on all the technology that we have at our disposal, the planet is headed for disaster.

Global warming will have a significant impact on economic stability and growth, particularly in poorer countries. Its effect on human wellbeing worldwide is undisputed. In 2015, responding to this mounting threat,

196 countries signed up to the Paris Agreement's goal of limiting global warming to below 2°C compared to pre-industrial levels, and ideally to just 1.5°C. Their focus was on cutting emissions.

The Paris Agreement marked a milestone in the battle against climate change. Many countries have since taken action in line with their pledge. More than 80 nations, responsible for almost two-thirds of total emissions worldwide, have stated that they intend to achieve "net zero" emissions by 2060, bending the curve of ever-increasing emissions.

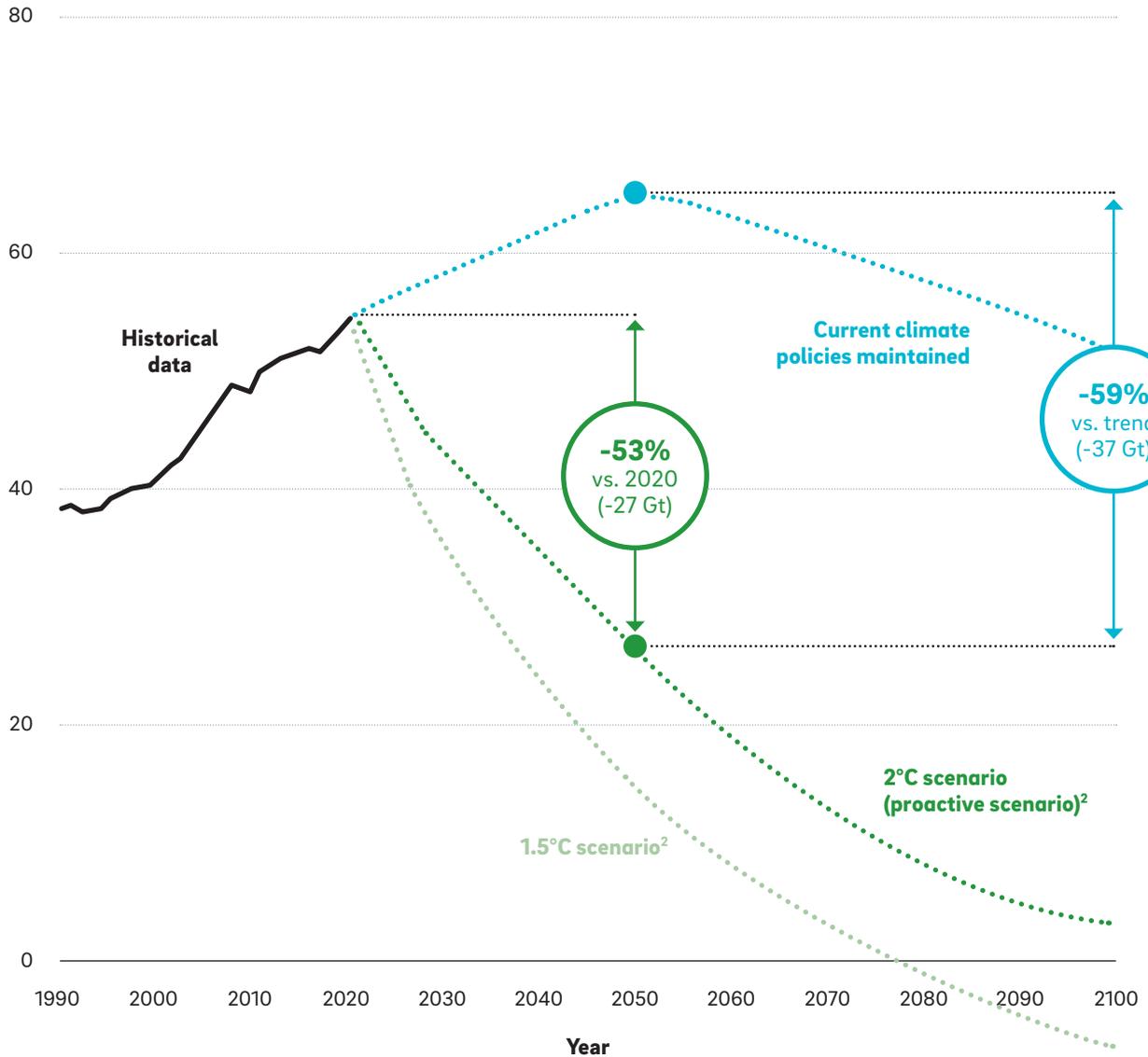
Yet, the Paris goals remain a major challenge. Limiting global warming to less than 2°C by 2050 would require cutting GHG by almost half compared to their 2016 levels; if current climate policies remain unchanged, the gap in 2050 will be around 37 Gt CO₂e a year. Limiting global warming to the more ambitious target of less than 1.5°C by 2050 would mean cutting emissions by almost half as early as 2030, and by three-quarters by 2050. → [A](#)

Clearly, much more action on climate change is needed – and is likely to come. Stricter policies and regulations will be needed in order to put us on track to meet the Paris goals. Resolute steps to reduce emissions will have a direct effect on the economy, changing key parameters for business. The ramifications for companies and their future success should not be underestimated. Below, we discuss some of these coming changes and suggest potential responses by businesses that will allow them to reap the benefits of change.

A

Much more must be done
GROSS GLOBAL ANTHROPOGENIC GHG EMISSIONS

Gt CO₂e/year



¹ Historical data to 2014, restated projected data 2015-20, IPCC emissions trajectory after 2020

² IPCC median 2°C scenario

Source: EDGAR database, GIEC, Roland Berger

2 – Pressure on companies is growing. Consumers, investors and regulators are pushing for climate-friendly solutions

FURTHER ACTION ON CLIMATE change is inevitable, and companies need to respond quickly. Where is the pressure coming from and what form does it take? Below, we look at the three main sources of pressure in detail.

