VISION 2050

TIME TO TRANSFORM

wbcsd

How business can lead the transformations the world needs

CONTENTS

MESSAGE FROM PETER BAKKER

A MINDSET SHIFT TO TRANSFORM EVERYTHING

A MESSAGE TO ALL BUSINESS LEADERS AND STAKEHOLDERS

If you are reading this report with the idea that tomorrow is going to be much the same as today, then this is not for you. This is a report for change, urgent change even, starting now.

I am not exaggerating when I say this is one of the most comprehensive, forward looking and pragmatic reports I have read to date. A report that has been developed over the past two years, by more than 40 global business leaders and a strong external review committee, building on the initial Vision 2050 report from 2010.

Our world is facing three pressing global challenges: the climate emergency, the loss of nature and growing inequality. Each of them, on its own, can endanger the safe operating space for humanity and the planet, as well as the license to operate for business. And if there is one thing that we have all learned from the COVID pandemic, it is how interconnected these challenges are.

We need a long-term vision that we can all rally behind: 9+ billion people living well, within planetary boundaries, by mid-century. Achieving this relatively simply worded vision requires a wholesale transformation of everything we have grown up with: energy needs to decarbonize; materials need to go circular; food needs to be produced sustainably and equitably and provide healthy diets.

The need to transform systems is rightfully – the concept that everyone in sustainability is talking about; now, it needs to be backed up by actions. It is now or never. Hence, this report focuses on nine pathways of systems transformation, written in an actionable format. It should influence the strategic business agenda for this decade. And it should inspire you to put more focus and more ambition in the journey of your company and help you shape the agenda for your company's transformation.

This report is not the usual "doom and gloom approach" to sustainability. On the contrary: it offers business practical suggestions and thus creates a story of opportunities. Moreover, I strongly believe that the innovative and distinctive part of this report is the need for leaders everywhere to change their mindsets toward building long-term resilience, toward a regenerative approach to business and ultimately toward reinventing capitalism. Transforming our global systems will take more than just engineers improving the products and services that business produces.

The most critical of these mindset shifts is the one about the reinvention of capitalism. This shift will ensure that the economic system, our incentives, the global accounting standards and the capital market valuations will no longer just be based on the financial performance of business but integrates the impact on the planet and people as part of how we define success and determine the enterprise value. The move to a capitalism of true value for all will accelerate the transformation toward 9+ billion people all living well, within planetary boundaries, faster than anything else.

I see this as a hugely exciting prospect, but I know that it is not an easy one. However, whether you like it or not, we are all changemakers now, with business having to play a leading role in the transformations toward Vision 2050, working together with governments, regulators, investors and all people. At WBCSD, we stand ready to support you making this happen in any way we can.

It is time to transform, it is time to think systems, it is time to create true value, now. I count on you to join us on the decisive journey of our generation.

Best wishes,

Peter Bakker
President & CEO
World Business Council
for Sustainable Development

FOREWORD
IT'S TIME TO TRANSFORM

OUR VISION IS FOR 9+ BILLION PEOPLE TO LIVE WELL, WITHIN PLANETARY BOUNDARIES, BY MID-CENTURY. WE CAN ACHIEVE THIS VISION – BUT ONLY IF WE SIGNIFICANTLY INCREASE OUR EFFORTS, STARTING TODAY.

WBCSD first introduced this vision in a landmark 2010 report that explored what a sustainable world would look like, how such a world could be created, and the role business should play in bringing it about. It projected a decade of turbulence (the "turbulent teens") that would lay the foundations for a period of profound transformation from the 2020s onward.

Over a decade later, the turbulence continues. The transformation required to achieve our Vision 2050 is eluding us. Change is not happening at the speed or scale required. And the disruption of the COVID-19 pandemic has exposed deep vulnerabilities in our societies, underscoring the threat these pose to our long-term stability and prosperity. We now have a unique but rapidly closing window of opportunity for action, to transform the systems that govern our businesses and societies in order to change the world for the better.

Business can lead this change, but it cannot – and should not – do it alone. Transformation requires an unprecedented level of leadership – rejecting a "business as usual" mindset, and acknowledging that business can only achieve transformation if it sees itself as part of a larger whole. We must recognize that a livable planet, an equitable society, genuinely free and fair markets, and strong public institutions are in our individual and collective self-interest.

Transformation requires a shift in the mindsets that guide how business leaders think about the long term. We need to reinvent the model of capitalism that we have grown up with, so that it rewards value creation, not value extraction. We must make our businesses more resilient and adaptable to the disruptions that inevitably lie ahead. And we must think regeneratively, moving beyond a "doing no harm" mindset to one in which we enable our social, environmental and economic systems to heal and thrive.

To help business focus its efforts, we have identified nine ambitious yet realistic transformation pathways across the key areas of business activity that are essential to society, and to achieving our Vision 2050.

Business can lead. Business can forge the collaborations required to drive change. It can… but more than that, it must. It is in business's interest to pursue the transformations set out in Vision 2050 – because its long-term success depends on thriving societies to trade with, and a healthy planet for us all to exist on.

JOIN US TODAY IN LEADING THE TRANSFORMATIONS THE WORLD NEEDS

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ABOUT THIS REPORT

WE ENVISION A WORLD IN WHICH 9+ BILLION PEOPLE CAN LIVE WELL, WITHIN PLANETARY BOUNDARIES, BY 2050.

WBCSD first introduced this vision in a landmark 2010 report. It was a collaborative effort by 29 WBCSD member companies from 14 industries, reflecting insights from more than 200 additional companies and external stakeholders in 20 countries. It explored what a sustainable world would look like, how such a world could be created, and the role business should play in bringing it about.

The report made it clear that radical change would be required to provide the 9+ billion people projected to live on Earth in 2050 with enough food, clean water, sanitation, shelter, mobility, education and health so that they could all live well within the limits of what this small, fragile planet can supply, renew and replenish.

The report outlined a pathway to achieve Vision 2050 that included two timeframes for action. 2010-2020 would be the "turbulent teens", a formative period of dynamism and energy during which new ideas and approaches would emerge, compete and evolve, ultimately paving the way for "transformation time" from 2020-2050 – in which hard-won ideas and relationships would transform our businesses, economies and societies at scale.

Ten years on, it is clear that the turbulent teens aren't over. Transformation is eluding us. While many of the building blocks now exist, in the form of frameworks such as the Sustainable Development Goals and the Paris Agreement, change is not happening at the speed or scale required. As unprecedented global risks continue to build and we approach key ecological and social tipping points, we have a unique but rapidly closing window of opportunity for action over the course of the next decade. There is momentum to build on, but we must accelerate our efforts.

At this critical juncture, 40 WBCSD member companies have come together to revisit Vision 2050. Drawing on guidance from an external review committee of leading global thinkers, plus engagements with a wide range of stakeholders from throughout WBCSD's global network, these companies have worked over two years to bring the original vision up to date and to reset the baseline for business leadership for the decade to come.

