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TRANSFORMATION
FORUM

Beyond the tipping point

New value in a new sustainable future

November 2021

'Moving to a sustainable future: Let's ban red meat from stores and restaurants as of tomorrow'

DTF NextGen, 13 October 2021, On the Road to NetZero in 2050.

Foreword

This was one of the thoughts that popped up during the NextGen Dutch Transformation Forum. On the one hand, this idea does make sense considering the impressive ecological footprint of meat consumption[1]. On the other hand, we all know that the real and lasting solution is (a) not so straightforward and (b) calls for integral approaches rather than isolated ideas.

There is no doubt these days: the world urgently needs a transition towards a sustainable future in three domains – food, energy, and materials. This calls for an integrated set of measures and strategies. As it happens, this integrated thinking was also paramount during the NextGen session. One of the conclusions: business leaders need new frames when assessing new business models and strategies. Lasting change will be built around the concept of value, as success has always revolved around creating value. We may, however, need to put a new lens on value.

Think of it this way: if you can think of a model that creates societal value, there must be options to translate this into financial value for your company as well. To this end, however, you may need to rethink propositions, enter new types of partnerships or explore clever ways to merge individual interests into common interests.

This may not sound as catchy as banning meat. But it is a way more promising approach.

With this paper we hope to inspire you to explore the opportunities (and the position of The Netherlands in this respect) and what you can do to help. Based on a series of interviews, a questionnaire among prominent public and private sector leaders – and own research – we conclude that the pressure is mounting but also that there is a unique tipping point to turn ideas into action. This action is, of course, not only needed when it comes to innovating business models. It is also about product innovation. About influencing consumer behavior. About the role of politics. And about value creation beyond finance.

The beauty is that all of us can play a vital role in the change. From world leaders, to scientists, to politicians, to business leaders and individuals in society.

[1] https://www.fao.org/3/i3437e/i3437e.pdf

We look forward to a rich discussion at the 2021 edition of the Dutch Transformation Forum.

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Stephanie Hottenhuis,
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What happens when climate becomes the new digital?

How can we future-proof the health of our planet? In a time when climate effects receive prominent media coverage, there's a lively debate about this question. One thing is crystal clear: we're hitting the boundaries of what our planet can deal with. Throughout the whole world, the effects of greenhouse gas emissions that warm up the atmosphere are being felt. At the same time, we see alarming reports on the social perspective of a sustainable future.

The mission: we must design and implement a set of coherent measures to mitigate climate change and to prevent the earth system from being pushed into irreversible change. It's a mission of the utmost urgency and, with a reference to the Titanic, one could say that the violins have stopped playing.

In this paper we analyze the situation we're in and – more importantly – explore how we can deal with this urgent matter. We also consider the roles that various stakeholders play in this challenging transition. We need radical change.

Looking at the situation from a distance, a compelling yet optimistic message emerges: we are convinced it can be done.

First, human beings historically have proven to be a creative species when the going gets tough. The Covid-19 crisis has yet again shown that we can be adaptive, provided we devote the right resources to the right issues.

Secondly, we think that radical approaches are not only necessary but also feasible. This may sound somewhat optimistic at a time when world leaders can't seem to make tangible progress in joint arrangements on fighting climate change. Despite this apparent and disappointing lack of joint agreements, we have to bear in mind that, in the twenty-first century, the power to transform societies may come from another source altogether. In this day and age, the necessary radical approaches may result from evolving business strategies, executed in close cooperation with other stakeholders.

In fact, we believe that for business leaders and their strategies, climate is now 'the new digital'. A growing number of business leaders understands the strategic importance of building a sustainable future, just as over the past 10 years they understood that going digital was the name of the game. They now fully grasp that they don't need to choose between profit and the protection of the planet and the people on it. The two should go hand in hand. This means that business leaders now start designing business models that recognize and potentially capitalize on the creation of societal value. Our bold statement is that any company that has a proposition or a business model that creates value for society, must be able to translate this into a business model where there is also financial value to be harvested. If not, the business may not even have a justification to exist. Yes, we will need creative minds to design these business models. And no, there are no easy answers. But isn't that just what digital strategies were about 10 years ago?

Moreover, we are optimistic about the role Big Tech could play here. In its annual report on Trust, Edelman concluded this year that 'Tech loses its halo'. In recent years, tech companies have indeed been heavily criticized for how they use their power. On the other hand, there is a silver lining to their powerful position: big tech companies can also use their influence to contribute to a sustainable future. Yet again, there are no easy answers here. But it is promising to see that big names from the tech world have already jumped on the bandwagon of new opportunities.

We believe there is one other crucial factor for success: we need a compelling narrative that connects the dots of all efforts in the transition. It's a journey where all stakeholders need to be on the same page. We must all have a clear understanding of our joint mission and our role in it. Once this is the case, we can use the momentum to make real impact towards a sustainable future. Just like the impact that we have witnessed in digital transformations over the past decade.

We hope this paper serves as a good starting point for this narrative.

Introduction

After the industrial revolution, there has been a great acceleration in living standards in advanced economies. Gradually, the price we pay for this is becoming increasingly clear in the form of aggravating impacts of climate change and corresponding environmental and social problems[2]. These problems have become very pressing in the 21st century. Heat waves, heavy downpours and major hurricanes have become the new normal. Their impact is felt by citizens from Canada (recent extreme heat) to the Dutch province of Limburg (floods of the river Geul and Maas) to California (heat waves resulting in wildfires) and remote island communities on low-lying islands and coasts suffering from rising sea levels.

Every day, we witness signals of boundaries of our social and environmental systems being reached[3]. Scientific research also points out that we have reached the boundaries of our ecosystem. At times, it may be a bit depressing to read these analyses[4] and see the damaging effects for our planet and our society.

However, one could also argue that there is a silver lining to all of this. Not only have we reached the boundaries, we have also reached an exceptionally strong momentum for change: a tipping point.

At this point in time, system changes are simultaneously taking place in various domains, and this may be the perfect breeding ground for a turbocharged transformation of our economy. It is a combination of technological innovations, social movements, changing political ambitions and evolving commercial opportunities for companies. We can witness some unprecedented signals of these tipping points in the media every day: world leaders taking decisive and ambitious actions towards climate change[5], court rulings forcing large corporates to reach their climate goals[6], central banks implementing policies that drive sustainability[7], supranational programs such as Net Zero[8] and Fit for 55[9] aiming for goals that were previously unthinkable. And many other ground-breaking events and initiatives[10].

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[2] https://www.pbl.nl/sites/default/files/downloads/pbl-2020-trends-in-global-co2-and_total-greenhouse-gas-emissions-2020-report_4331.pdf
[3] https://www.overshootday.org/
[4] https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Full_Report.pdf
[5] https://www.consilium.europa.eu/en/policies/climate-change/
[6] https://transformativeprivatelaw.com/friends-of-the-earth-netherlands-versus-royal-dutch-shell-all-companies-must-act-against-climate-change/
[7] https://www.climatebonds.net/2021/08/banking-climate-action-central-banks-hot-seat-systemic-sustainability
[8] https://unfccc.int/climate-action/race-to-zero-campaign
[9] https://ec.europa.eu/commission/presscorner/detail/en/IP_21_3541
[10] https://academic.oup.com/bioscience/article/70/1/8/5610806

Perhaps the most important factor that fuels the momentum for radical change: business leaders are starting to understand that there will no longer be a choice between profit and the protection of the planet and the people on it. The two should go hand in hand. Sustainable strategies that incorporate both are increasingly recognized as the best approach for value creation.

In short: we are now in the middle of a combination of transitions. The eggs are scrambled. And as we all know, you can't unscramble eggs…

The question is: what does this transition imply for organizations' strategies and governmental policies?

In this perfect storm, the cards will be reshuffled. However, one thing remains a constant. Success has always revolved around creating value – and it will always revolve around creating value. The concept of value, however, will be very different from what we are used to, in three respects:
- the drivers of value will be different;
- the risks that may threaten value creation will be different;
- the concept of value itself will be different.

The starting point of value creation for all involved will be in translating the Sustainable Development Goals (SDGs) into future scenarios and use these as the basis of strategies and policies. Although this may sound very logical, its consistent execution is hard. It calls for new ways of cooperation with stakeholders, for new metrics or perhaps even a new language for value creation, for seamless integration of silos in organizations, for a new paradigm in the investment community, for radical innovations and for much more. It will be a matter of exploring, learning, failing and trying all over again. Just as organizations had to redefine strategies for a digital era during the first two decades of the 21st century. In this paper, we analyze the position of The Netherlands in this challenging transition and the key domains to help leaders succeed with this exploration.

Chapter 1
We've reached multiple boundaries: The violin players have stopped playing

In 1856, Eunice Newton Foote was the first scientist that found that altering the proportion of carbon dioxide in the atmosphere would change its temperature. A few months later, she was barred from reading her findings at the meeting of the American Association for the Advancement of Science. Why? Because she was a woman.

More than 150 years later, many things have changed.

First, since then, many women have successfully become top scientists and denying their role would not be accepted in most countries in Western society. This is an important topic, but although gender equality is one of the SDGs, this is not the focal point of this paper.

Second, the climate effects of greenhouse gases became one of the most researched and debated topics in the last 50 years. This is understandable because the stakes are high. We're dealing with nothing less than the future of our planet and humanity.

Third, and perhaps even more important for this paper: throughout the whole world, the effects of greenhouse gas emissions warming up the atmosphere are being felt. We are hitting the boundaries of what our planet can deal with[11]. If we cannot agree on a unified and coherent set of measures and act on them, climate change could push parts of the Earth's system into abrupt or irreversible change[12], and as a result we will face catastrophic developments: extreme weather and rising sea levels endangering global food supplies, causing disruptive mass migrations, and increased danger of wildfires[13].

For the first time in history, the atmosphere has exceeded the 400 parts of carbon dioxide per million particles of air (PPM). This is a very considerable rise compared to the level of 278 at the beginning of the industrial revolution, and causes global warming. In 2015, world leaders aligned during the 2015 Paris climate summit to limit the rise of temperatures to no more than 2 degrees Celsius. This calls for rigorous cuts in emissions. Which need to be achieved in a short timeframe and we are running out of time.

[11] https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Full_Report.pdf
[12] https://www.carbonbrief.org/explainer-nine-tipping-points-that-could-be-triggered-by-climate-change
[13] https://www.theguardian.com/science/2020/sep/19/the-tipping-points-at-the-heart-of-the-climate-crisis

The recently published IPCC report on climate change has once more confirmed that global warming is an alarming scenario and that the current pace of action will not get us to where we should be.