Consumers are increasingly demanding environmentally friendly or "clean" products. They also expect to see transparency over the carbon footprint of companies offering products and services, as well as their suppliers further upstream. Recent survey data shows that around three-quarters of consumers actively look for brands from companies that offer clean products, act sustainably, support recycling and use organic ingredients. As many as 88 percent pay extra to offset carbon for shipping when shopping online, if given the option. This trend is particularly strong for younger consumers: According to some industry insiders, more than 90 percent of millennials would switch brands to one that champions a cause. → [B](#)

Investors, too, are increasingly looking for green assets. Sustainable or "ESG" investing – choosing products that consider environmental, social and governance issues – is currently showing strong momentum among shareholders. Three-quarters of investors are more inclined today to buy a fund with a better carbon footprint. They are also confident that those funds will achieve better returns: Around 56 percent believe

28

trillion EUR

of investment in sustainable assets in 2018

2/3

global share

of emissions that is attributed to countries that pledged to reach net zero by 2060 or earlier

Year

2080

when worldwide emissions need to reach net zero to limit global warming to 1.5°C

that socially responsible companies will outperform their peers with less green credentials.

Reflecting this trend, the share of sustainable assets in total assets under management grew from around one-quarter in 2014 to one-third in 2018, with a CAGR of 13.5 percent. That tendency is likely to continue in the years ahead. Some investors are also divesting from fossil fuels: Already, more than 1,100 institutional investors around the world, who manage around EUR 10 trillion in assets, have committed to reducing the level of fossil fuel stocks in their portfolios. → [C](#)

In 2020, 30 clean technology or "cleantech" SPAC (special-purpose acquisition company) deals were announced and 15 of them completed, representing a total enterprise value of around EUR 1.8 billion. If this momentum is maintained, the total number of companies listing via a SPAC or announcing plans to do so may be more than 100 by the end of 2021.

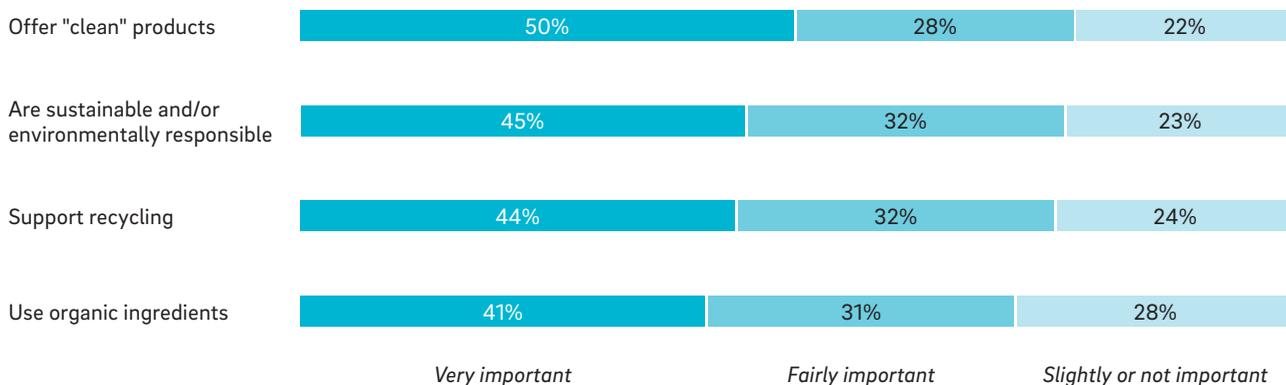
At the same time, regulators around the globe are increasingly pushing for net zero emission goals. More than 85 nations, responsible for almost two-thirds of total emissions worldwide, have publicly stated that they intend to achieve net zero emissions by 2060 or earlier. Norway, Sweden, the United Kingdom and France lead the way here, having already enacted legislation, albeit with varying dates for achieving this goal. Other nations are still discussing relevant issues

B

The trend towards green products and services

CUSTOMERS ARE WILLING TO PAY MORE FOR BRANDS WITH GOOD CREDENTIALS

Consumers are looking for brands that¹ ...



Consumers are willing to pay a premium for brands that¹ ...



¹ Research study of 18,980 consumers in 28 countries

Source: IBM, Roland Berger

or have drawn up policy documents or proposed legislation that now awaits enactment. → [D](#)

Before we move on to what this pressure means for companies, it's worth remembering that this is a truly global issue. Although the United States has been somewhat absent from the climate action stage over the past few years, it is

now making a strong comeback, reengaging in the battle with renewed energy. The combined political and economic influence of the United States, European Union and China, backed up by rising concern around the globe, will ensure that pressure on companies in all countries will increase exponentially in the coming years.