This report is the culmination of this effort. It lays out:

> **A shared vision:** a rearticulation of our vision for 2050, setting out what achieving it will look like in practice.

> **Transformation pathways:** distinct pathways that outline the key transitions required in nine major areas of business activity, and the essential business actions that will drive progress over the course of the next decade.

> **Foundational mindset shifts:** critical new ways of thinking that will be needed to underpin the transformations laid out in our pathways.

> **Keys to understanding and unlocking transformation:** clarity around what systems transformation means, how it happens, and the role that business can, and needs to, play.

This update of Vision 2050 is designed to help business fulfil its full potential and societal responsibility, providing a framework that it can use to lead the transformations that will enable 9+ billion people to live well, within planetary boundaries.

The report is not intended as an overly prescriptive plan or blueprint, but rather a framework around which a positive and inspiring agenda can be built, that the business community can come together around and use to accelerate transformation. It aims to provide a collective and comprehensive understanding of the necessary and urgent transformations the world needs; a common narrative for business leaders, grounded in opportunity and business reality; and a resource that companies can leverage to inform their sustainability planning and business strategies.

As part of our efforts to refresh Vision 2050, WBCSD has also produced a series of supporting issue briefs that explore some of the key concepts emerging in this report in more detail.

Unlocking systems transformation

Macrotrends and Disruptions shaping 2020-2030

The consequences of COVID-19 for the decade ahead

Innovations that could shape and transform 2020-2030

Reinventing Capitalism: a transformation agenda

Building long-term business resilience

The voice of youth

These materials are available via our Vision 2050 microsite:

www.wbcsd.org/Overview/About-us/Vision2050/Resources

PROJECT MEMBER COMPANIES

3M · acciona · ARCADIS · ArcelorMittal

BASF · BAYER · CHANEL · DNV

DSM · edf · ENGIE · ERM

EY · FUJITSU · Givaudan · Godrej

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Shell · SOMPO JAPAN · SONAE · syngenta

THE NAVIGATOR COMPANY · TOYOTA · Unilever · VALE

VOLKSWAGEN AKTIENGESELLSCHAFT · YARA

ACKNOWLEDGEMENTS & DISCLAIMER

The full project team and contributors are presented at the end of this report. This piece of work has also benefited from a broad range of inputs and insights collected from a specially convened External Review Committee as well as an extensive series of global dialogues and workshops that were convened to test and advance our findings.

This publication has been developed in the name of WBCSD. Like other WBCSD publications, it is the result of a collaborative effort by members of the secretariat and senior executives from member companies. A wide range of members reviewed drafts, thereby ensuring that the document broadly represents the perspective of the WBCSD membership. Input and feedback from members was incorporated in a balanced way. This does not mean, however, that every member company agrees with every word.

EXECUTIVE SUMMARY

WBCSD MEMBER COMPANIES HAVE COME TOGETHER TO REVISIT VISION 2050, BRING ITS PATHWAYS UP TO DATE, AND RESET THE BASELINE FOR BUSINESS LEADERSHIP FOR THE DECADE TO COME.

This update restates our Vision 2050, defines what achieving it will look like in practice, outlines the transformation pathways and essential business actions that will drive progress over the next decade, and proposes three foundational mindset shifts that will underpin the transformations that our vision requires. In addition, we have laid out how systems transformation takes place, the inputs and enablers that drive it and the role that business can, and needs to, play in directing transformation toward Vision 2050.

We have not proposed a utopian ideal – our recommendations are possible and practical, as well as in line with global commitments such as the Sustainable Development Goals and the Paris Agreement. As with the original Vision 2050, we intend this to be used as a reliable and ambitious framework, providing leaders across governments, businesses and civil society with a comprehensive overview and common understanding of where we are trying to get to, and how we can get there.

The challenges we face are global – no country or company can solve them on its own. With its international reach, business can help to focus companies and governments on specific solutions to critical sustainable development challenges, and the international policy environments that will be essential to the realization of global solutions.

TIME FOR
A SHARED VISION

VISION 2050
We believe that 9+ billion people can live well, within planetary boundaries, by 2050.

But only if we significantly increase efforts to transform our businesses and societies.

This report provides a shared ambition and collaborative pathways that business and other stakeholders can pursue to realize this Vision. We detail the key transitions that are required and the actions that can be taken today. Progress along these transformation pathways and toward our Vision 2050 needs to be core to our mission as leading global businesses.

LIVING WELL,
WITHIN PLANETARY BOUNDARIES
Using the latest scientific and development thinking, we have a clear understanding of what it means for 9+ billion to live well, within planetary boundaries.

"Living well" means that everyone's dignity and rights are respected, basic needs are met, and equal opportunities are available for all. Living "within planetary boundaries" means that global warming is stabilized at no more than +1.5°C, and nature is protected, restored and used sustainably. It also means that societies have developed sufficient adaptive capacity to build and maintain resilience in a healthy and regenerative Earth system. Achieving this vision is central to our ability to run our businesses profitably and generate long-term value.

THE URGENT NEED FOR ACTION
This vision is still within reach – but we have to act faster. The decade ahead is critical, and every day counts.

Unprecedented global risks continue to build: we are facing a perfect storm of challenges in the form of a climate emergency, nature in a state of crisis, and mounting inequality and social unrest. Key tipping points are being reached. The next decade represents a final window of opportunity to correct our course.

VISION 2050

9+ billion people
living well, within planetary
boundaries, by 2050

TIME FOR
ACTION

PATHWAYS TO VISION 2050

Vision 2050 can only be achieved through urgent and significant transformations of our businesses, economies and societies. Business plays a central role in delivering the products and services that societies need, including: energy; transportation & mobility; living spaces; products & materials; financial products & services; connectivity; health & wellbeing; water & sanitation; and food.

For each of these areas, we have outlined an ambitious yet plausible vision and pathway for transformation, detailing the key transitions required and the business actions that will contribute the most. Together, these pathways are at the heart of what is needed to realize a world in which 9+ billion people live well, within planetary boundaries. Our visions for each pathway are laid out in the chart below.

TIME FOR
A MINDSET SHIFT

FOUNDATIONAL MINDSETS

These transformations will depend on three critical strategic business mindset shifts: reinventing capitalism to reward true value creation, not value extraction; building long-term resilience; and taking a regenerative approach to business sustainability.

The transformations in our pathways will not come about without fundamental changes to our mindsets. What could capitalism achieve if our companies were managed to deliver long-term and true (sustainable) value? How can we make our companies resilient enough to absorb and adapt to the changes that are already locked in, the disruptions that will surely come, and the transformations that we know are needed? Can regenerative thinking help us restore and nourish the social and environmental systems that our business success depends on?