In addition to the PPM amounts in our atmosphere, there are more signals showing that the ecosystem is being threatened by human activity. Deforestation and land use decisions have a negative contribution to both climate change and biodiversity.

All these factors should not be seen in isolation as they are strongly connected and tend to require challenging trade-offs. One example of this is that vigorous efforts to cut back on CO2 emissions will contribute to avoiding breaking the planetary boundaries but could have negative social consequences for large labor forces in low wage countries.

The social aspect of the challenge is just as relevant as the environmental one. All these signals point out that we have reached boundaries. An interesting fact is that this we are not only increasingly aware of our natural planetary boundaries, but also of our social floors. There is a growing sentiment that inequality has grown out of hand[14], that we can no longer accept growing social injustice, and that the power balance has shifted in unacceptable ways to some mega corporations and their data-driven business models. Many research papers have been devoted to these worrisome developments and a series of popular (Netflix) documentaries spark anger among large groups of people. Moving to a high efficiency and low-carbon energy system does not come without a price tag. Both the required investments and future carbon pricing will drive up energy prices, which means that poorer households will spend a higher share of their disposable income on energy – thereby increasing inequality.

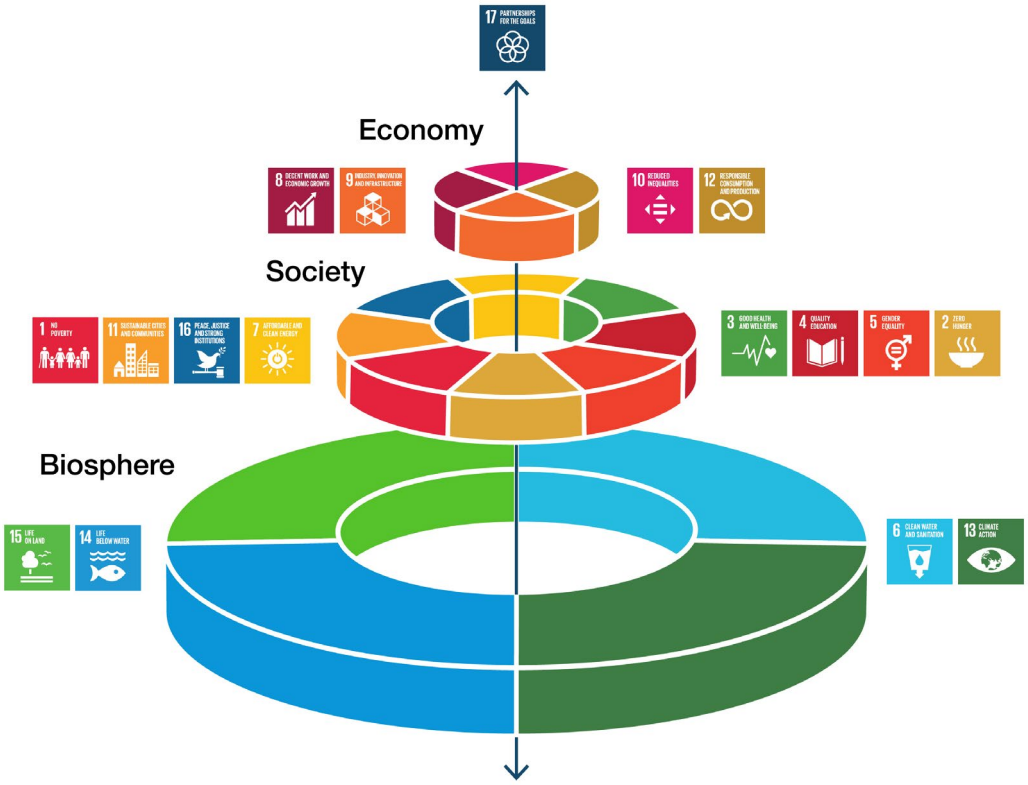
By analogy with the sinking of The Titanic: the violins are no longer playing to help keep the passengers calm as the crew load the lifeboats. In this case, they have simply stopped playing.

Connecting the dots

For a solution we should not regard social, economic, and ecological development as separate parts of the challenge, because they are inherently interlinked. The so-called Wedding Cake Model[15] offers a practical way to assess these connections, based on the Sustainable Development Goals. This model argues that economies and societies should be seen as embedded parts of the biosphere.

[14] https://www.oecd.org/els/soc/41494435.pdf
[15] https://www.researchgate.net/figure/The-SDG-Wedding-cake-shows-the-biosphere-as-the-foundation-of-economies-and-societies_fig1_349110621

The idea is that sustainable development respects the biosphere as the foundation for our economies and societies and we need to take this into account in our financial and economic decision making accordingly. The biosphere layer is the biggest layer at the basis and must be the priority in our policies. This makes sense as it is fundamental: we can't reach any of the SDGs if we don't have a biosphere to breathe in or grow our food. Next, the society layer includes factors like peace and justice, reducing poverty and famine, health, and wellbeing. The stronger this layer is, the better we are at creating a society that excels in innovation and growth. We will not have a thriving economy (the third layer in the model) if we are struggling to survive in our natural environment or suffer from injustice or illnesses. In other words: each layer depends on the one below.



Case for change: the need for transition

To reach the Sustainable Development Goals by 2030, rigorous change is needed. This notion is also found in many papers as a core rationale explaining why societies need to achieve systemic change. A transition.

The question is: is the world ready to embrace this systemic change wholeheartedly? In the next chapters we will search for answers to this question for our global society – and The Netherlands in particular.

Chapter 2
We've also reached a unique momentum: The Sputnik moment for sustainability

Popular management speak has it that change calls for a so-called burning platform, a situation where it has become painfully clear that action is needed. In chapter 1, we argued that there can hardly be any doubt about this: all the ingredients of a burning platform are there. The heat is on. Literally. However, to bring real change, we also need various stakeholders to change their perspectives and translate these changed perspectives into powerful actions. Precisely this is taking place right now. The Sputnik moment of sustainability seems to have come upon us.

In 1957, the Soviet Union launched the Sputnik – the first human-built satellite – into orbit. It proved to be a key trigger for the United States to massively step-up efforts in space. It led to the creation of NASA and huge investments in research and education. Looking back on it, this wasn't just an 'Aha!' moment, but rather a culmination of trends that were already happening in the years before.

We could argue that the same trigger mechanism is now taking place when it comes to the sustainability of our planet. Several unprecedented events and developments clearly point into this direction, as we will argue in this chapter. This time it is not about being the first human in space or on the moon. It is about ensuring a livable world for future generations.

In this chapter, we will briefly touch upon four relevant developments.

1. Investors change direction: money moves everything

Throughout history, capital has always followed opportunity. It is therefore very promising to see that the investment community has embraced the power of ESG.

This change is very noticeable at Private Equity firms. Many of them now embrace ESG criteria to assess risks and value creation opportunities of the companies they invest in. ESG has evolved into a key source of value creation, and this is a marked change compared to ten years ago.

At the time, ESG was an important topic for Private Equity firms as well, but it was mostly considered a compliance topic. By now, ESG has earned a central place in the strategy and investment approach and the trend towards incorporating ESG in investment decisions will only rise[16] [17] [18]. In a turbulent year marked by the effects of the Covid-19 pandemic, the surge in ESG assets was bolstered by a stimulus-driven market recovery and because investors were increasingly looking for more resilient investments.

The fact that capital is seeking new opportunities is felt in a broad domain of the investment community. Many asset managers have shifted their strategies towards ESG, and BlackRock, one of the world's biggest investment management firms, uses its sheer market power to influence the discussions in boardrooms worldwide. It is well known that BlackRock chief Larry Fink has a yearly tradition of writing a letter to the world's CEOs with an urgent message on climate change[20]. The New York Times noted that in the weeks after his letter early 2020, Microsoft announced a plan to be carbon-negative by 2030, Salesforce pledged to conserve or restore 100 million trees over the next decade and even Delta Air Lines announced a $1 billion effort to be carbon neutral in 10 years[21].

Of course, the precise timing of these ambitious corporate efforts is a coincidence.

But it has become clear over the last years that the investment community in general – and BlackRock specifically – has an enormous influence. BlackRock can simply sell the shares of companies owned by the firm's actively managed fund that don't heed Mr. Fink's call and can exercise its voting rights as a shareholder. Apparently, BlackRock is not hesitant to use this power. In 2020, the firm voted against 69 companies and against 64 directors for climate-related reasons, while putting 191 companies 'on watch'.

Some still believe that idealism plays a key role in this shift. Their perception is that to make the world a better place, one should sacrifice some financial return. This view is outdated. Studies have found that companies which develop organizational processes to measure, manage, and communicate performance on ESG issues, outperformed a carefully matched control group[22].

Remember that capital follows opportunity?

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[16] https://home.kpmg/nl/nl/home/insights/2021/06/climate-stability.html
[17] https://home.kpmg/nl/nl/home/insights/2021/06/healthy-ecosystems--healthy-returns-.html
[18] https://home.kpmg/nl/nl/home/social/2020/02/the-bar-for-esg-integration-will-be-raised.html
[19] https://www.reuters.com/article/us-global-funds-sustainable-idUSKBN29X2NM
[20] https://www.blackrock.com/corporate/investor-relations/larry-fink-ceo-letter
[21] https://www.nytimes.com/2021/01/26/business/dealbook/larry-fink-letter-blackrock-climate.html
[22] https://pubsonline.informs.org/doi/10.1287/mnsc.2014.1984

The investment community is not only focused on the important topic of climate change, but also on other areas of ESG. A striking example of this is the failure of the Initial Public Offering (IPO) of Deliveroo early 2021. By then, many top investors were critical about the company's treatment of its employees. The business model was perceived as exploitative, and many couriers earned an average income below the minimum wage. Admittedly, there were other reasons for the failure, such as bad market timing and a criticized dual-class shares structure. But it was nonetheless striking to see how investors stood up.

Capital markets reflect the new paradigm well. One example of this is the moment when a Dutch court demanded that Royal Dutch Shell should slash carbon emissions. The index of euro-denominated debt issued by energy companies saw its spread widen compared to debt issued by non-financial companies, a trend that had been going on for months already[23]. In other words: the cost of capital for companies that are perceived as non-sustainable went up.

The widening in the spread is also linked to another change: Central Banks making moves to favor sustainable companies in their bond-buying programs[24]. Christine Lagarde, President of the European Central Bank, and other ECB policy makers see a role for central banks to factor climate risks into corporate bond-buying programs. In March 2021, the UK government directed the Bank of England to expand its mandate beyond price stability to also contributing to the net zero ambitions, meaning the country's carbon emissions are fully offset[25].