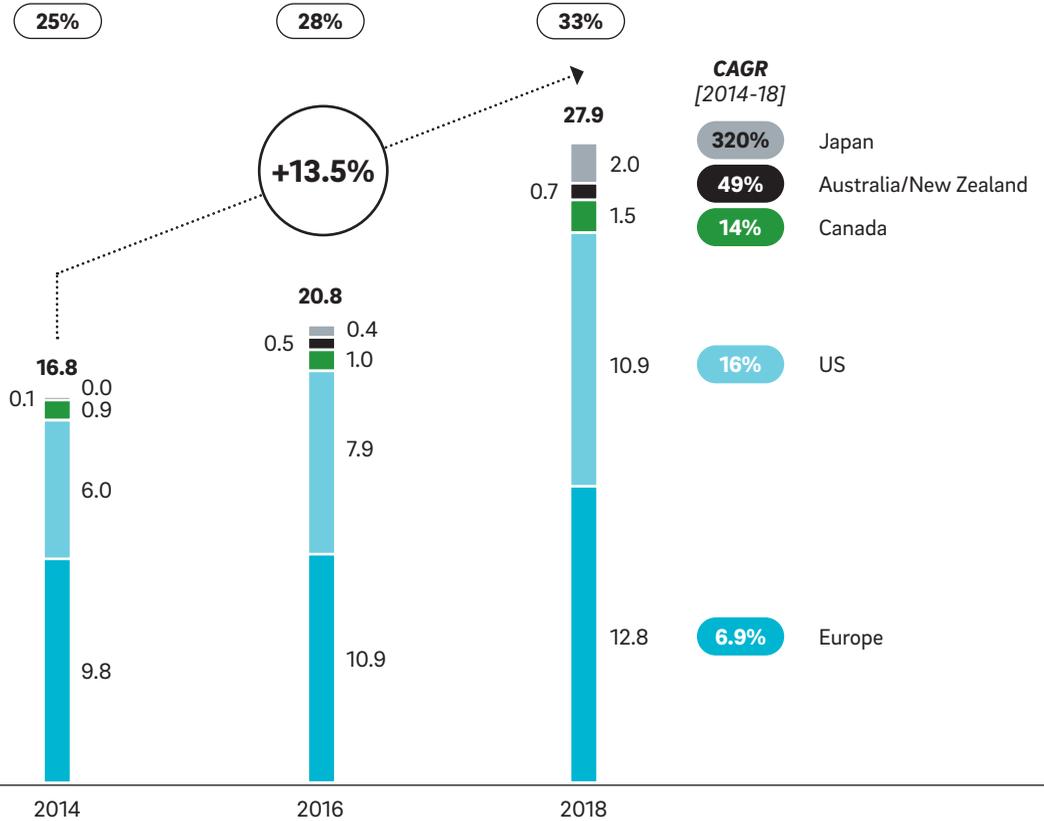
C

The rise of ESG

SUSTAINABLE INVESTMENTS REPRESENT A GROWING SHARE OF TOTAL ASSETS UNDER MANAGEMENT



Proportion of sustainable investments relative to total managed assets



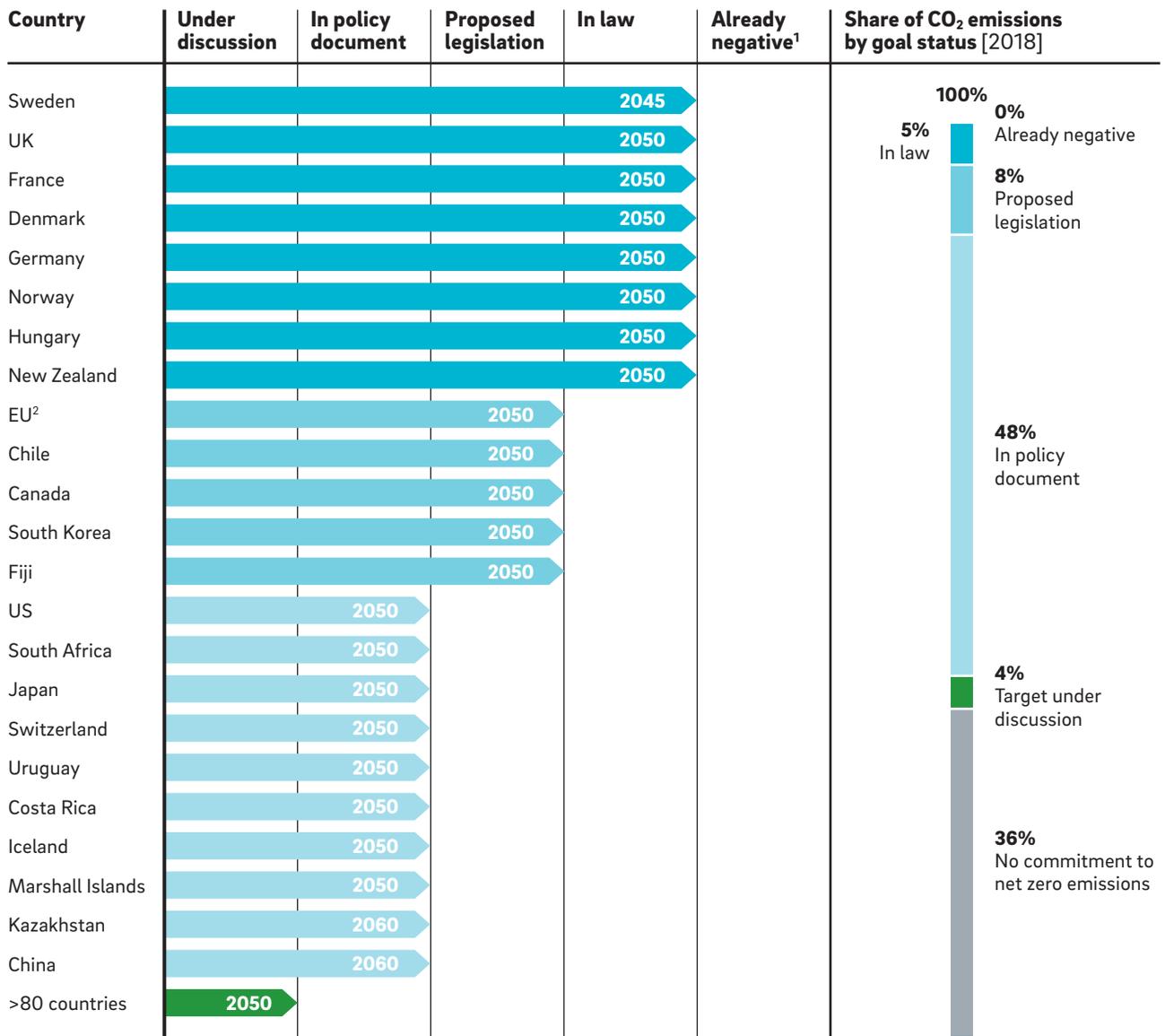
Sustainable investments by region [EUR trillion]