TRANSFORMATION PATHWAYS TO VISION 2050

ENERGY	A sustainable energy system providing reliable and affordable net-zero carbon energy for all
TRANSPORTATION & MOBILITY	Safe, accessible, clean and efficient transportation of people and goods
LIVING SPACES	Healthy and inclusive living spaces, thriving in harmony with nature
PRODUCTS & MATERIALS	Resource use is optimized to meet society's needs while the systems that provide resources are allowed to regenerate
FINANCIAL PRODUCTS & SERVICES	All financial capital and financial products and services are mobilized to support sustainable development
CONNECTIVITY	Responsible connectivity brings people together, enhances transparency and efficiency, and drives access to opportunity
HEALTH & WELLBEING	The highest attainable standard of health and wellbeing for everyone
WATER & SANITATION	Thriving aquatic ecosystems that support food, energy and public health for all
FOOD	A regenerative and equitable food system producing healthy, safe and nutritious food for all

TIME TO SUCCEED

UNDERSTANDING TRANSFORMATION

Transformation means change at root cause level to deliver fundamentally new outcomes.

Transformation will require radical ambition, intent and effort across business and governments, throughout economies and societies. It will also require systems thinking. While business cannot transform systems on its own, it can contribute to – and relentlessly support – change, through its own actions and in its interactions with other stakeholders.

UNLOCKING TRANSFORMATION

Our strategies and solutions need to be grounded in the technological, economic, political, cultural and environmental realities that will influence both their implementation and progress toward Vision 2050.

We cannot make plans in a bubble. Transformation won't take place in a perfect world – the volatility that has been brewing over the past decade will extend well into this one. Macrotrends, disruptions, new innovations: these will all shape the challenges we face and the ways we can, and cannot, address them. Our responses need to be conceived in context, but at the same time we must also recognize our ability to influence the way the future unfolds.

Our multinational businesses have unparalleled reach – we can influence transformation globally through our innovations, our investments and our relationships with customers, communities, partners and policymakers.

Business doesn't just respond to consumer demand, financial markets, regulatory and policy environments – it also plays a role in shaping them. These points of leverage offer business the opportunity to influence ambition and action in the service of Vision 2050 and its transformation pathways.

TIME FOR LEADERSHIP

LEADERSHIP BASED ON SHARED VISION, SYSTEMS THINKING & MINDSET SHIFTS

Multinational companies are able to influence, empower and align actors up and down value chains, and across geographies and cultures. Vision 2050 provides a framework for business leadership and action, which it can use to fulfil its full potential and societal responsibility, driving urgently needed transformations. At the core of this leadership are a shared vision, systems thinking and mindset shifts.

A safe, sustainable and prosperous future depends on systems transformations that will require enormous, determined and enduring effort from all corners of society, including business.

Vision 2050 provides business with a shared vision, defining the world we are seeking to create and lays out the mindsets, transitions and actions that will make it a reality.

This vision is grounded in an understanding of how systems transform, the pressures that influence change and the factors that enable and accelerate it. Systems thinking is absolutely crucial if we are to successfully disrupt business as usual, working together with legislators, innovators, investors and individuals.

But we also need to shift our mindsets – about the purpose of businesses, about what it means to be resilient, and about how we can operate regeneratively, rather than destructively – so that we can generate long-term value, and therefore future success. These mindsets are the key to running companies well, well into the future.

"THIS UPDATE OF VISION 2050 HAS BEEN DESIGNED TO HELP COMPANIES DRIVE CHANGE IN THEIR MINDSETS, STRATEGIES AND SUSTAINABILITY PLANNING. IT IS A FRAMEWORK FOR ACTION IN LINE WITH THE URGENCY OF THE CHALLENGES THAT WE FACE AS A GLOBAL SOCIETY."

Peter Bakker, President & CEO, WBCSD

TIME FOR
A SHARED VISION

WE ENVISION A WORLD IN WHICH 9+ BILLION PEOPLE CAN LIVE WELL, WITHIN PLANETARY BOUNDARIES, BY MID-CENTURY.

We find ourselves at a time in history where an aspirational, shared vision is more important than ever before. To achieve sustainable development, we need a clear picture of where we want to go, and a path to set out on – even if we can't see all the twists and turns that lie ahead.

In 2010, we provided the original Vision 2050, calling for a world in which 9+ billion people can live well, within planetary boundaries, by mid-century. This vision is equally compelling today, and can serve as a powerful guiding star for the global business community.

However, it is important that we establish not only a shared vision, but also a common understanding of what it will look like in practice, against the backdrop of the progress we have made to date and grounded in science based realities. What constitutes "living well" and what does keeping "within planetary boundaries" really mean?

Perhaps more importantly, we also need to understand how these two prerequisites can be met in a way that is mutually reinforcing as, in reality, it is impossible to separate economic development issues from environmental ones.

Drawing from the latest science, a broad range of expert inputs, and close consultation of intergovernmental instruments and frameworks such as the Sustainable Development Goals and the UN Declaration of Human Rights, we have laid out a common view of the future we seek to create. We will describe this in detail over the next few pages.

9+ BILLION PEOPLE LIVING WELL...

Everyone's dignity and rights are respected, basic needs are met, and equal opportunities are available for all.

...WITHIN PLANETARY BOUNDARIES

Global warming is stabilized at no more than +1.5°C, and natural systems are protected, restored and used sustainably. Societies have developed sufficient adaptive capacity to build and maintain resilience in a healthy and regenerative Earth system.

PEOPLE LIVING WELL

A WORLD IN WHICH PEOPLE ARE LIVING WELL IS A WORLD IN WHICH EVERYONE'S DIGNITY AND RIGHTS ARE RESPECTED, BASIC NEEDS ARE MET, AND EQUAL OPPORTUNITIES ARE AVAILABLE FOR ALL.

BY 2050, WE ENVISION A SOCIETY IN WHICH:

PEOPLE ARE FREE AND EQUAL IN DIGNITY AND RIGHTS

- All human rights, including civil, cultural, economic, political and social rights, as laid out in the UN Declaration of Human Rights and its accompanying covenants and conventions, are fully recognized and embedded in societies globally.

- The UN Guiding Principles on Business and Human Rights are upheld, with all states and businesses fulfilling their respective duties and responsibilities to protect and respect human rights, and to provide access to effective remedy.

- Business models and strategies are developed with attention to the risks they may pose to vulnerable workers, communities and consumers, and are adapted to avoid harm.

- Multi-stakeholder coalitions have played a key role in helping to eradicate forced labor, modern slavery and human trafficking, eliminate child labor, and end sexual harassment in all workplaces

- Businesses work with suppliers, trade unions and other stakeholders to enable, incentivize and reward respect for workers across their value chains, including fair wages.

- Public and private sectors collaborate to ensure the safety of human rights defenders and advance regulatory frameworks that protect the human rights of all.

THERE IS HEALTH AND HAPPINESS FOR ALL

- The basic needs of all individuals are met, allowing them to live healthy, happy and self-determined lives.

- Food is sufficient, safe, affordable and nutritious, and the human right to water and sanitation is upheld.

- There is universal access to affordable and reliable energy, and human habitats are safe and resilient.