Corporate leaders are by no means deaf to all these signals. Most of them have understood for many years that businesses have a key role to play in tackling urgent challenges such as climate change. But in the old paradigm, many of them believed that this runs counter to the wishes of their shareholders. This is simply not true anymore. Shareholders increasingly demand sustainable strategies.

2. Political advocating is no longer about creating fear

European Commission President Ursula von der Leyen created a 'man on the moon' moment when she introduced the European Green Deal by the end of 2019. It is an ambitious program for a transition to a low-carbon economy. The overarching objective is to become the first climate neutral continent by 2050 and thereby paving the way for future generations to be able to have a prosperous life that stems the climate and biodiversity crisis and creates sustainable business models and lifestyles.

[23] https://www.wsj.com/articles/shell-exxon-decisions-highlight-rethink-in-energy-investment-11622109522
[24] https://www.ecb.europa.eu/press/key/date/2021/html/ecb.sp210125~f87e826ca5.en.html
[25] https://www.bankofengland.co.uk/prudential-regulation/publication/2021/june/climate-related-financial-disclosure-2020-21

At present, the political momentum for this ambitious program seems to be strong. A newly elected president in the US also brought a new political wind about climate efforts, supporting companies in their transformation efforts. China is accelerating a public-private driven sustainable transition and shows a strong execution power. Climate change has in fact become an arena for competition.

There can be no doubt that real impact depends on an integrated global approach. Before Covid-19, the EU emitted about 8 percent of the world's greenhouse gases[26]; as such, to stop global warming, the Green Deal must be pushed beyond the EU borders. Diplomats are therefore working hard to persuade other countries to step up their efforts under the Paris Agreement. The European Commission adopted a proposal for a new Carbon Border Adjustment Mechanism in July 2021, which will put a carbon price on imports of targeted selected of products to extend Europe's ambitious climate action beyond European borders[27]. This could spark trading tensions with countries like Russia, China, or the US. However, research shows that putting a price on carbon, in the form of a fee or tax, is an effective way of reducing GHG emissions and pollution levels globally[28]. This can hardly come as a surprise to world leaders, as over the last decades many economists have made strong arguments that pricing mechanisms for externalities such as emissions are a very effective solution.

The sense of urgency is felt by a vast majority of Europeans, especially young ones. 70% of Europeans endorse more stringent climate protection measures, a survey by the European Investment Bank concluded[29]. Having said that, public buy-in encompasses a broad demographic: climate activists demand a perfect Green Deal to halt climate change, whereas at the other end of the spectrum there are citizens (and countries) who fear that rapid transformation may damage their economic future.

The immediate future will be decisive. Implementing practical measures requires upending many different domains — industry policies, taxation, agriculture and many more. It is in fact a matter of vigorously redefining market conditions. Many Northern and Western European countries are pressing hard for ambitious policies. The European Parliament is calling for a 2030 emissions cut of 60 percent, which is more than the Commission's previous recommendation of 55 percent. On the other hand, coal-dependent countries like Poland are less ambitious. The challenge for political leaders is to find a middle ground that has real teeth. A middle ground based on a vision of a revived Europe where the Green Deal tackles climate change but also provides new jobs and offers economic potential.

[26] https://www.eea.europa.eu/highlights/eu-greenhouse-gas-emissions-kept
[27] https://ec.europa.eu/taxation_customs/green-taxation-0/carbon-border-adjustment-mechanism_en
[28] https://www.weforum.org/agenda/2021/06/addressing-climate-change-through-carbon-taxes/
[29] https://www.eib.org/en/surveys/climate-survey/3rd-climate-survey/index.htm

This is precisely why it's so encouraging that the investor community has fully embraced the ESGs (see development number 1 'Investors change direction: money moves everything'). In the past, many politicians have advocated for change through fear for the consequences of inadequate measures. Now politicians can start pitching the huge economic opportunities.

3. Big Tech loses its halo but is also on the lookout for new opportunities

The power of Big Tech – with big names like Amazon, Apple, Facebook, Google, and Microsoft – has skyrocketed in a hyperconnected society. They are often criticized for their dominance and held accountable for many societal problems – from human rights to a growing mass-class divide. Governments on both sides of the Atlantic are seeking to take measures to reduce their influence. It proves to be a challenging battle.

However, there is also another side to the coin.

Now that citizens lose their trust in tech companies[30], it has become in the (urgent) interest of the tech sector to adapt to the societal demands. In their yearly report on Trust, Edelman concluded this year that 'Tech loses its halo'. From the report[31]: "The theory of libertarianism is now proven to be a failure; it is in the interest of the tech sector to hold itself to account in a most transparent manner." And an even more promising passage in this report reads that employees of tech companies may be a strong driver of change. They are more convinced than ever about their ability to change corporate strategy in line with their values: "Fifty-nine percent of tech employees said that they are now more likely than a year ago to engage in workplace protests if they disagree with a corporate policy."

Yet again, change may not only come from societal pressure nor the values of a collective of employees, but also from a financial perspective. Money may be the strongest driver of change here as well. In general, tech entrepreneurs feel at home in a transforming the environment and they are now attracted to the domain of climate change as they feel it will be the epicenter of the next entrepreneurial revolution. Climate tech investment increased from $418 million per year in 2013 to $16.3 billion in 2019, outgrowing the venture capital market rate five times[32]. Climate may become the 'new digital'.

Big names from the tech world are eager to jump on the bandwagon of new opportunities and – yes – they already create (personal) wealth with this[33]. A wide range of sectors – from heating and cooling systems to agriculture – offers them interesting 'playgrounds' for innovations towards a greener future.

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[30] https://www.forbes.com/sites/forbestechcouncil/2021/06/28/trust-in-tech-industry-is-at-all-time-low-four-ways-to-change-that/
[31] https://www.edelman.com/trust/2021-trust-barometer/trust-technology
[32] https://www.pwc.com/gx/en/news-room/press-releases/2020/climate-tech-investment-report-climate-week.html
[33] https://www.bloomberg.com/features/2020-green-billionaires/

This playground is becoming even bigger in the wake of extreme weather circumstances in the recent past. These call for reshaping the residential and office construction and alternative concepts for where and how food is produced. Experts also predict that massive climate migrations may take place in the near future and these millions of people will be in urgent need of homes. With the existing climate change scenario, by 2030, water scarcity in some arid and semi-arid places will displace between 24 million and 700 million people[34]. This is yet another huge challenge. However, history shows that the best business opportunities often come to light when companies solve urgent problems for their customers. We could hardly think of anything more urgent.

4. Covid-19 serves as a useful pressure cooker

Popular wisdom has it that you should never waste a good crisis. There is little doubt that Covid-19 proved to be disastrous to society throughout nearly all regions of the world. However, the pandemic also proved to have a silver lining to it when it comes to ESG.

Many experts feared that the pandemic would dispel concerns about the environmental challenges or climate change. Their line of reasoning was that when companies had to choose between cutting back on sustainability efforts or dividends for investors in times of economic crisis, sustainability programs would be the first victims. This scenario did not materialize. When Covid-19 paralyzed large parts of society, the emphasis on climate change became an even greater focus within companies and among investors[35].

More in general, Covid-19 highlighted the adaptive power of humankind and showed that in a pressure cooker many routines and values can be reconsidered in a quite fundamental way, powered by the backbone of our strong digital infrastructure. Yuval Noah Harari wrote an essay for the Financial Times on Covid-19. His main point: humankind was not so helpless as many people think and digital infrastructures made things controllable and manageable. “In fact, 2020 has shown that humanity is far from helpless. Epidemics are no longer uncontrollable forces of nature. Science has turned them into a manageable challenge. Why, then, has there been so much death and suffering? Because of bad decisions.”[36]

5. On a crossroads toward transition

This adaptive power during Covid-19 is cause for hope that humankind is capable of big things when the stakes are high and when the going gets tough. All in all, our foregoing analysis shows that there is indeed a perfect storm and that preconditions for a real transition probably have never looked this good.

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[34] https://www.un.org/waterforlifedecade/scarcity.shtml
[35] https://home.kpmg/nl/nl/home/insights/2020/10/prioritizing-in-a-pandemic.html
[36] https://www.ft.com/content/f1b30f2c-84aa-4595-84f2-7816796d6841?utm_source=pocket_mylist

However, to make this massive transition work, we must look from the perspective of society as a complex multifunctional system combining diverse elements. A report from the EEA uses the analogy of the emergence of the car as the dominant form of land-based transport[37]. In those days, we needed private investments in skills, knowledge, and infrastructure for car production; public investments in road infrastructure; emergence of complementary industries to manufacture and deliver fuel, tires and other accessories; adaptation of urban design to the car; and changes in behavior, expectations and cultural values linked to car ownership.

Likewise, addressing persistent environmental problems requires urgent and far-reaching systemic change in many elements of societal systems.

At the same time, the EEA Report notes that research into the dynamics of socio-technical systems suggests some cause for optimism. “This is because historical case studies indicate that change in socio-technical systems follows a ‘punctuated equilibrium’ path, implying long periods of stability and incremental change interspersed with relatively short and sudden periods of disruption and ‘waves of creative destruction’ (i.e. transitions).”

From an optimistic stance, there can hardly be any doubt that we now have entered this path of punctuated equilibrium.

[37] https://www.eea.europa.eu/publications/perspectives-on-transitions-to-sustainability/file

Chapter 3
We're dealing with a new concept of value: Changing paradigms for business

In the current sea of change, one thing remains a constant: being successful in business has always revolved around creating value. And it will always revolve around creating value.

However, the concept of value itself is very different than we were used to.

This can hardly be a surprise, as many experts have pointed this out. One remarkable sign of the times was an article by Harvard professor Michael Porter in the Harvard Business Review. For decades, Mr. Porter promoted shareholder value as the dominant business paradigm, but in 2011 he radically changed his mind and introduced his ideas on the so-called Shared Value. In this concept, it is all about enhancing the competitiveness of a company while simultaneously advancing the economic and social conditions in the communities in which it operates. Value is not only value for shareholders, but also value for the society as a whole. In his essay, he wrote that "(…) It will also reshape capitalism and its relationship to society. Perhaps most important of all, learning how to create shared value is our best chance to legitimize business again."[38]

Ten years later, this is precisely what is at stake. Business leaders are challenged to reinvent their relationship with society. To succeed in value creation, they must get better in measuring, understanding, and managing the value they create (or destroy) for their stakeholders, both in terms of financial value and in terms of societal value.
This begins with an understanding of how the concept of value has changed in three regards.