Source: GSI, Roland Berger

D

Regulating for change

COUNTRIES AROUND THE WORLD ARE COMMITTING TO NET ZERO EMISSIONS



¹ Only Bhutan and Suriname have already achieved net zero emissions due to large offset with forestry activities

² To be put in legislation by remaining 22 EU member states; commitment of Poland still under discussion

3 – A new competitiveness paradigm. The price of carbon is an opportunity for companies

AS THE WORLD'S "carbon budget" shrinks – the total amount of greenhouse gas emissions that can still be generated if global warming is to be kept below 2°C – the pressure on businesses will grow even further.

What if they do nothing? Failure to react could well lead to a sudden intensification of action by consumers, investors and regulators. That translates into a twofold risk for companies. In the first place, they will find their access to financial resources and insurance services limited. At the same time, their existing business models will become less viable. Driving this negative development will be dwindling demand for their products and services (a top-line risk), working hand-in-hand with lower margins due to the increased cost of CO₂ emissions (a bottom-line risk).

One way to encourage firms to reduce their carbon footprint is through carbon pricing systems, such as the European Union's Emissions Trading System (ETS) or other cap & trade programs, carbon border adjustments (currently under discussion in the European Union) and specific tax instruments. At present, only 30 or so countries have introduced such mechanisms, covering around 20 percent of all carbon emissions – a figure that is sure to rise in the coming years. But very few of today's prices in market-based mechanisms are in line with the estimated level required to meet the goals of the Paris Agreement, namely a carbon price of EUR 80-120/t by 2030 and EUR 90-150/t by 2040. This level is currently only seen in the most advanced countries, such as Sweden (EUR 123/t) and Switzerland (EUR 98/t). → [E](#)

What would happen if carbon prices were raised to levels in line with the Paris Agreement? What impact would this have on business? To answer those questions, we estimated the "profit at risk" for companies in different industries – automotive, chemicals, energy and utilities, financial services,

and so on – if the carbon price were to go up to EUR 100/t. Startlingly, we found that unless they take action, companies in many industries will see up to 50 percent of their profits put at risk. → [E](#)