- The world enjoys universal access to quality education at all levels, as well as healthcare and social protection that assures physical, mental and social wellbeing.

COMMUNITIES ARE THRIVING AND CONNECTED

- Both urban and rural communities flourish. Rural communities' access to land and the livelihoods it supports is protected, and the particular rights of indigenous peoples are respected.

- Rural areas are attractive places to live, work and invest in, creating plentiful opportunities.

- Everyone has access to safe and affordable mobility solutions which connect communities to each other and to key goods and services.

- Universal access to digital and communication technologies connect individuals across geographic, cultural and socio-economic boundaries – thereby contributing to the development of fair, informed, prosperous and inclusive societies. Public policies and business practices ensure these technologies are not used in harmful ways.

NO ONE IS LEFT BEHIND

- People are not discriminated against on the basis of their race, origins, sexual orientation, gender identity, status or beliefs, and everyone has equal opportunities to advance their needs and interests.

- Society has achieved true gender equality through the empowerment of women and girls and the eradication of all forms of gender-based discrimination.

- The benefits of economic growth are distributed fairly, providing everyone with equitable access to public goods and essential products and services.

- The gap between rich and poor has been significantly reduced; poverty is ended in all its forms everywhere.

PEOPLE HAVE ACCESS TO A WORLD OF OPPORTUNITIES AND ASPIRATIONS

- All people have access to decent and meaningful work that sustains them and their families.

- Work provides people globally with financial security, a sense of self-worth, and the opportunity for self-advancement as well as family time and leisure pursuits, and a means of contributing to society.

- Individuals are empowered to develop the skills they need for work, life, and future fulfillment and employability.

- People can access the education and training needed to perform their work well and build opportunities for both personal and professional growth.

- Workplace cultures are built on empathy and respect, and they encourage the discussion of challenges and mistakes as a means to learning and progress.

- Businesses provide opportunities for people and economies to grow and make a measurable contribution to society.

- Workplaces are safe spaces that protect and nurture people's physical and mental wellbeing and foster meaningful connections.

To define this desired future for "living well", we have drawn from a range of sources including the Universal Declaration of Human Rights, the Sustainable Development Goals, the UN Guiding Principles on Business and Human Rights, Maslow's pyramid of needs, the Social Progress Index Framework, and the Human Development Index.

LIVING WITHIN PLANETARY BOUNDARIES

THE EARTH'S REMARKABLE CLIMATE STABILITY OVER THE PAST 10,000 YEARS, ALONG WITH ITS RICH BIOLOGICAL DIVERSITY, HAVE ENABLED HUMAN SOCIETIES TO GROW AND THRIVE. HOWEVER, THE PLANET'S COMPLEX LIVING AND NON-LIVING SYSTEMS ARE DYNAMIC AND NON-LINEAR.

We now know that since the industrial revolution, and at increasing speed over the past decades, human activity has severely undermined the functioning of Earth's systems.

We have now entered a crisis period of greater volatility: climate emergency, ecological degradation and significant biodiversity loss. In the face of these threats, human societies must build sufficient capacity to adequately respond to these planetary emergencies. We must work to mitigate additional climate change and loss of nature while also learning to adapt to a dynamic and more volatile planet.

BY 2050, WE ENVISION A WORLD IN WHICH:

GLOBAL WARMING IS STABILIZED AT NO MORE THAN +1.5°C[1] AND CLEAN AIR IS AVAILABLE FOR EVERYONE[2]

- Global anthropogenic greenhouse gas emissions have reached net zero, allowing global warming to stabilize at 1.5°C above pre-industrial levels.[3]

- Improved air quality supports better health and environmental outcomes as pollutants including particles, ozone, lead, carbon monoxide, nitrogen dioxide and sulfur dioxide are reduced.

- Anthropogenic aerosol emissions to the atmosphere have been minimized, halting their impact on Earth's climate system.

- The ozone layer in the stratosphere has stabilized and is self-repairing.

THE BIOSPHERE IS PROTECTED AND RESTORED

- The biosphere, including all living organisms on land and below water and the relationships between them, is protected and restored such that – despite the unavoidable pressures on marine and terrestrial habitats from a +1.5°C world – its ecosystems are sufficiently resilient to sustain and regulate the environment.[4,5]

- The biosphere's regulatory services, such as pollination, seed dispersal, pest control, and mitigation of the impact of natural disasters are thriving.[6,7]

- Having achieved net-zero deforestation and habitat loss, by 2050 we live in a "nature positive" world which embraces afforestation and habitat creation.

- Human-induced nature loss is limited to only those impacts which cannot be prevented from a +1.5°C warmer world.

- Conservation plans for those species under threat from even limited climate change have been implemented, and initiatives are in place to limit the spread of invasive species.

- The integrity of living systems is safeguarded and regenerated through efforts to enhance habitats and improve the connections between ecosystems.

HEALTHY LAND AND SOILS ARE STEWARDED IN AN EQUITABLE AND SUSTAINABLE WAY

- Agricultural and food production is confined to an area no greater than that which it currently occupies, helping to conserve forests, grasslands, wetlands and peatlands.

- A strong emphasis is put on preserving and restoring global forests, as their critical role in controlling the linked dynamics of land use and climate is universally recognized.

- Land has been restored and human-induced degradation reversed. Innovative technologies, land management strategies, and land-resource stewardship approaches are widely practiced.[8]

THE OCEANS AND CRYOSPHERE ARE PROTECTED AND RESTORED[9]

- Transformative efforts to reduce greenhouse gas emissions have limited global warming to 1.5°C above pre-industrial temperatures. This may have prevented important tipping points from occurring, including the loss of Arctic summer sea ice and the destabilization of the continental ice sheets. It has also contained ocean temperature increase, ocean acidification, sea level rise, the frequency of marine heatwaves and other consequences, keeping them within manageable bounds.

- Loss from ice sheets and glaciers, reductions in snow cover and Arctic sea ice extent and thickness, and increases in permafrost temperature have all been limited to only that which cannot be avoided in a +1.5°C world. Black carbon emissions from heavy fuel use have been eliminated, preventing additional melting in the cryosphere.

- Ocean ecosystems regenerate and thrive. Marine species remain abundant and are fished sustainably.

THE FRESHWATER CYCLE IS SAFEGUARDED, AND CLEAN WATER IS AVAILABLE FOR ALL

- Water systems are managed efficiently and sustainably, ensuring that groundwater is restored.[10,11]

- Local water storage capacity is optimized for equitable and efficient use.

- Freshwater ecosystems, including wetlands, have been conserved and restored, helping to store carbon and restore nature.[12]

LAND, OCEANS, WATERWAYS AND COASTLINES ARE FREE FROM WASTE AND POLLUTION

- Plastic pollution has been eliminated.

- Emissions of other toxic, persistent, and bio-accumulative substances – organic pollutants, antibiotic and other pharmaceutical residues, heavy metal compounds, and radioactive materials – have also ceased.