First, the **source of value** has changed. Value results less frequently from tangible assets (the best machine or the most efficient processes), but increasingly from more elusive and rapidly evolving elements. Softer elements like brand, reputation, but also an algorithm that is somewhat smarter than the competitor, the power to collect and/or use data in a certain way or a digital application which cannot simply be copied by a competitor. The source of value is therefore a lot more ephemeral.

[38] https://hbr.org/2011/01/the-big-idea-creating-shared-value

Furthermore, as noted by Porter, the **concept of value** itself has also changed significantly. Value is no longer just financial but broadens to value for society as a whole. For a growing number of companies, entrepreneurial success now revolves around more than financial performance and includes a contribution to a social and sustainable environment. We have elaborated on this in the previous chapter and in fact made the case that only by creating societal value, one can create financial value.

The consequence of these first two factors is that the **risks surrounding value creation** are also very different than before. Value can quickly evaporate when less tangible assets are under pressure (if an algorithm is not working properly) or when ethical or social problems loom. The minefield of risks has grown significantly due to the broader concept of value.

Chapter 4
Connecting the dots for vigorous change: How well-positioned are we?

In the previous chapters, we have described how pressure is mounting (the violins have stopped playing) and how preconditions for change are now excellent (the Sputnik momentum). We also noted that the concept of value itself is changing, which contributes to a perfect breeding ground to lead us towards a completely new business paradigm. A paradigm in which business leaders may be the main drivers of achieving impactful change, precisely because their central strategic goal is to maximize value for their stakeholders. The questions to be answered are: What do we need to transform this opportunity into solid actions? And are we well-positioned to start this journey?

Actions speak louder than words. In recent months, there have been numerous media reports on a variety of topics that underline the willingness of key stakeholders to enter new paths towards a sustainable future. However, the litmus test is if they will be able to translate their lofty ambitions into powerful action.

Over the past decades, many stakeholders have tried their best to achieve change, but step changes appear to be missing. This is a real problem from a transition perspective. We will never be able to properly address the current environmental problems with small changes. We will need far-reaching systemic change in societal systems.

EEA Report No 25/2017 Perspectives on transitions offers hope, indicating that this change in socio-technical systems often follows a 'punctuated equilibrium' path. In plain wording, this means that there are often long periods of stability followed by sudden outbursts of 'waves of creative destruction'. Yet again, this is also what seems to be happening these days, as we described in chapter 1 (We've reached multiple boundaries) and chapter 2 (A unique momentum: the Sputnik moment).

How can societies implement systemic reconfiguration? One thing is certain. Relevant actors should not operate in splendid isolation. Building the toolkit for systemic change in various domains should focus on connecting the dots of change. Once more, we refer to EEA Report No 25/2017. This report states that "while innovation (in its various forms) is crucial for socio-technical transitions, it is understood to co-evolve with many other dimensions. This diversity is apparent in the following list of themes":

1. Governance, power, and politics (hereafter GOVERNANCE)
2. Implementation strategies for managing transitions (hereafter STRATEGY)
3. Civil society, culture, and social movements in transitions (hereafter CIVIL SOCIETY)
4. The role of firms and industries in transition to sustainable consumption – transitions in practice and everyday life (hereafter BUSINESS)
5. The geography of transitions (hereafter INTERNATIONAL CONTEXT)

In this chapter we will elaborate on these elements, based on desk research, and interviews we did for this paper.

1. GOVERNANCE

Look through the metrics, not at the metrics

"What gets measured gets done." These famous words from management guru Peter Drucker still resonate more than half a century after he first coined them. The idea is that proper metrics are the cornerstone of successfully achieving goals. Thereby, they are at the heart of governance. Metrics not only enable leaders in the public and private sector to steer their organizations but are also essential to be accountable about their strategy to stakeholders.

It can hardly be a coincidence that William Deming developed his plan-do-check-act (PDCA) cycle at the same time Drucker coined his famous words. Nowadays, this model still plays an important role in strategic planning and control. Traditionally, the model was fueled by financial metrics. In a changing world, where the concept of value has evolved into a broader concept, it makes sense that in recent decades we have seen a proliferation of metrics in many areas of ESG, both in the private and public sector. Initiatives range from the GRI framework and WEF IBC metrics used for external reporting, benchmarks used to determine the sustainability level of companies for stock indexes, initiatives to measure impact (e.g. True Value), an EU Taxonomy to define what is green and what is not[39], efforts to create a broader definition of Gross Domestic Product (GDP)[40] by countries, to countless other initiatives and programs. Some speak of a cottage industry, a landscape that seems to change every week: "Beyond-GDP is a heterogeneous community which speaks in many dialects, accents and languages. Unless this changes, the 'beyond-GDP cottage industry' will never beat the 'GDP-multinational'."[41]

[39] https://home.kpmg/nl/nl/home/insights/2021/05/eu-taxomomy-webinar.html
[40] https://www.oecd.org/statistics/better-life-initiative.html
[41] http://www.rutgerhoekstra.com/replacing-gdp-by-2030/

All these initiatives surely have added new levels of transparency and delivered important insights for leaders to base their decisions upon. However, there is also another side to the coin.

Many organizations now feel confused amidst the countless frameworks for reporting and benchmarking. This is not only time consuming, but also has a more profound effect. The metrics often don't add real value to the decisions that determine the journey towards a more sustainable world. Worst case, they may even be counterproductive and slow down decision making. For instance, some companies that invested in adapting their processes to contribute to the uptake of greener product options downstream, found themselves ending up with a higher footprint for their own activities. The 'macro' effect on the planet was great, the metrics, however, would tell a whole different story on the greening of their own operations. This oftentimes turns out to be problematic in the dialogue with shareholders who have trouble looking through the metrics to discover the real impact of the sustainability efforts. Metrics dominate the discussion, while the underlying stories about the wider (macro) effects are largely unheard. Moreover, the proliferation of metrics increases the risk of greenwashing, especially in an era where urgent need for change is felt.

Therefore the conventional rigid way to use the metrics (and the PDCA cycle) as a lens has its limitations. This model usually functions well in a stable and predictable environment. In a time of transition, such stability and predictability are, however, hard to come by. That is why both (business) leaders and stakeholders should not place too much focus on the metrics. In fact, they should start looking through the metrics instead of looking at the metrics. This means that we need more dialogue on how sustainable goals can be reached in a powerful, swift manner, without being hampered by the straitjacket of metrics.

In 2013, Viktor Mayer Schönberger, Professor of Internet Governance and Regulation, Oxford University, wrote an essay on the dictatorship of data[42]. Although the context is a different one, his message is important for this paper as well: "The threat is that we will let ourselves be mindlessly bound by the output of our analyses even when we have reasonable grounds for suspecting that something is amiss."

We should take his warning very serious, also when it comes to measuring the efforts on the journey to a more sustainable world. In the domain of sustainability, the dictatorship of 'green data' is at times very powerful and may lead us away from looking at the underlying information.

[42] https://www.technologyreview.com/2013/05/31/178263/the-dictatorship-of-data/

Proper governance of the journey towards a sustainable world is much more than looking at a dashboard. In this respect, it is rather ironic that the PDCA cycle was never meant to be used like this. 'Inventor' Deming in fact developed the PDSA cycle, with the 'S' representing 'study'.

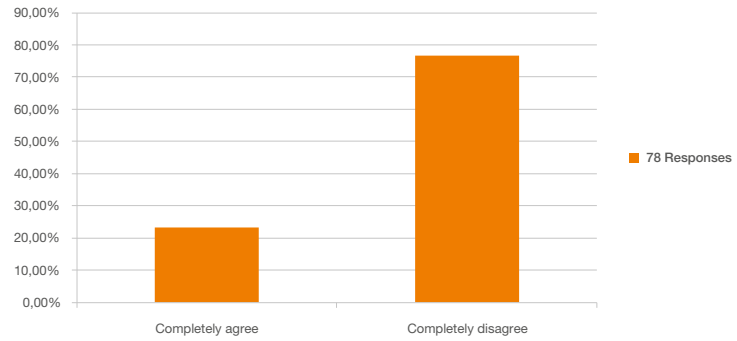
It was a Japanese engineer who, years later, converted Deming's concept into something now — erroneously — called the Deming PDCA cycle. Deming himself was also fairly clear about the connection between the PDSA and PDCA cycles[43]: they have nothing to do with each other. Perhaps it is time that we start using the PDSA: 'study' rather than 'check' actually fits much better with today's needs. Metrics can be misleading, and only by studying will we be able to note this.

Takeaways from interviews and research

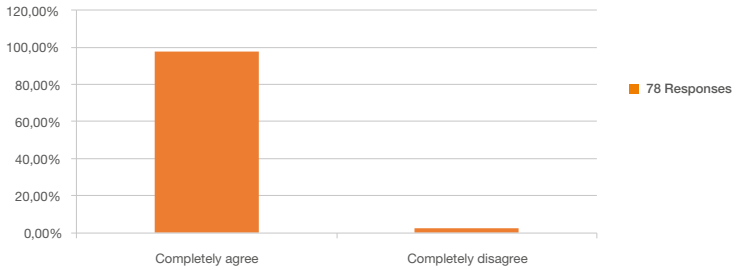
- When it comes to governance, we need better cooperation between government, science, and companies.
- In The Netherlands, we are working along the lines of Mission Economics but fail to tell a clear story about this, with the risk of not engaging all parties involved.
- We are drowning in data, but starving for wisdom when it comes to measuring the efforts. An integrated, centralized approach with clear policies and vision is required to drive concrete change.
- Situation now: much talk, not so much action. We need to power up the efforts and not get stuck in "analysis paralysis".

[43] According to The CFO in pole position, 2020, Bouker Geelen Wielaard

In the energy transition government and business work well together



The Netherlands should cooperate more with other countries, and the EU in particular, to accelerate the energy transition



2. STRATEGY

Using scenarios as a foundation for strategy

As we stated in chapter 3: success has always revolved around creating value and will always revolve around creating value. This is a certainty. Another certainty is that the process of strategy making will always be built on outside-in thinking. It is increasingly important to thoroughly understand the outside-in (macro) forces and trends shaping the conditions for companies to thrive in, exploring plausible futures based on this understanding and translating this into decision making. In times of transition, change is not linear and in many sectors, this increases the need to assess (extreme) scenarios built on these non-linear changes. Companies who have a better view on this and can translate this into new policies will be the winners.