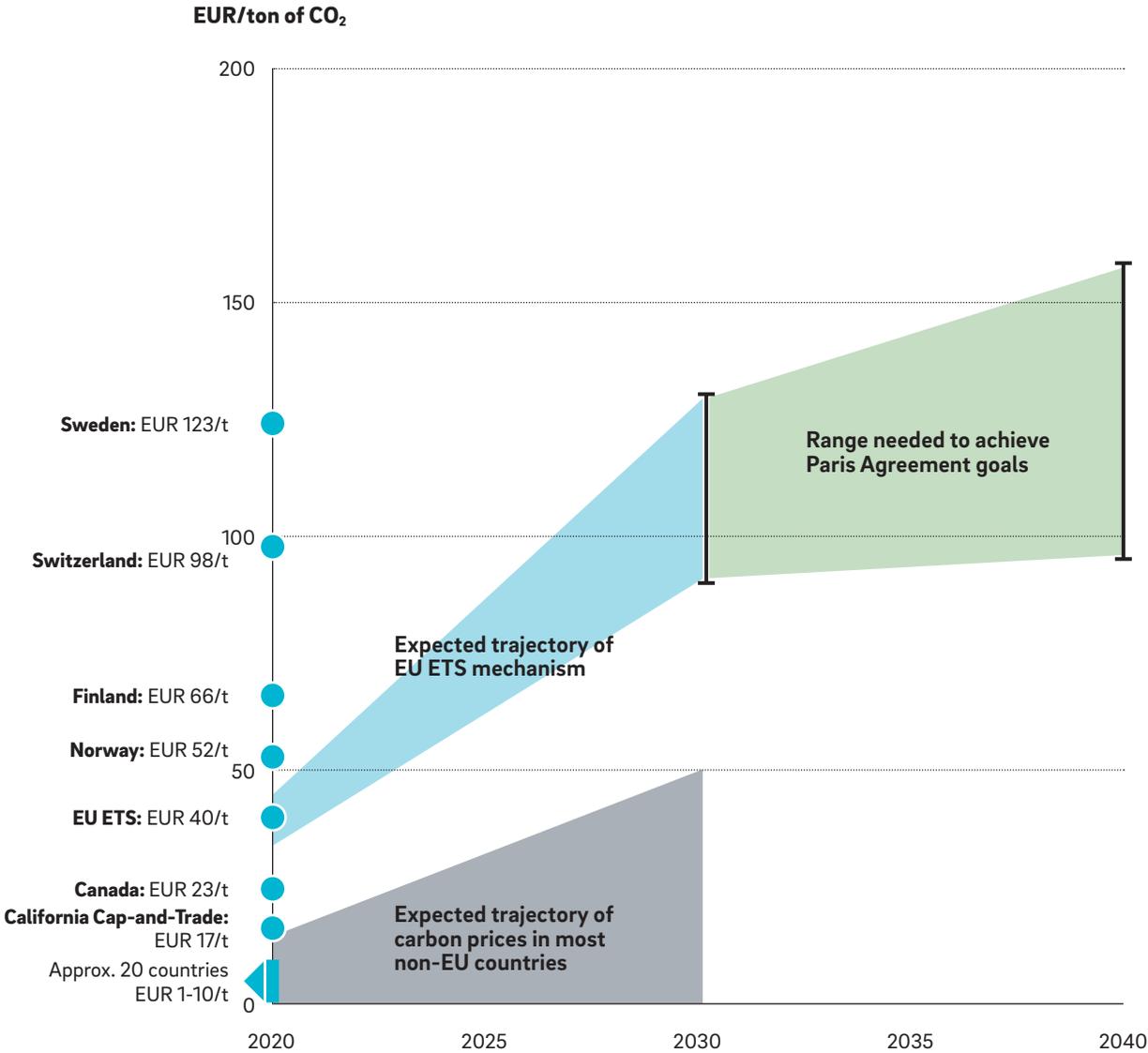
A SHIFT IN MINDSET

Companies need to pay close attention to their carbon footprint and developments in carbon prices. This will fundamentally affect both their operational and their

In this new competitiveness paradigm, a company's value is reflected in its climate action. The number of tons of carbon emissions the company successfully avoids becomes one of its profit pools. As carbon prices rise, so does the value of the new currency.

E

Carbon prices are set to rise CARBON PRICE CORRIDORS 2020-35



● Price as of March 2021

Source: I4CE, Carbon Market Watch, Roland Berger

strategic decisions. But rather than focusing on carbon emissions as a cost, we suggest viewing them as a currency. By choosing to offer climate-friendly, low-emission products and services, firms can transform climate-related risks into climate-related opportunities. This then gives them an edge over their rivals.

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This new competitiveness paradigm requires a shift in mindset. Business leaders need to stop thinking about decarbonization as primarily a drain on their bottom line and start seeing it as an investment in their future competitiveness. Yes, the new currency is a risk for climate

underperformers. But it is an exciting business opportunity for companies who take action on combating climate change.

How does this new way of looking at things, this change of perspective, differ from the old competitiveness paradigm? Traditionally, firms carved out a competitive edge for themselves by leading on either quality or price. Competitiveness was based on factors such as a superior cost structure or a unique product or innovation. In the new competitiveness paradigm, whether a company is competitive or not depends fundamentally on its own action or inaction with regard to climate issues. What the company does or doesn't do in this key area has a pervasive impact on all drivers of competitiveness.

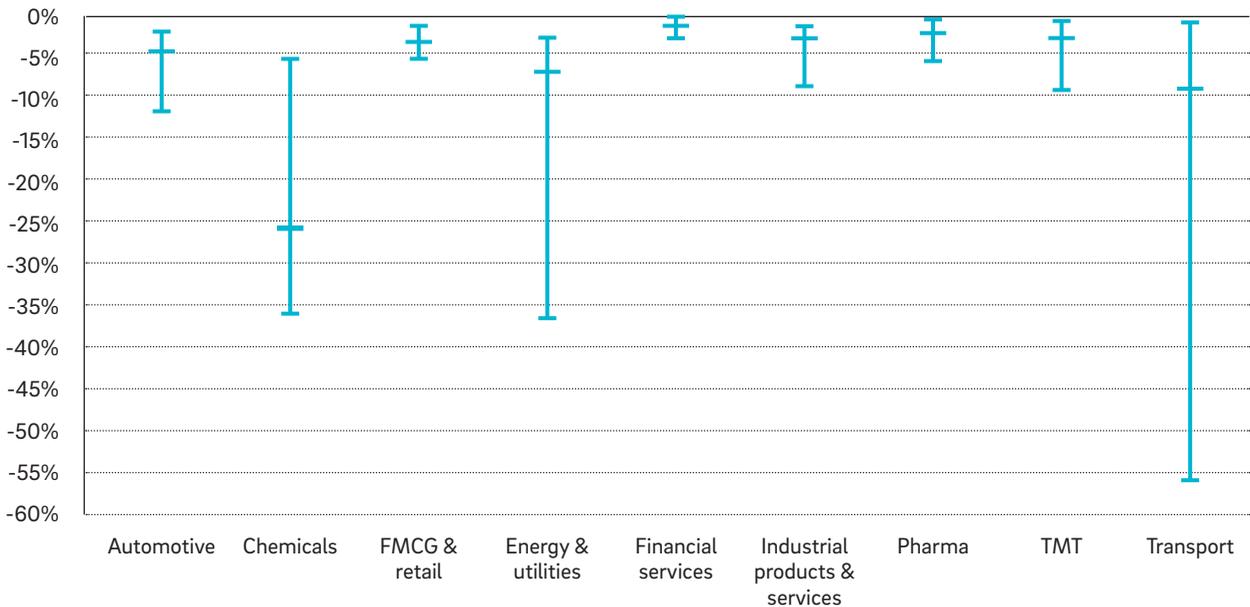
The new competitiveness paradigm also changes the rules of the game, opening up a whole host of fresh opportunities for companies. Companies can create new

E

The risk of inaction

PROFIT AT RISK FOR SCOPES 1 AND 2, ASSUMING A CARBON PRICE OF EUR 100/T

Profits at risk
(25th, 50th, 75th percentiles; % of EBITDA)



Source: Desk research, Reuters, Dow Jones, Roland Berger

business models and capture the corresponding profit pools – for example, net zero motor vehicles with free solar-based recharging, energy efficiency services for buildings, zero-carbon heating, battery recycling, and the like. They can be the first to become carbon neutral or the fastest to lower carbon emissions, creating value by leveraging their lower costs, larger customer base or higher margins. Opportunities abound.