- Biogeochemical cycles of nitrogen and phosphorus have been brought back to a sustainable balance, protecting waterways from eutrophication.

NATURAL RESOURCES ARE CONSUMED SUSTAINABLY

- Service-oriented and circular approaches to production and consumption have enabled people to sustainably use natural resources for food, energy, materials, medicines and other applications.[13]

- The ecological footprint of production and consumption has been reduced by more than half and the true value of resources is recognized.[14]

- Efficient and sustainable food systems ensure access to nutritious food and clean water.[15] Food waste has been minimized.

- Everyone has access to clean, affordable energy based on a decarbonized energy system.

NATURE IS VALUED

- People value nature in its own right, recognizing the intrinsic existential value of biological diversity and of the ecological, genetic, social, economic, scientific, educational, cultural, recreational, aesthetic and existential values of the natural world in its entirety.[16,17]

- Governments, companies, and financial institutions consider the value of nature in all their decision-making.

- Everyone enjoys access to nature and the physical and psychological benefits it brings. Nature continues to inspire human ingenuity and creativity.[18]

> *To expand upon our understanding of what it means to live "within planetary boundaries," we considered the latest science and thinking, drawing from a range of experts and sources including the Stockholm Resilience Centre's Planetary Boundaries Framework, UN Environment's Sixth Global Environmental Outlook Report, the IPBES 2019 Global Assessment, IIASA's The World in 2050 initiative's Transformations to Achieve the SDGs 2019, IUCN's Global Commons in the Anthropocene, the Convention on Biological Diversity, the SDGs, the IPCC's Special Report on 1.5°C ; the EAT Lancet report, and the Club of Rome and Potsdam Institute's Planetary Emergency Declaration and Action Plan.*

THE URGENT NEED FOR ACTION

THE LAST 10 YEARS HAVE SEEN OUR BIGGEST CHALLENGES – CLIMATE CHANGE, BIODIVERSITY LOSS, INEQUALITY – GET WORSE, NOT BETTER. OUR VISION IS STILL WITHIN REACH – BUT THE DECADE AHEAD IS CRITICAL, AND EVERY DAY COUNTS.

When the original Vision 2050 was launched, it identified a number of "must-haves" for the decade ahead: key building blocks that needed to be put in place by 2020 in order to make the vision of 9+ billion people living well, within planetary boundaries, possible by 2050. The report challenged businesses and other stakeholders to align their strategies in support of these must-haves, laying the foundations for what our original report called "transformation time" – a period from 2020-2050 in which hard-won ideas and relationships would transform our businesses, economies and societies at scale.
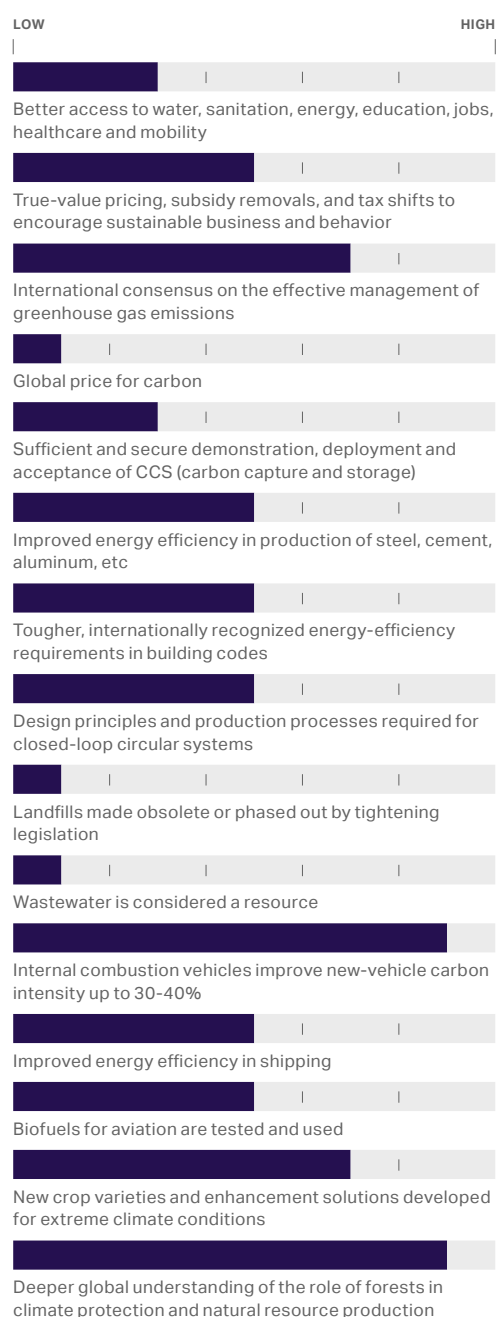
There have been significant advances since the original Vision 2050 was launched. Perhaps the most notable developments have been global inter-governmental agreements to tackle the world's greatest challenges. Chief among these are the Sustainable Development Goals (SDGs), a set of 17 goals and 169 targets that provide a unified global framework for realizing a better world for all, and the Paris Agreement under the United Nations Framework Convention on Climate Change, both of which have provided a shared focus that has helped to empower collaborative action toward sustainable development.

Business has also contributed to important progress. Its innovations and technologies have begun to pave the way for the transition to a low-carbon economy. Companies around the world have set science-based net-zero carbon targets, in line with the Paris Agreement. Beyond emissions reductions, there have been significant investments in nature-based solutions that mitigate climate change while protecting biodiversity and livelihoods, and in important new circular business models that drastically cut waste. Trillions of dollars of assets are now being managed with consideration of environmental, social and governance criteria. And companies continue to work with a broad range of stakeholders throughout global value chains to operationalize the UN Guiding Principles on Business and