The good news in the current era is that these societal trends are very clear. The Sustainable Development Goals combined with the described planetary boundaries and social floors are in fact an excellent compass to build strategies and offer a relatively easy way to define strategy based on scenarios.

The bad news is that many companies do not wholeheartedly think in scenarios. From an optimistic viewpoint, a younger generation could lead the dance here, as this younger generation better senses how exponential changes call for the use of (extreme) scenarios to develop strategies. The voice of this generation is everywhere in the media (think Greta Thunberg) and cannot be missed. However, when it comes to decisions in the boardrooms, the ideas of the younger generation often do not prevail.

The current challenges and uncertainties (and reporting frameworks such as TCFD) now stimulate companies to take scenarios seriously[44]. Contrary to popular belief, scenarios are not a representation of the future, nor are they forecasts or predictions. They are hypothetical constructs of possible future states of the world and their main purpose is to highlight central elements and give insight into key factors that will drive future developments. Well-executed scenario analyses are a powerful tool to enhance critical strategic thinking because it challenges conventional wisdom about the future. By doing so, the use of scenarios triggers the exploration of alternative directions (and thereby may contribute to systemic changes).

[44] https://home.kpmg/nl/nl/home/insights/2020/07/looking-forward-to-a-rising-temperature.html

Climate-related scenarios allow organizations in the public and private domain to better understand how physical and transition risks and opportunities[45] of climate change might impact business over time.

A critical aspect of scenario analysis is the selection of a set of scenarios that cover a reasonable variety of future outcomes, both favorable and unfavorable. The TCFD recommends that organizations use, at a minimum, a 2°Celsius (2°C) scenario and consider using other scenarios most relevant to the organization's circumstances, such as scenarios related to Nationally Determined Contributions (NDCs), business-as-usual (exceeding 2°C) scenarios, physical climate risk scenarios, or other challenging scenarios[46].

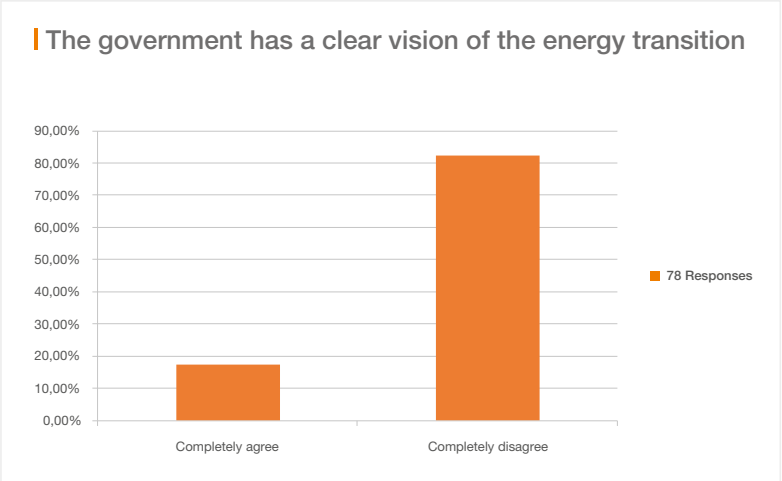
Put simply: scenarios can be of great help. However, a good strategy is not enough for successful value creation. The winners are often not the ones with the best strategy, but more specifically the ones who can connect this strategy with the hearts and minds of their stakeholders. This is essential to deal with the (risks of the) new concept of value as described. And this is also why companies need a proper language to communicate and engage about this new concept of value. By providing tangible and objective metrics around sustainability and ESG, leaders can also generate alignment within organizations, so that all parts of the company have the same understanding about terms like decarbonization, net-zero, and emissions reduction. This is precisely why IOSCO stresses the urgent need for globally consistent, comparable, and reliable sustainability disclosure standards and announces its priorities and vision for a Sustainability Standards Board under the IFRS Foundation. This point was also stressed in the World Economic Forum, whose aim it is "to catalyze the convergence, simplification and standardization of the non-financial reporting ecosystem."[47]

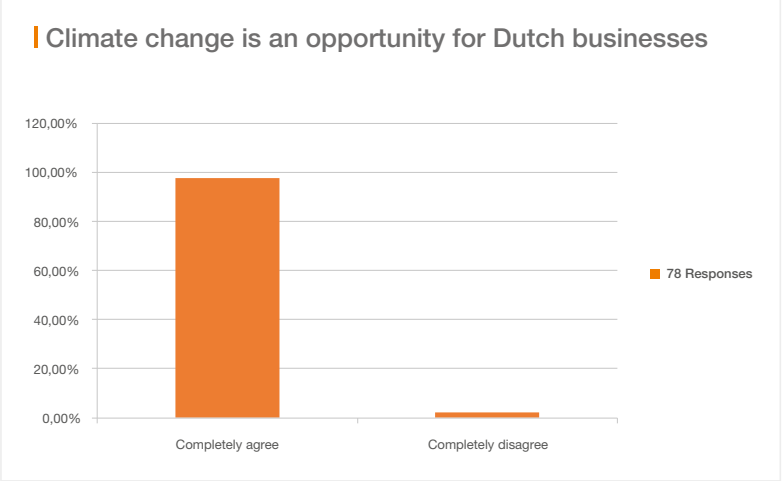
Takeaways from interviews and research

- The Netherlands has interesting opportunities in three domains: climate adaptation, green chemicals and agritech.
- Initiatives and their strategies are diverse. What seems to be lacking is a joint understanding of the required efforts and the long-term goals. As a consequence there is lack of consistency and concrete actions.
- There is much talk about change and there are many strategic assessments. However, now it is a matter of 'putting the money where the mouth is'. This is the foundation for real tangible actions.

[45] https://home.kpmg/nl/nl/blogs/home/posts/2021/06/climate-related-risks-for-organisations.html
[46] https://www.tcfdhub.org/scenario-analysis/
[47] https://www.weforum.org/stakeholdercapitalism

- We need more leaders who have the guts to stand up and not be afraid for drastic change.
- Government should:
  - Actively stimulate purpose led innovation by increasing investments, creating incentives, and developing supporting infrastructure, regulation and standards.
  - Work together with business and knowledge institutions and collaborate on solutions for the most difficult issues to solve in the transition.





3. CIVIL SOCIETY

Let the 'new teeth' of NGOs do their work

'*The times they are a-changin*' when it comes to the work of many non-governmental organizations (NGOs). Not so long ago, they sat down periodically with corporate business leaders to voice their perspectives and concerns. Business leaders listened and promised to take their ideas and views into consideration. Part of the NGO community opted for more radical approaches by following activist strategies that merely resulted in symbolic gain and symbolic damage.

Overall, it sometimes felt a bit like the dynamics in the cult movie Groundhog Day. Routines were repeated over and over again, without anything changing.

In the current era, the dynamics of how NGOs try to obtain their goals has changed dramatically. As we have seen earlier, the concept of value has broadened, and this also sheds a new light on the role of both businesses and NGOs in bringing in societal change.

Traditionally, NGOs contribute to many important topics and are the voice of the society at large. They continue to do so, but – more and more – they now opt for partnerships with businesses to create lasting change in business life. Such partnerships are most effective when partners are honest about their motivations in their cooperation. This is perhaps the most important change over the last decades: in the past, there often was quite a wide gap between the motivations, whereas now they often discover they have the same objectives.

One could even argue that the boundaries between corporations and NGOs are in fact vanishing. A sign of the times is the rise of the B Corps, companies that are using their business as a source for good, where money is a means to an end[48].

The voice of NGOs has obtained a more structural place within many companies.
One sign of the times in this respect is the fact that many large companies now have specialized councils in place. These councils bring in societal views (on climate, ethics, or other domains) and have an important say in formulating policies and strategies. Several companies even offer these councils a platform in their annual reports to provide insight in the impact of their perspectives.

[48] https://bcorporation.net/

Moreover, NGOs also modernize their repertoire of instruments. This also involves opting for tactics that, until recently, were the domain of corporates to get things done. One example is litigation. Between 1986 and 2014, just over 800 climate change-related cases were brought in. In the last six years, this has grown substantially. Between 2014 and 2020, the number is 1,000 cases[49]. There is a focus on 'strategic' cases that aim to bring about some broader societal shift. Well-known examples of these are the Milieudefensie vs. Shell case and the Urgenda vs. Dutch Government case.

All of this shows that proverbially speaking NGOs grow new teeth and these turn out to be quite effective. No more Groundhog Day routines.

Another relevant trend in this respect is the changing role and position of activist shareholders. Hedge fund activists push companies to increase disclosures and adopt more sustainable business practices. Also here, boundaries are vanishing.

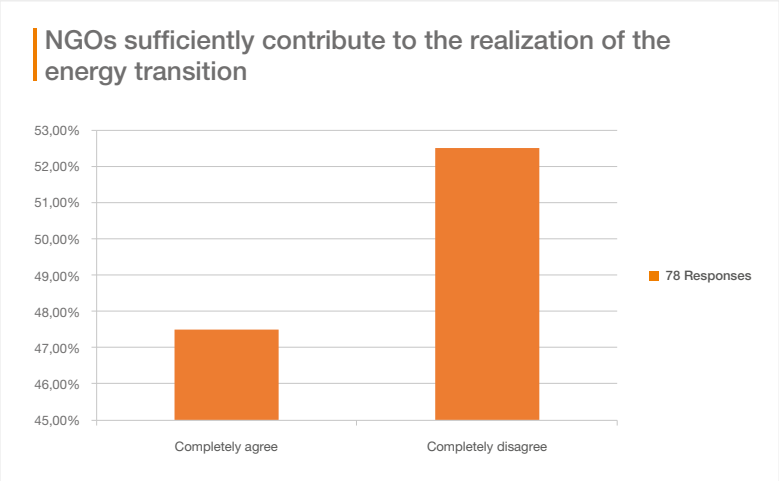
One example of this is how FollowThis mobilized voting policies for Shell, thereby in fact using the instrument that traditionally was the domain of institutional investors. Another is the successful pressure on another oil giant, Exxon, calling for new voices on the board of directors to force the company to better efforts in the energy transition[50].