Many companies have already woken up to the possibilities. The number of companies disclosing their emissions has grown strongly over the past four or five years and such companies now represent more than 50 percent of global market capitalization. Of these, more than 1,500 businesses, representing over EUR 10 trillion in revenue and 19.3 million employees, have set themselves net zero targets. The consumer discretionary sector leads the way here, with

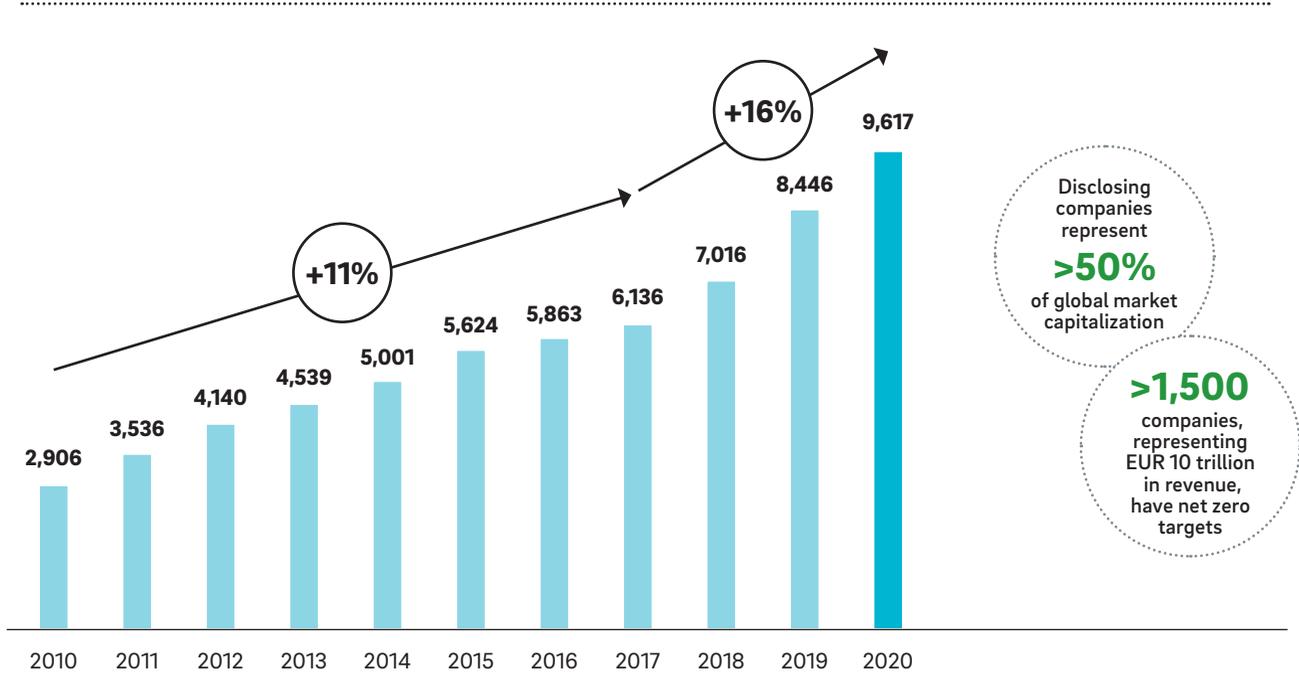
195 companies aiming for net zero, representing EUR 2 trillion in combined revenues and 3.9 million employees. This is followed by the industrial sector, which has 171 companies aiming for net zero, representing more than EUR 1 trillion in revenue and over three million employees. Even in carbon-intensive sectors such as the energy industry, a number of companies are setting themselves ambitious targets, some aiming for net zero in the next few years and others going beyond their direct emission scopes and targeting supply-chain and downstream emissions, too. → G

Sooner or later, everyone will have to play by the new rules. But individual companies will pursue different paths to success, depending on their specific value proposition. On page 14-15 we describe two companies that have successfully adapted to the new competitiveness paradigm – examples that can be successfully emulated by others.

G

Companies are waking up to the possibilities

TOTAL NUMBER OF FIRMS DISCLOSING THEIR EMISSIONS THROUGH CARBON DISCLOSURE PROJECT



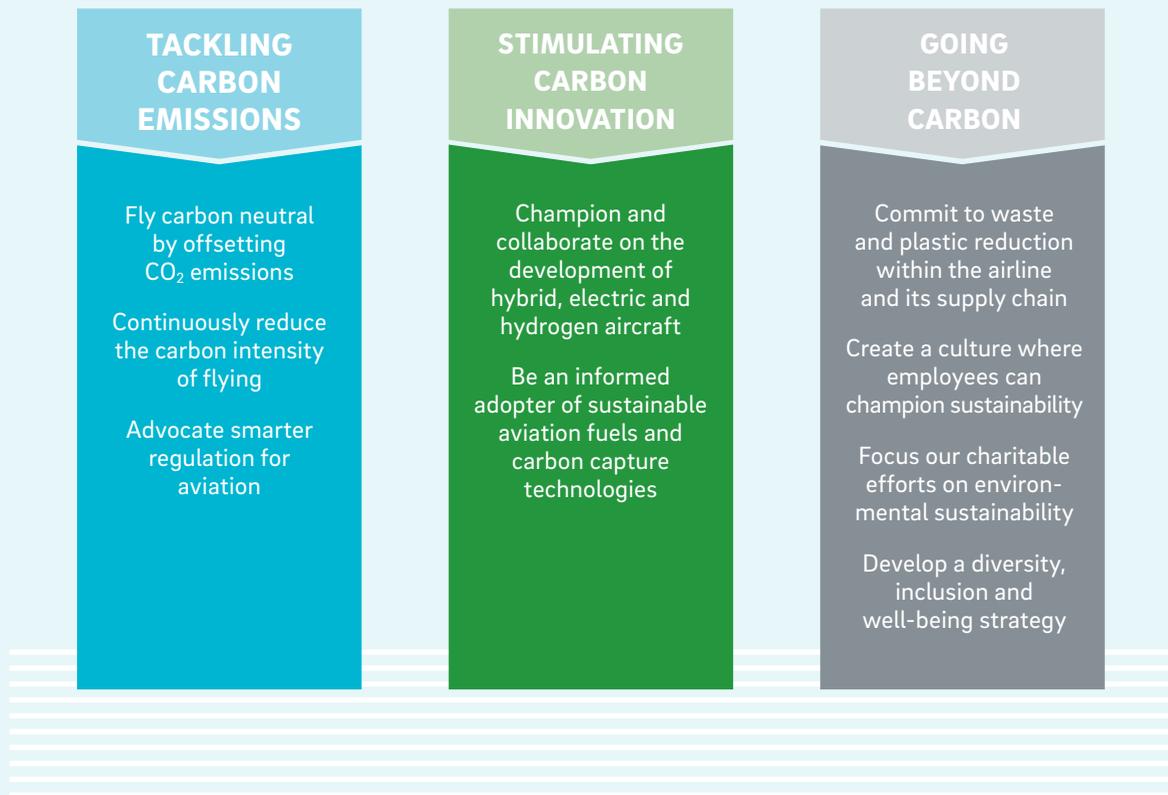
Source: Carbon Disclosure Project, New Climate Institute, Roland Berger