Human Rights. Business is increasingly aware of the direct link between progress on sustainable development challenges and long-term value generation.
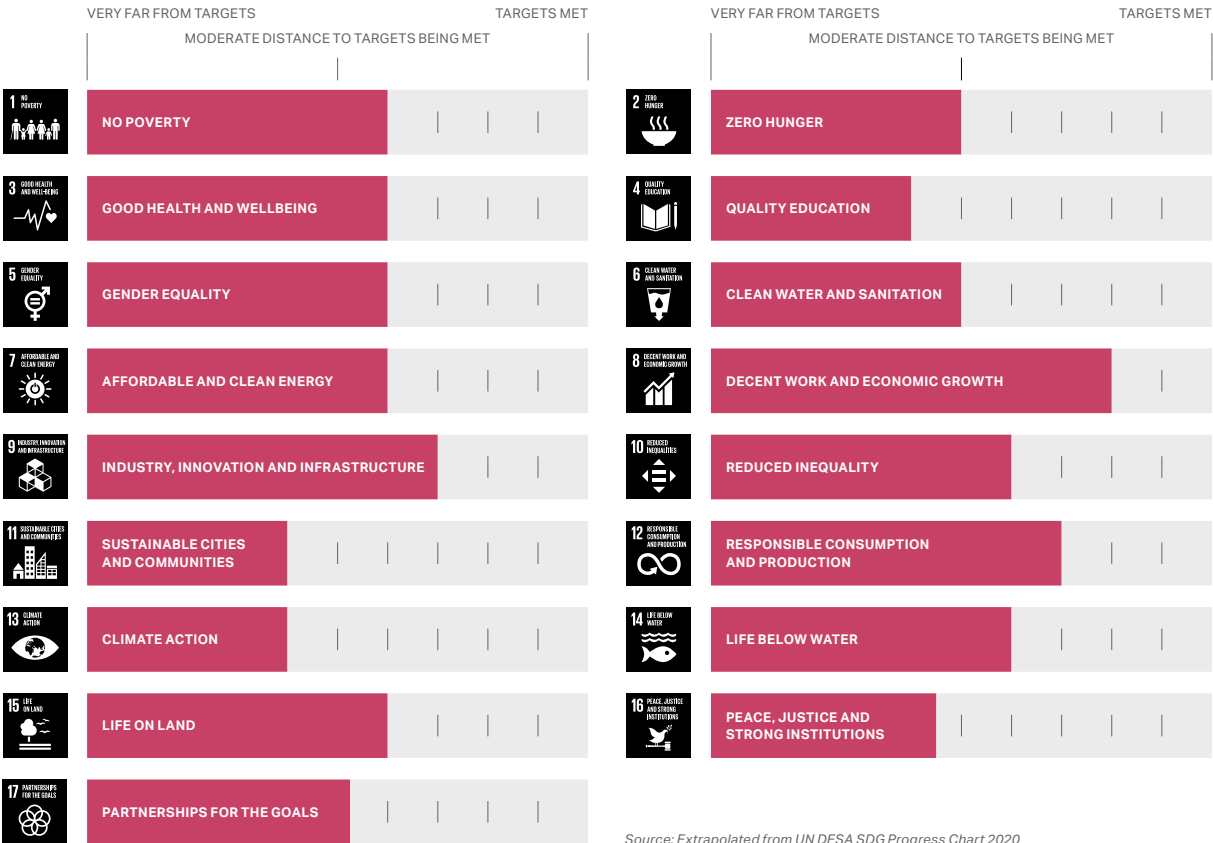
Despite advances in many areas, however, it is clear today that we have largely fallen short of turning our original Vision 2050 "must haves" into "haves," as highlighted in Fig. 1, below. Fig. 2 underlines how global progress on the SDGs remains significantly off-track,[19] and while 189 countries have become parties to the Paris Agreement, recent calculations suggest that even if all countries meet their current carbon reduction commitments, temperatures are still expected to rise to a catastrophic 3.2°C above pre-industrial levels within this century.[20]

FIG. 1: QUALITATIVE ASSESSMENT BY WBCSD AND ITS MEMBERS ON PROGRESS AGAINST A SELECTION OF ORIGINAL VISION 2050 "MUST HAVES"

LOW ——— HIGH

Better access to water, sanitation, energy, education, jobs, healthcare and mobility

True-value pricing, subsidy removals, and tax shifts to encourage sustainable business and behavior

International consensus on the effective management of greenhouse gas emissions

Global price for carbon

Sufficient and secure demonstration, deployment and acceptance of CCS (carbon capture and storage)

Improved energy efficiency in production of steel, cement, aluminum, etc

Tougher, internationally recognized energy-efficiency requirements in building codes

Design principles and production processes required for closed-loop circular systems

Landfills made obsolete or phased out by tightening legislation

Wastewater is considered a resource

Internal combustion vehicles improve new-vehicle carbon intensity up to 30-40%

Improved energy efficiency in shipping

Biofuels for aviation are tested and used

New crop varieties and enhancement solutions developed for extreme climate conditions

Deeper global understanding of the role of forests in climate protection and natural resource production

Source: Based on analysis by WBCSD and its members, 2019

VERY FAR FROM TARGETS   TARGETS MET

MODERATE DISTANCE TO TARGETS BEING MET

1	NO POVERTY
3	GOOD HEALTH AND WELLBEING
5	GENDER EQUALITY
7	AFFORDABLE AND CLEAN ENERGY
9	INDUSTRY, INNOVATION AND INFRASTRUCTURE
11	SUSTAINABLE CITIES AND COMMUNITIES
13	CLIMATE ACTION
15	LIFE ON LAND
17	PARTNERSHIPS FOR THE GOALS

VERY FAR FROM TARGETS   TARGETS MET

MODERATE DISTANCE TO TARGETS BEING MET

2	ZERO HUNGER
4	QUALITY EDUCATION
6	CLEAN WATER AND SANITATION
8	DECENT WORK AND ECONOMIC GROWTH
10	REDUCED INEQUALITY
12	RESPONSIBLE CONSUMPTION AND PRODUCTION
14	LIFE BELOW WATER
16	PEACE, JUSTICE AND STRONG INSTITUTIONS

Source: Extrapolated from UN DESA SDG Progress Chart 2020

This lack of progress to advance the capacity of people to live well, within planetary boundaries can be seen clearly by layering the Global Footprint Network's Ecological Footprint over the UN's Human Development Index, as depicted in Fig. 3 on the next page. This same chart was included in our original Vision 2050 report; however since then we have not seen a shift of countries into the bottom right sustainable development quadrant, where a high level of human development is achieved within planetary boundaries.

The problem is that we are currently seeing incremental change when exponential change is needed. And in several areas, trends are still heading in the wrong direction. The United Nation's landmark 2019 Global Sustainable Development Report highlighted four particular trends that are threatening all aspects of sustainable development:[21]

CLIMATE CHANGE

When we released the original Vision 2050 report 10 years ago the latest scientific evidence suggested that one climate tipping point was at risk. Today, nine out of the 15 major biophysical systems that regulate climate are on the move, showing signs of decline and potentially approaching tipping points.[22] Human activities have already warmed the planet by an average of 1.0°C above pre-industrial levels,[23] and past and present emissions are adding 0.2°C per decade.[24] At this rate, global warming is likely to reach 1.5°C between 2030 and 2052.[25] Heat-related events, heavy precipitation and droughts are worsening,[26] and food security is suffering.[27] For example, in 2019, the Greenland ice sheet suffered its greatest loss in centuries – possibly even millennia – at 255 billion tons or approximately one million tons per minute.[28] Despite growing awareness, emissions keep on rising. Global decarbonization rates remain radically off-course to limit warming to 1.5°C. The latest science indicates that we have just eight years at current emissions rates before we use up our 1.5°C budget.