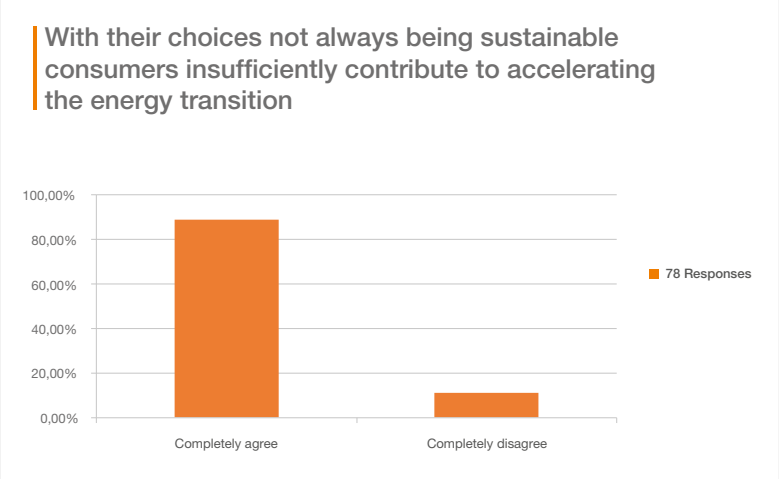
Social unrest travels fast into the world of these activist shareholders: massive protests against racial injustice in 2020, for instance, prompted some large asset managers to better integrate diversity and inclusion (D&I) in their public statements and proxy voting policies. The power of activist shareholders seems to be just at the start of its growth curve. Some recently launched investment firms are solely dedicated to pursuing ESG-related goals by following activist strategies. Apparently, some have even undertaken proxy fights in the hope of placing their own directors on company boards[51].

[49] https://www.lse.ac.uk/granthaminstitute/wp-content/uploads/2021/07/Global-trends-in-climate-change-litigation_2021-snapshot.pdf
[50] https://www.nsenergybusiness.com/news/company-news/exxon-board-change-karsner/
[51] https://www.pwc.com/us/en/governance-insights-center/publications/assets/pwc-the-directors-guide-to-shareholder-activism.pdf

Takeaways from interviews and research

- More coordination of civil initiatives could power up their impact.
- Many civilians seem to be willing and eager to play a role. The government should facilitate and stimulate this.
- At the same time, there is a risk of rising inequality and need for change in different layers of society. Engaging society in the transition is a key bottleneck which requires clear coordination, inspirational leadership, and better communication to all layers of society by government.





4. BUSINESS

Close the intention-action gap in consumer behavior

Changing the collective consumer behavior is a fundamental requirement for the journey to a sustainable future. Over the past decades, business leaders have learnt a lot about how to get into the hearts and minds of consumers with sustainable products and services. Some of them cleverly use social influence – based on the hypothesis that human behavior is largely determined by the social norms in our environment – while others have found interesting ways to simply turn their sustainable offering into the coolest of choice.

There is no doubt that there are very interesting market opportunities for sustainable offerings and reports show that the products with sustainability claims beat their traditional counterparts in growth figures. This is not surprising, as a growing group of consumers –particularly millennials – favor brands that embrace purpose and sustainability.

So much for the good news. There is namely also a rather frustrating paradox: although consumers are very positive towards sustainable products and services, many of them don't put their money where their mouth is.

There is a gap between intention and action and narrowing this gap is important – not just for business leaders eager to meet their goals but also for the future of our planet. Many books have been written on this subject and there are various strategies to do so.

However, maybe it is time to consider a more radical approach now that we have reached an era of urgently felt need for change. When luring consumers into new behavior doesn't pay off, we should explore new options.

From an economic perspective, the tragedy of the commons[52] is at the heart of the problem. This phenomenon occurs when individuals neglect the well-being of society as a whole by pursuing their own personal gains.

Our current monetary systems have no options to counteract this phenomenon. The question is whether we would be able to implement a better one.

[52] https://online.hbs.edu/blog/post/tragedy-of-the-commons-impact-on-sustainability-issues

The late Professor Bernard Lietaer has dedicated a considerable part of his life to this topic and concluded that indeed we can bring conscious choice in the arena of our money system by completely redesigning it. The main change is that the 'new money' would have more dimensions, whereas our current money is one-dimensional.

We could think of it as 'programmable money', in which a conversion factor would apply, which would determine the value of money for various dimensions. An example would be that the value in some dimensions could be dependent on the transaction history. Put very simply: if you have bought steaks with your money (unfriendly to the climate), your rights to book a flight to Barcelona (also unfriendly to the climate) with your current money at hand are reduced while your rights to buy a solar system are not reduced.

In reality, the system would be more intricate. Within the confines of this paper, however, we cannot analyze this subject in full detail. The main point is that if we would be able to design and implement such money, we would in fact improve how markets work in a very powerful way. The money would – for the first time in history – reflect scarce resources and the downward spiral leading to 'tragedies of the commons' could be overcome. Without introducing new taxes or caps!

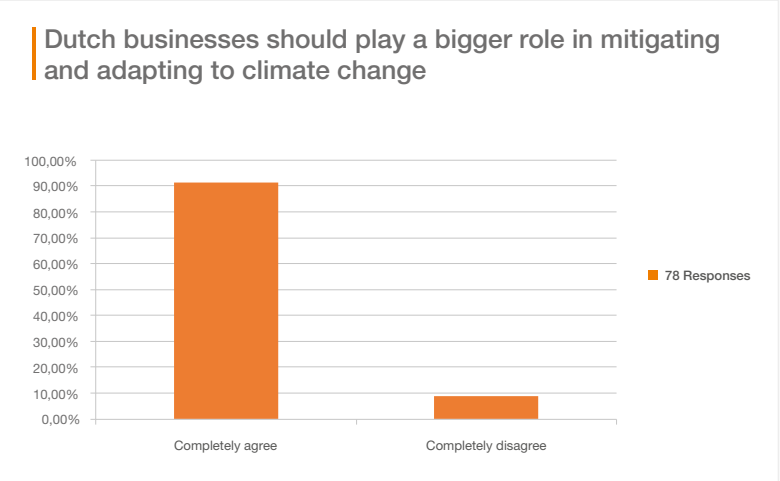
This may all seem like a rather far-fetched scenario. Lietaer himself wrote that the main obstacle to our aim of harnessing such conscious choice is "the widespread belief that in the modern world an alternative money system is not even thinkable." However, he also shows that below the radar beams of many official monetary experts, fundamental change in our money systems is in fact already well under way, driven by the social and technological forces of the Information Age.

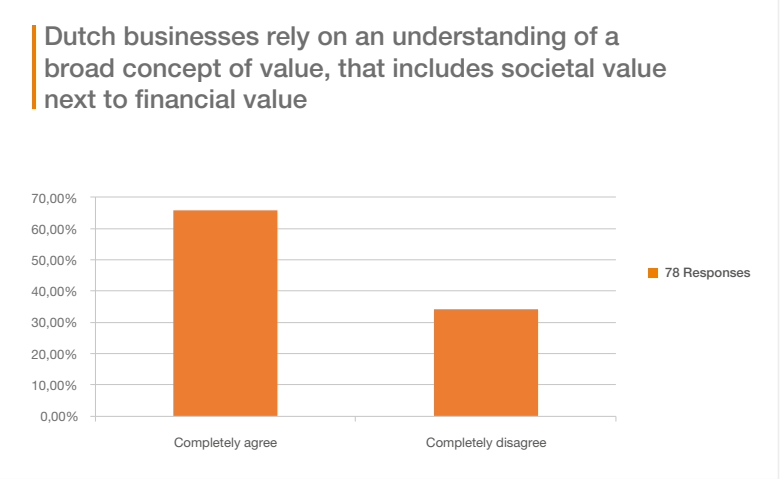
This type of programmable money was unthinkable some decades ago, but with the advances in cryptocurrencies – combined with other breakthroughs in digital technology – it would be technologically feasible. Such technological disruptions can now create windows of opportunity in ways that could not be imagined when the pioneers of crypto introduced their first applications. It is no doubt one of the most promising approaches to shape our future, as money is the strongest social incentive we could think of. It is the social motivator of choice.

Takeaways from interviews and research

- There is an intention-action gap among consumers. Many of them feel the need to change their behavior but price still seems to be the most important factor. Consumers should be collectively stimulated and better informed to make better decisions.

- There is mistrust about companies greenwashing their products and services.
- Integrating climate change initiatives into strategy is gradually becoming a license to operate. A majority of current and future leaders agree that Dutch companies already do so, but while awareness increases (driven by e.g. employer reputation and reporting requirements), real change following their ESG goals has yet to be accelerated.
- Mitigating climate change is not only a need (moral duty), but also an opportunity for business – even though there is a price to pay for the transition and there will not only be winners.
- Although smalls steps are made (in words), in times of crises or conflicting interests, societal value-driven decisions are not yet prioritized over financials.
- Business should:
    - Leverage its power to drive the market and be bold by taking the lead
    - Commit to integrating the SDGs into the core of its strategy and decision making
    - Prioritize purpose led innovation, which integrates environmental and social value creation





5. INTERNATIONAL

Integrate the efforts to fight poverty and climate change

Nearly every country nowadays has felt (some) effect of climate change. But the consequences – droughts, supercharged storms, heat waves, etc. – are unevenly distributed around the world. Most researchers agree that the burden of the effects seems to be endured especially by the more vulnerable countries and the effect of this is a widening gap between those who have resources and those who do not[53].

One example is that climate change has more adverse impacts on less developed countries (e.g. semi-arid areas subject to water stress) and those countries have less resources to protect themselves against it[54]. Another is the effect on smallholder farmers that depend on their crops for both food and income. The effects of climate change make their income (or their source of food) less stable. In wealthy countries, farmers can get insurance for this, which allows them to cope with bad crop yields and recover in other years. In poor countries, these instruments are often not available to farmers.

There are numerous other examples that show how poverty and climate change are intertwined. In fact, if the world fails to deal with climate change it will be inevitable that the gap between rich and poor will widen. This will not be without consequences – such as social unrest, refugees seeking better futures, etc. Programs to mitigate or adapt to climate change will inevitably reduce poverty, and investments made in order to reduce poverty will better protect people against the growing environmental crisis.

Therefore international cooperation, and a holistic approach is quintessential. Climate change – and the related social issues – simply do not stop at a border. In a speech at the United Nations general assembly, President Joe Biden called for unity and multilateralism on a number of fronts.