CASE STUDIES

Case Study #1 A major European airline

One major European airline adapted to growing pressure over climate action by developing a new sustainability strategy. With support from Roland Berger, the firm created a three-pillar approach. This included a ground-breaking strategy of offsetting CO₂ emissions through its own carbon offsetting program and partnering with a number of OEMs to support research into innovative zero-emissions aircraft.

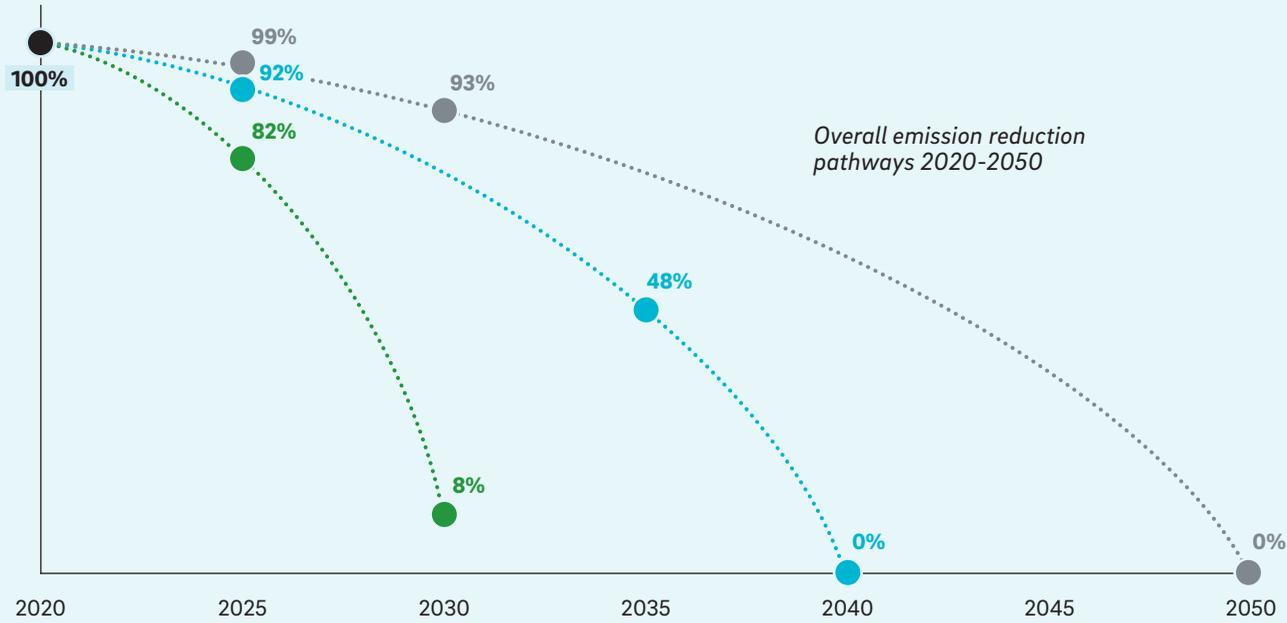
Three pillars of the airline's sustainability strategy



Case Study #2 A global FMCG company

A large fast-moving consumer goods company with a global footprint developed a ten-year decarbonization roadmap for its logistics operations. We projected three decarbonization pathways for the company, showing when and to what extent it could reduce its emissions by following a "maximum", "focused" or "defensive" line of action. The project included examining use cases, carrying out a technology assessment, calculating total cost of ownership and abatement costs, and performing a policy analysis.

Decarbonization pathways
[cost/CO₂ implications]



1. MAXIMUM		2. FOCUSED		3. DEFENSIVE	
Cost increase	Offsetting costs (% of current OPEX)	Cost increase	Offsetting costs (% of current OPEX)	Cost increase	Offsetting costs (% of current OPEX)
+20 -25%	<1% ¹	+15 -20%	1-5% ¹	+10 -15%	5-20% ¹
Phase out fossil tech swiftly, shift to zero emission tech, BEV, FCEV, bio-diesel		Pilot new tech through 2030 and phase out completely from 2030		Secure operational efficiency, conduct offsetting, phase out fossil tech gradually from 2030 onwards	

¹ Considering EUR 100/ton CO₂

Source: Roland Berger

4 – Strategic recommendations. Companies that change now can get an edge on the competition

BY ALIGNING THEIR STRATEGIES with the new competitiveness paradigm, companies can begin to tap the potential offered by the currency of carbon emissions. Below, we offer four strategic recommendations for those that are willing to take the leap.