BIODIVERSITY LOSS

While the United Nations declared that 2011-2020 would be the Decade of Biodiversity,[29] species have continued to go extinct tens to hundreds of times faster than has been the average over the past 10 million years. The world has failed to meet almost all of the conservation targets in the decade-long Strategic Plan for Biodiversity. The tragic reality is that global wildlife populations shrank by 68% between 1970 and 2016, and we are currently on course to lose nearly one million species to extinction by 2050.[30] Failure to halt biodiversity loss will have grave consequences for our livelihoods, economies, health and security. Taken together, the risks from biodiversity loss and climate change have shifted us into a state the Club of Rome and the Potsdam Institute describe as a "planetary emergency".

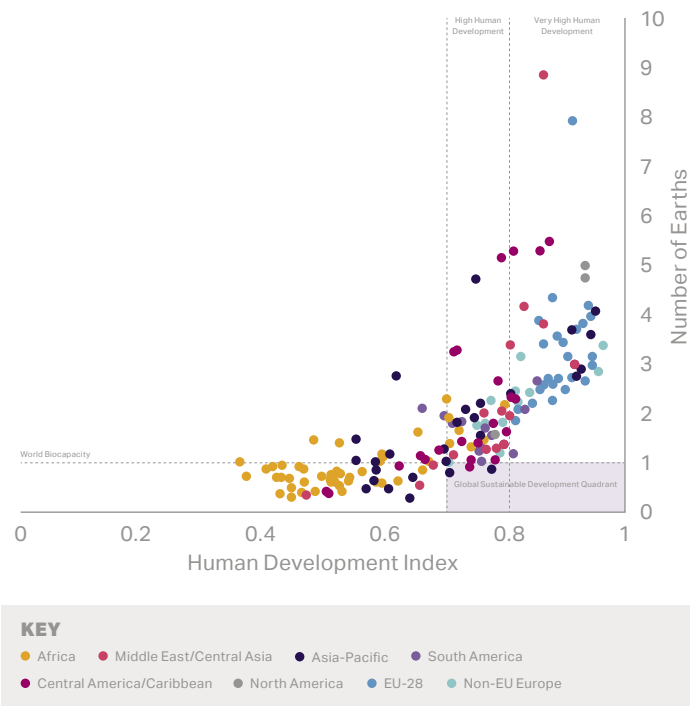## RISING MATERIAL EXTRACTION AND WASTE PRODUCTION

Our global material footprint has more than tripled since 1979, growing by 67% from 2000 to 2017.[31] At the same time material productivity started to decline around 2000, and has stagnated in recent years. Meanwhile, waste has also significantly increased. Electronic waste is growing fastest, having increased by 8% to 43 million tons from 2014 to 2016 alone, and it is now expected to reach 52 million tonnes by 2021. Despite a recent increase in awareness and action, plastic waste is also still expected to grow from 260 million tons per year in 2016 to 460 million tons by 2030 – nearly half of that from packaging.[32] Of all the minerals, fossil fuels, metals and biomass that enter the world each year, just 8.6% are currently cycled back.[33]

RISING INEQUALITY

Income inequality has risen sharply since 1980 – both between and within countries. The richest 1% of the global population has captured 27% of economic gains, while the poorest 50% has captured only 12%.[34] The richest 1% now own 44% of global wealth. The poorest 50% own a mere 2%.[35] Meanwhile women remain nearly 100 years away from equality with men,[36] discrimination remains rife in many corners of society and more than 40 million people are estimated to be trapped in modern slavery.
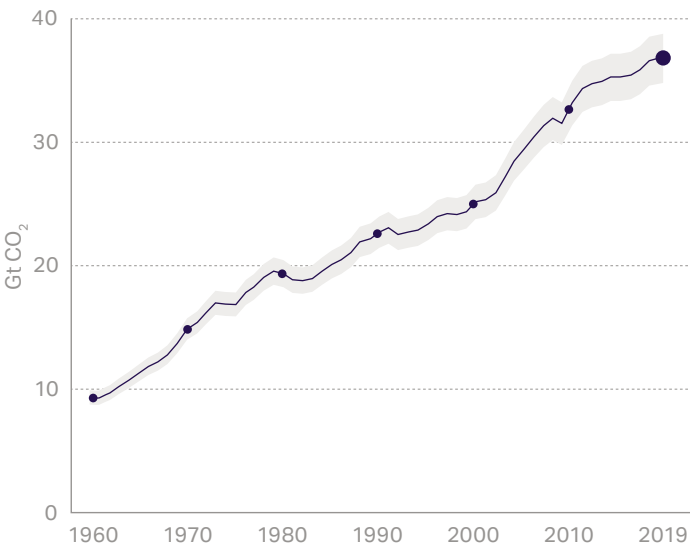
The fact that the 2020s have begun with the world facing of one of the worst public health crises and deepest economic downturns of the modern era has only compounded these inequality challenges. The COVID-19 pandemic has brought important vulnerabilities to the surface and underscored just how far away we are from realizing our vision of a world in everyone can *live well*, let alone within planetary boundaries. The world's ten richest men have seen their combined wealth increase by half a trillion dollars since the pandemic began; meanwhile the World Bank estimates that between 143 and 163 million people will have been pushed into extreme poverty as a result of COVID-19 by the end of 2021.

FIG. 3: ECOLOGICAL FOOTPRINT AND HUMAN DEVELOPMENT INDEX OF COUNTRIES

KEY
- Africa
- Middle East/Central Asia
- Asia-Pacific
- South America
- Central America/Caribbean
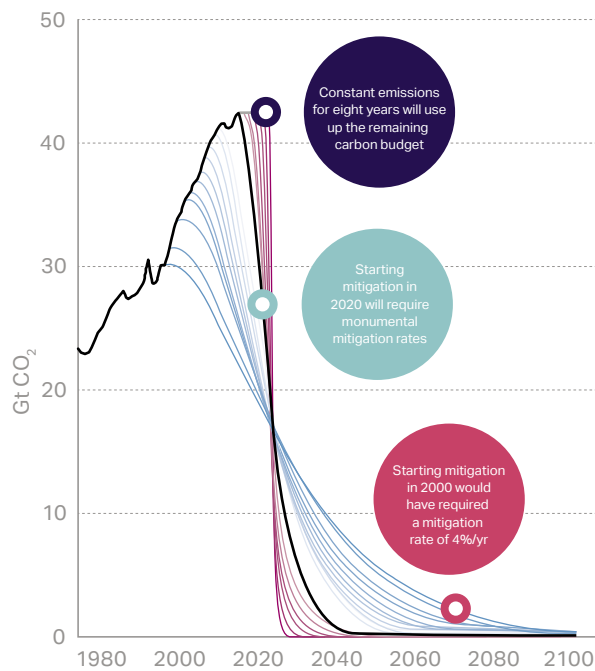- North America
- EU-28
- Non-EU Europe

Source: Global Footprint Network (2019). Data from Global Footprint Network National Footprint Accounts, 2019 Edition; UNDP Human Development Report, 2018