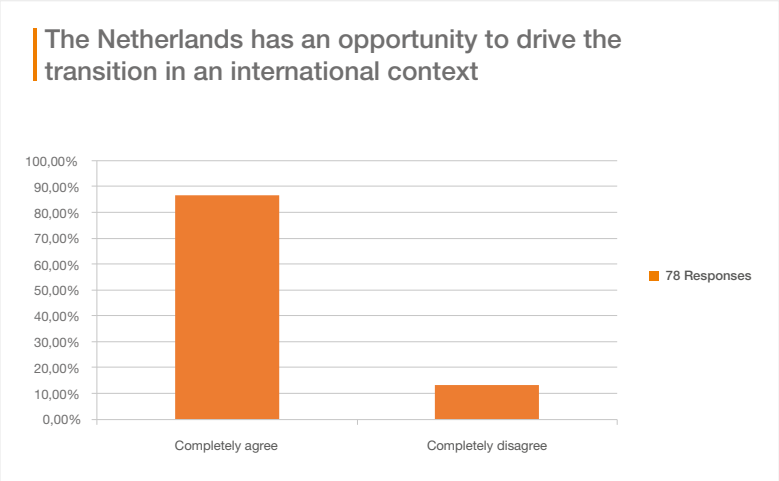
He vowed to double the financial aid for climate change given to developing countries vulnerable to the worsening climate crisis, shifting from ‘relentless war’ to ‘relentless diplomacy’. In his plans, the US will become the world’s leading provider of climate finance developing nations[55].

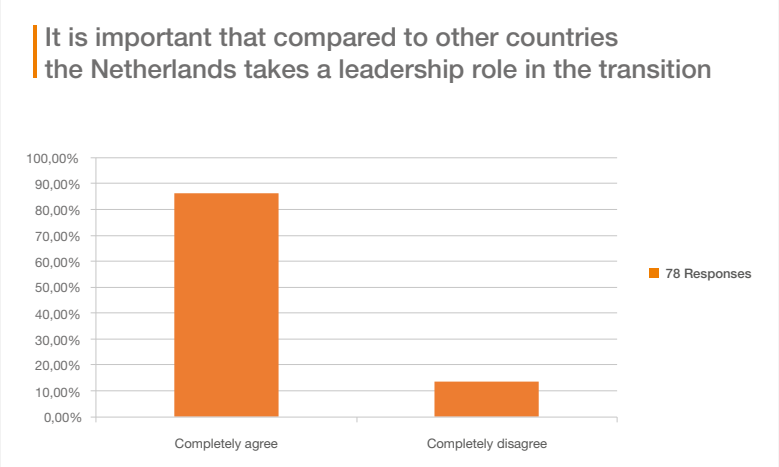
Takeaways from interviews and research

- Geographically, The Netherlands is very well-positioned for a green economy. North Sea for wind and solar in combination with hydrogen production, the Port of Rotterdam, and a strong infrastructure to supply Europe.

[53] https://www.un.org/esa/desa/papers/2017/wp152_2017.pdf
[54] https://www.globalcitizen.org/en/content/climate-change-is-connected-to-poverty/
[55] https://www.theguardian.com/us-news/2021/sep/21/joe-biden-un-general-assembly-climate-aid-developing-countries

- We are also well-positioned with an industry that has ideas and expertise for relevant innovations.
- The transition is – first – a moral duty, especially for a rich country such as The Netherlands. Second it is a must for survival. And third it is an economic opportunity. This is how we should position the challenge.
- Current leaders grade The Netherlands' position compared to other countries when it comes to (collaboratively) combat climate change a 6.3, whereas future (NextGen) leaders give our country a 5.6.
- We need a better narrative about the transition, a narrative that ties the efforts together. More coordination is needed from government in this respect.
- We need to look at the challenges in a more international context, more cross-border coordination is needed. Measures in a national context will often have consequences in an international context.





Chapter 5
Laws & Regulations: Dealing with a regulatory tsunami

Laws and regulations play a vital part in the transition that we have touched upon in previous chapters. First, energy and climate goals have been set at international, European, national and regional levels. Moreover, the climate and energy transition entails aspects of administrative law, general obligatory law and corporate law, and therefore demands special expertise in all of these fields. Equally, a wave of Sustainable Finance legislation and regulation is rolling over the financial sector and large corporates, which will directly affect corporates through their financial reporting and financing. The consequences thereof will be felt even before climate regulations will come into effect.

There are also regulations being developed that directly address the responsibility of corporates in slowing down climate change through the so-called duty of care. Recently, a bill was submitted to the Dutch House of Representatives on responsible and sustainable international business conduct. This bill proposes a duty of care for all corporates in The Netherlands and an obligation to conduct due diligence in accordance with the OECD Guidelines for Multinational Enterprises. The purpose of the bill is to establish a minimum threshold that should ensure that corporates comply or increase their compliance with international standards on human rights, labor rights and the environment, as set out in these guidelines.

Even though it is uncertain whether this bill will pass (as the government is in a formation process) the obligations in this bill are expected to come into force at some point in time, due to the increasing attention for the duty of care of corporates. In spatial planning for instance, the upcoming Environment and Planning Act (in Dutch: 'Omgevingswet', or 'Ow') is introducing a general duty of care for everyone to take sufficient care of the physical environment.

Environmental regulations may impede innovation, as many regulations are shaped based on a specific way of producing or operating. Innovation often encompasses different ways of producing or operating that do not match with these ways. For example, the energy saving measures that corporates are obliged to take. Even if a company would want to introduce alternative measures that will end up saving more energy, they cannot be put into practice if it conflicts with the measures that are prescribed. Innovation and regulations can also clash in other domains.

One of the questions regarding the 'tsunami' of laws and regulations is whether authorities and financiers are asking too much. The best advice is that corporates should be alert on whether there is a sufficient legal basis for what the public authorities are asking and to make sure that the possibility for compensation is utilized. Furthermore, it is important to monitor compliance with regulations / climate care and create a framework for sustainability reporting and assessment. This is also important in order to demonstrate – e.g. in case of enforcement by authorities, or litigation by climate interest groups – that relevant legislation, duty of care and ESG principles are being complied with.

One thing is certain: it can be difficult to navigate through all the different regulations and policies, as it is not a question of simply obeying to a set of climate regulations; many corporates must keep track of many rules deriving from different sources.

In **Appendix 1**, we explore some relevant developments in this respect.

Chapter 6
The need for step change

'If you keep doing what you always did, you'll get what you always got.' This may be a cliché, but it captures the challenge of the topic of this paper very well.

As we have seen in previous chapters, both the potential and the momentum to turn the tide towards a sustainable future are excellent. Moreover, humankind has historically proven to be a creative species when the going gets tough. There is no reason why we wouldn't be able to deal with the urgent challenge of building a sustainable and prosperous future for our planet.

What we need to succeed in this mission is innovation, a theme that is central in all the foregoing.

On the one hand, it is about incremental innovation that is everywhere around us. It's about making products and services more energy-efficient; it's about using less fossil fuels in a variety of daily activities; it's about the use of new earth-friendly materials; it's about innovations that help farmers with higher yields and producing better crops; it's about innovations in our daily food routines; and it's about many other areas of innovation. The good news is that over the past decades, we have witnessed an impressive wave of these innovations. The bad news is that these innovations alone will not suffice to reach social and environmental targets like the SDGs.

We need radical innovation on top of these incremental innovations.

What exactly is this radical innovation? Many books and scholarly articles have been written about this, but for the purpose of this paper we could summarize it in one simple sentence: radical innovation is not about doing things better, it's about doing better things.

One important factor will be the use of the power and intelligence of tech companies, ranging from start-ups to powerful big tech names. In today's hyperconnected world, they can play a crucial role in radical innovation. One example is how Microsoft has plans for a Planetary Computer, a computing endeavor that collects massive amounts of data and employs machine learning to get a deeper understanding of the challenges to keep our planet healthy.

Another factor is nothing less than the reinvention of capitalism and the role of money in this adapted concept of capitalism. As described in previous chapters, the concept of value itself is changing (broadening) and we have rather fascinating options to create a new type of money (multidimensional) that would be a powerful instrument to support this new concept of value. Yet again, tech companies could play a key role here as the reinvention of money is enabled by a wave of digital applications.

Another important factor is a much deeper cooperation between parties involved. In general, it is very unlikely that any organization has access to all structures, knowledge and technology that is required for radical innovation and to reach the SDGs. It often requires the expertise or networks of others to bring it to scale and thus new coalitions with partners. It may also mean challenging old conventions about competition. One interesting example is Elon Musk, who in 2015 made Tesla's patents available (on certain preconditions) to any third party, to "encourage the advancement of a common, rapidly-evolving platform for electric vehicles". After all, the larger the platform, the greater the opportunities – for competitors, but also for Tesla and the environment.

Another factor that is important to radical innovation is rethinking business models. There is enormous untapped potential for many companies in bringing value to poor countries. However, the societal value they bring with their products and services to the so-called bottom of the pyramid may not immediately translate in financial profits. The challenge for leaders is not only to look beyond the figures – look through the metrics, not at the metrics – but also to design business models that recognize and potentially capitalize on the creation of societal value. Yet again, this will often be a matter of new types of cooperation between government and business.

There is, however, one other important factor for success with all these innovations: we need a compelling narrative that connects the dots of all efforts in the transition. Innovation will only lead to the desired outcome in an environment where stakeholders involved have a clear understanding of the joint mission and their role in this mission. Currently, this is lacking in several ways. For instance, many citizens are bombarded with news about the need to "green" their lives (and the financial consequences of this) but most of them have no idea about the mission nor the efforts of governments and private companies in tackling the problems.

The interviews for this paper have highlighted that there is a deeply felt need for clear and compelling stories which not only address the urgent situation the world is in, but also provide insight into the efforts and initiatives that are undertaken to solve the situation.

The international context of how China, the US and Europe in their own different ways act at breathtaking speed should be part of this narrative.

To conclude. The subject of this paper is a wicked problem. A proper analysis of such a wicked problem is important, but powerful exploration is more important in times of sink-or-swim. Learning by doing should be the central mantra in the exploration. And there has never been a better time to start this exploration.

Legal and regulatory issues for boards and corporates to consider: from climate laws to duty of care to sustainable finance.

Energy transition and climate: never before have these themes been discussed so much, and have governments and corporates been held accountable, including in legal proceedings, for not doing enough to redress climate risks. In addition, to slow down climate change, and to accelerate the transition to other sources of energy, energy and climate goals have been set at international, European, national and regional levels. The battle against climate change and the measures taken in its context affect, directly or indirectly, all sectors of the economy.

Climate and energy transition entails aspects of administrative law, general obligatory law and corporate law, and demands special expertise in all of these fields. Equally, a wave of Sustainable Finance legislation and regulation is rolling over the financial sector and large corporates that will directly affect corporates through their financial reporting and financings. The consequences thereof will be felt even before climate regulations come into effect.