1

EVALUATE YOUR EXPOSURE TO PRESSURE

We advise companies to evaluate the level of pressure they face to take action on climate change. Ask yourself these questions:

First, which regulations could affect your current business and how much of your profit is at risk? As we saw in Chapter 3, many mechanisms exist that put a price on carbon, including cap-and-trade programs, voluntary trading systems and carbon taxes. At the end of 2020, around 20 percent of global emissions were covered by one of these national or sub-national initiatives. This figure will rise over time. Companies must keep a close eye on which regulations and schemes will affect their business. Some state subsidies for decarbonization technology are available but players should bear in mind that, as the new technology comes in, such incentives are usually quickly phased out. Taxpayers will be unwilling to foot the bill in the long run and the majority of the investment required in decarbonization will have to be made by the companies themselves.

Second, how important is climate action to your customers? Shifts in demand are already occurring in some industries, as evidenced by the growing market for organic food, increased willingness of customers to pay for green products, readiness to offset emissions, and so on. These trends will pull the market towards less carbon-intensive products and services. The same goes for B2B (business-to-business) services, with some clients already pushing suppliers to report their emissions and make visible reductions. In many industries, the aim for players will be to ultimately achieve carbon neutrality right across their value chain.

Third, how do you compare to your peers? Many companies around the world have already committed to becoming carbon neutral, a trend that has noticeably accelerated since 2019. First movers on carbon neutrality can derive a competitive advantage from the value placed on them by customers and markets, their ability to choose which technology provider to partner with, and the chance to set the industry standard for decarbonization technologies in line with their own needs.

2

ASSESS THE IMPACT ON YOUR BUSINESS MODEL

Companies would be wise to look at how the transition towards a carbon-neutral world will impact their current business model. Questions for top management include, on

a practical level: How can you make your manufacturing processes carbon-free? And more generally: How could (or should) your positioning evolve in a decarbonized future? Will your product or service portfolio still be viable? And what will your profit pools look like after the transition?

Of course, the impact on your business model will depend on the industry you operate in. In B2C (business-to-consumer) industries such as FMCG, for example, we are already seeing greater customer expectations with regards to sustainable products and sourcing, reparability, reusability and recyclability of products and packaging. Going beyond marketing claims and actually meeting customer wishes is already essential in order to maintaining revenues.

In the transportation sector, many regions have introduced CAFE (corporate average fuel economy) standards for light vehicles, including the United States, China, India, Mexico, South Korea, Japan and Europe. But the effect of regulation on fleet emissions as a whole has been limited, especially over the last decade. The reluctance on the part of OEMs to develop sales of fully electric vehicles, despite high levels of incentives, is now jeopardizing their activities: not only are the potential fines for non-compliance with the regulations high, but newcomers are also entering the fully

electric sector in response to rapidly increasing customer demand for such vehicles.

For trucks, similar regulations are being phased in across the United States, European Union and much of Asia. Again, the short-term targets are relatively easy to meet, but the long-term targets will require a complete switch to decarbonized transportation. The carbon reduction technology that this generates will depend greatly on the specific use case and driving profile (urban bus, interstate bus, urban delivery, long haul, and so on).

The switch to low carbon has already taken place in power generation, with most new capacity now being renewable. The overall share of coal and gas-based power saw its biggest global decline ever in 2020. This development is driven almost entirely by the fact that renewables have become more competitive than fossil-based alternatives, in most cases even without subsidies.

Heavier industries have so far been less affected by the transition to carbon neutrality. They are subject to carbon pricing mechanisms where such exist, but the quotas at present are large enough to allow a slow decrease in emission levels. Players will be aware, however, that investments cycles in the industry are long and they must

H

How ambitious are you?

FOUR KEY PARAMETERS FOR DEFINING YOUR AMBITION LEVEL



Source: Roland Berger

be careful not to risk ending up with stranded assets as the pressure to decarbonize increases.

3

SET YOUR AMBITION LEVEL

Another important action before you embark on decarbonization is setting your ambition level. This should be based on your evaluation of your exposure to pressure from customers, investors and regulators, combined with your assessment of how you are doing compared to your peers. It should also take into account the size of the investment that you will have to make in order to reach the target that you set yourself.

We recommend using four main parameters when defining your ambition level: the scope or scopes of emissions covered, the time horizon for achieving carbon neutrality, the path that you will pursue, and whether you will primarily aim to reduce emissions or offset them. → [H](#)

4

DEFINE (OR REDEFINE) YOUR CLIMATE ACTION STRATEGY

Defining a climate action strategy – or reassessing it, if you already have one – is a vital step in preparing yourself for a carbon-free world. The strategy should cover all relevant areas, including a new vision, a new value proposition, new sustainable products and services, a new R&D (research and development) roadmap, and potentially a new value chain and footprint.

In essence, the aim of your climate action strategy is to ensure the long-term viability of your business. It is the mechanism by which you guarantee that your operations do not exceed local climate or pollution targets, your sourcing is not at risk due to climate change and not likely to become unavailable post-decarbonization, and your outputs are compatible with a low-carbon world.

Conclusion

Seeing decarbonization as an opportunity, not a threat, requires a shift of perspective at all levels of the organization, from top management to rank-and-file employees. It should form part of an overall sustainability effort that incorporates the United Nation's Sustainable Development Goals and the circular economy practices that help achieve them.

The motivation for making fundamental changes is clear: The pressure that companies are already feeling will only increase over time, creating a real risk for profits. But the potential payoff is equally great: Companies that act now not only avoid the threat of being left behind, they also carve out a significant advantage for themselves in the new competitiveness paradigm.

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We welcome your questions,
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You'll find these solutions and further publications on our landing page on Sustainability & Climate Action

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