Corporates have to keep track of many climate change rules deriving from different sources and climate litigation risk coming from different directions. This short paper will highlight selected developments in administrative law and finance law and provides answers to frequently asked questions.

Which climate regulations and agreements do corporates need to be aware of?
On both European and national level there is a growing number of regulations and agreements on the topic of climate. These climate regulations and agreements mainly focus on the reduction of greenhouse gas emissions, set targets, and describe – sometimes - measures as to how to achieve those targets.

On European level the Climate Law entered into force on the 29 July 2021. This European Climate Law requires climate neutrality by 2050 for the European Union and sets a greenhouse gas reduction target for 2030 of 55% compared to 1990. In order to achieve this target the European Commission has adopted the 'Fit for 55' climate package setting out the measures proposed. These plans will lead to changes in, among other things, legislation regarding emissions and emission trading.

Similarly, the Dutch Climate Act, which entered into force on 1 January 2020, sets the general (political) target of reducing greenhouse gas emissions in The Netherlands by at least 95% in 2050 compared to 1990.

The Climate Act also sets (non-binding) targets of a 49% reduction in 2030 compared to 1990 and a completely CO2-neutral electricity production by 2050. In addition to the reduction (target) goals, the Climate Act also places policy obligations on the government.

These climate regulations and agreements mainly include targets for governments and do not directly contain obligations for corporations. Rather, the obligations flow from the measures taken in order to achieve the targets set out in this legislation. The Climate Agreement, for instance, contains agreements between the government and the private sector on what the latter will do to help in order to achieve the climate goals as set out by the Climate Act.

How can corporates deal with government asking more than legally required?
We expect that some of the developments regarding specific climate regulations, or in some cases the lack of necessary regulation, will give rise to discussions in court on, for instance, the legal basis and the question to what extent the government should provide compensation. Some of the legal measures that are taken in the public interest to counter climate change leave it to the affected companies to foot the bill, in which case it can be considered to obtain compensation through the courts if the legislation is unlawful. Below we discuss some examples.

Overasking in the Clean air agreement
The Dutch government and a large number of provinces and municipalities have signed the Clean air agreement (in Dutch: Schone Lucht Akkoord, "SLA") in which measures have been laid down to permanently improve air quality in The Netherlands, and thereby advance overall health. The SLA is in effect until 2030 and aims to reach ambitious goals such as working towards the WHO-recommended limits for nitrogen dioxide and fine particulate matter (fijnstof) and reach health gains of at least 50% from domestic sources compared to 2016.
The question rises whether all these measures have a legal basis. For instance, the SLA also forms the basis for the government to, together with the authorities issuing permits, draw up supplementary memoranda (in Dutch: 'oplegnotities') which describe how to implement the best available techniques (BAT)-conclusions in the Netherlands. The first memorandum BREF LCP shows the intention to tighten the emission limit values to the bottom of the range of the BAT-conclusion, even though the case law of the Council of State stipulates that emissions within the range of a BAT-conclusion are in accordance with the eligible BAT (ABRvS 21 March 2012, ECLI:NL:RVS:2012:BV9479). Corporates should consider addressing these 'overasking' issues when dealing with national, provincial and local governments.

Overasking in relation to potential substances of very high concern
Similarly, authorities in the Netherlands are creating policies on substances of very high concern (in Dutch: 'zeer zorgwekkende stoffen', "ZZS") that might be more stringent than legally justified. Corporates that work with ZZS are subject to various European and Dutch legislation.

In national law the emission of ZZS is regulated and it stipulates a minimization obligation for corporates. This obligation entails that corporates that emit ZZS into the air are obliged to prevent or, if prevention is not possible, to limit the emissions to a minimum. The province of South Holland has introduced a new policy with similar obligations for substances that are potentially of very high concern. The province uses the precautionary principle as a legal basis for this policy. However, according to the guidelines of the European Commission, this principle should only be applied if the substance is likely to have harmful effects, established through objective scientific evaluation and when such evaluation cannot be determined with sufficient certainty. The question is whether this can be applied when it comes to the potential ZZS and thus whether treating potential ZZS the same as ZZS is justified. Again, it is advisable for corporates to consider addressing any such issues when dealing with government.

How to prepare for climate litigation risk in light of the extended duty of care for corporates by law and the judiciary?

Besides the aforementioned policies and legislation, there are also regulations being developed that directly address the responsibility of corporates in slowing down climate change through the so-called duty of care. Recently a bill was submitted to the Dutch House of Representatives on responsible and sustainable international business conduct. This bill proposes a duty of care for all corporates in the Netherlands and an obligation to conduct due diligence in accordance with the OECD Guidelines for Multinational Enterprises. The purpose of the bill is to establish a minimum threshold that should ensure that corporates comply or increase their compliance with the international standards on human rights, labor rights and the environment, as set out in these guidelines.

Even though it is uncertain whether this bill will pass (as the government is in a formation period) the obligations in this bill are expected to come into force at some point in time, due to the increasing attention for the duty of care of corporates. In spatial planning for instance, the upcoming Environment and Planning Act (in Dutch: Omgevingswet, '**Ow**') is introducing a general duty of care for everyone to take sufficient care of the physical environment and to take certain measures when carrying out an activity of which they are aware, or may reasonably suspect, to have adverse effects on the physical environment. The Living Environment (Activities) Decree (in Dutch: Besluit activiteiten leefomgeving) also contains specific duties of care per activity, which apply in addition to a possibly required environmental permit. In the future regulations will be less detailed and rely more on the duty of care which can lead to less clarity for the corporates and government in administrative law and civil law proceedings. The duty of care can be administratively and criminally enforced. Even though the Advisory Division of the Council of State has criticized these duties of care it is expected that the government will use this duty of care to, for example, reach climate goals.

While legislative processes take time, the judiciary has actively begun to set the climate agenda, inspiring climate action groups to bring legal proceedings in courts in the Netherlands and abroad and giving rise to climate litigation risk for corporates. Already in 2015, in the Urgenda ruling, the district court of The Hague (and later confirmed by both the Court of Appeal in The Hague and the Dutch Supreme Court) ruled that by the end of 2020 the Dutch State was obliged to achieve the aim of reducing greenhouse gas emissions in the Netherlands by 25% compared to 1990. This involvement of the judiciary is not limited to the responsibility of the government, but also extends to private parties. In 2021, the same court ordered Royal Dutch Shell to reduce the CO2 emissions of the Shell group by net 45% in 2030, compared to 2019, through the Shell group's corporate policy. The court came to its decision by interpreting the unwritten standard of care under Dutch law referring to among other things the Paris Agreement, the UN Guiding Principles on Business and Human Rights and internationally accepted human rights which include the protection against hazardous climate change. In litigation the focus will be on whether or not corporates have done enough, whether in their own sustainability policies and frameworks or otherwise. We expect more climate litigation, not only due to activist NGO's who have a so-called 'hit list' with names of companies to target through the courts, but also due to the gap that still exists in legislation to achieve the climate goals set.

Furthermore, we see that authorities increasingly have the tendency to take a more cautious approach by imposing very strict obligations. The authorities seem to prefer to be corrected by the judiciary for being too strict rather than for being too lenient. Corporates can and do actively address this imbalance from a business perspective by engaging in constructive discussions with authorities and if the government asks too much, by making sure that the possibility for compensation is utilized.

What to do when regulation is (too) restrictive for innovation?
Environmental regulations can also impede innovation. Many regulations are shaped based on a specific way of producing or operating. Innovation often encompasses different ways of producing or operating that do not match with the specific way as laid down in regulations, and can therefore not be developed. An example are the energy saving measures that corporates are obliged to take.

Even if a company would want to introduce alternative measures that will end up saving more energy, they cannot be put into practice if it conflicts with the measures that are prescribed. Innovation and regulations can also clash when it comes to waste. Due to the definition of waste, there is no clear distinction between waste and a reusable by-product, which can make it difficult to reuse certain products (which fall under the definition of waste) while reusing 'waste' materials contributes to a circular economy and achieving climate goals.

It is clear that corporates should have discussions with authorities if innovation is stifled and that active participation in the societal and political debate by the sector as a whole is more relevant than ever.

How does Sustainable Finance and ESG affect financial reporting and financings?
The EU has the ambition to "finance our way to green" with numerous initiatives impacting corporates both directly, e.g. in relation to their annual reporting, and indirectly through the financing of their businesses. Even though some of those rules and regulations have not yet come into effect, their impact is already being felt now. Actions that boardrooms will need to prioritize in the coming year are the following.

In 2022, and for the reporting period 2021, public interest entities (PIE's), such as listed corporates and financial sector corporates, must get organized on more detailed sustainability reporting. Non-financial disclosure was already required and, going forward, will need to include sustainability disclosure on the environmental performance of assets and economic activities in accordance with the EU Green Book on economic activities and the EU Taxonomy Regulation. The rules prescribe science-based criteria for screening whether an economic activity can be categorized as 'green' or 'environmentally sustainable'.

Over the coming years, further detail in sustainability disclosure will be required. For example, non-financial corporates will have to disclose the share of their turnover, capital and operational expenditure associated with environmentally sustainable economic activities in detail. Financial institutions (banks, asset managers etc.) are subject to more in-depth requirements and, in order to satisfy their own reporting requirements, will need more information from their clients and their portfolio corporates – other corporates – on ESG performance of assets and economic activities. Financial institutions are also faced with capital requirements related to ESG factors, which creates a bias towards financing sustainable economic activities that comply with the EU taxonomy, effectively incentivizing corporates to create frameworks for sustainability assessments of their assets and activities.

The same will apply to smaller corporates, such as small and medium listed corporates, which will be subject to sustainability reporting under the Corporate Social Responsibility Directive from 2024, over the financial year 2023.

Conclusion
The increase in regulations and policies on climate change and energy transition, coupled with an active judiciary appealed to by climate litigation and sustainable finance initiatives that directly affect financial reporting and financings, raise the question whether authorities and financiers might be asking too much.

Where this is the case, we advise corporates to be alert on whether there is a sufficient legal basis for what the public authorities are asking and to make sure that any possibility for compensation is utilized. Furthermore, it is important to monitor compliance with regulations/climate care, create a framework for sustainability reporting and assessment, also in order to demonstrate - e.g. in case of enforcement by authorities, or litigation by climate interest groups - that relevant legislation, duty of care and ESG principles are being complied with.

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Responsibility

KPMG N.V. would like to make a constructive contribution to discussions about important social issues. The conclusions in this paper are our own and not those of the reviewers or interviewees who have collaborated on this paper.

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