**FIG. 4: GLOBAL FOSSIL FUEL EMISSIONS – 1960 TO 2019**

Source: Global Carbon Project, 2020
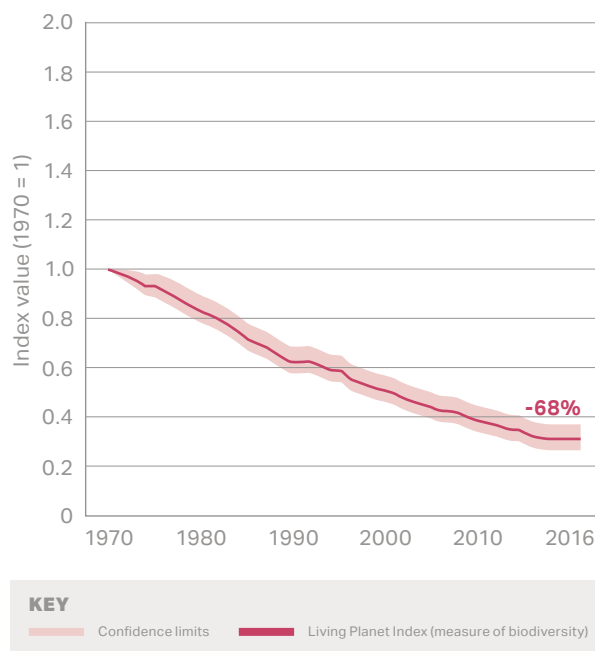
FIG. 5: CO₂ MITIGATION CURVES FOR 1.5°C

Constant emissions for eight years will use up the remaining carbon budget

Starting mitigation in 2020 will require monumental mitigation rates

Starting mitigation in 2000 would have required a mitigation rate of 4%/yr

Source: Global Carbon Project, 2020

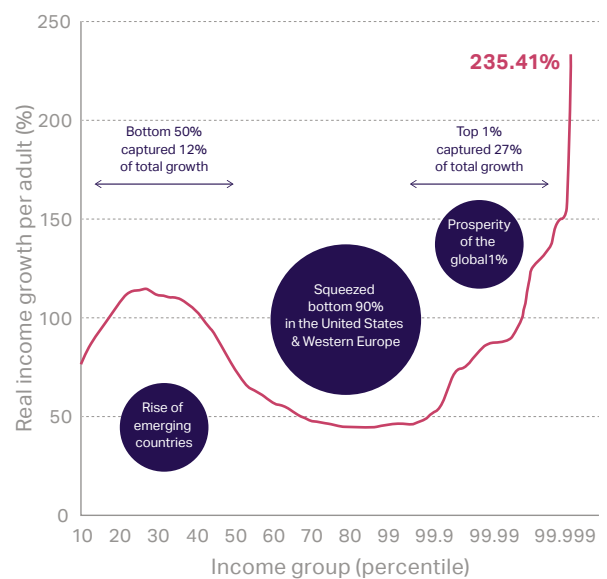## FIG. 7: GLOBAL MATERIAL EXTRACTION AND MATERIAL PRODUCTIVITY – 1970 TO 2017

KEY

— Material productivity
— Non-metallic minerals
— Metals
— Fossil fuels
— Biomass
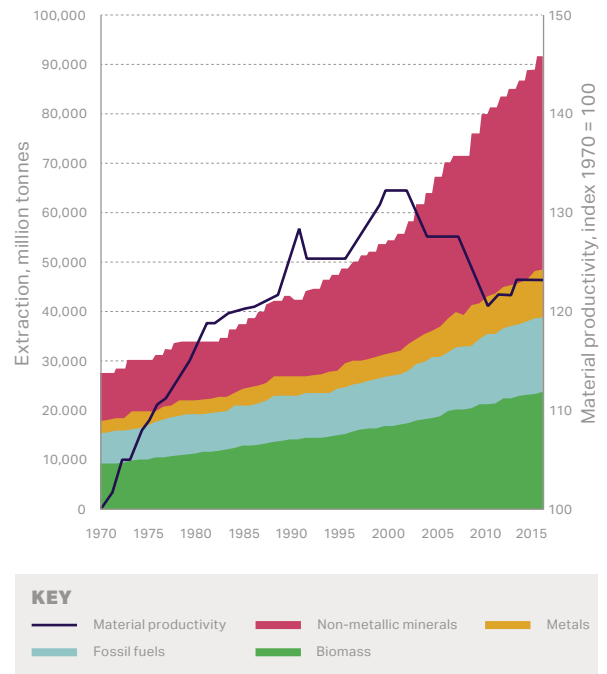
Source: International Resource Panel, 2019

FIG. 6: GLOBAL BIODIVERSITY LOSS 1970 TO 2016

-68%

KEY

Confidence limits   Living Planet Index (measure of biodiversity)

Source: WWF/ ZSL, 2020

FIG. 8: GLOBAL INEQUALITY AND GROWTH – 1980 TO 2016

235.41%

Bottom 50% captured 12% of total growth

Top 1% captured 27% of total growth

Prosperity of the global 1%

Squeezed bottom 90% in the United States & Western Europe

Rise of emerging countries

Source: The Future is Now: Science for Achieving Sustainable Development, United Nations, 2019

**OUR VISION IS STILL WITHIN REACH –
BUT WE NEED TO TRANSFORM NOW**

Unprecedented global risks continue to build: we are facing a perfect storm of challenges in the form of a climate emergency, nature in a state of crisis, and mounting levels of inequality and social unrest. At the same time however, we still have a unique window of opportunity.

Despite its enormous human and financial cost, the COVID-19 pandemic has created an opportunity to drive and accelerate change at a completely different pace than we may have previously imagined to be possible. It has given us new reasons to acknowledge our vulnerabilities, adopt radically different mindsets, implement innovative practices, and make bold new investments that can fundamentally change the trajectory of business and society toward a world in which 9+ billion people can live well, within planetary boundaries, by mid-century.

This window of opportunity is finite. We have less than 10 years to halve global carbon emissions if we want to limit global warming to 1.5°C, in line with the Paris Agreement; turning the tide on biodiversity loss requires immediate action; and the events of recent years have underlined just how close social order is to breaking down in numerous countries around the world, rich and poor, unless we address dangerous and still mounting levels of inequality.

The United Nations has declared the 2020s the Decade of Action. As business, we must take this declaration seriously: we cannot afford to miss this final chance to act and transform our world for the better. An important part of this is facing up to what has held us back so far. We need to acknowledge why we were unable to realize the "must haves" from our original vision (see Past Barriers to Systems Transformation pp.92-93), if we are to be clear about the business opportunities and critical actions that will drive progress in the decade ahead.

**EMBRACING OPPORTUNITIES AND
RECOGNIZING COSTS**

Tackling these critical challenges represents potentially historic opportunities for the global business community. We need to embrace these opportunities in a manner that matches the urgency of the challenges we face.

Landmark research published by the Business and Sustainable Development Commission in 2017 points to at least US$12 trillion of market opportunities that could be opened up annually by 2030 if the ambitions of the SDGs are realized. Research conducted by the Global Commission on the Economy and Climate has highlighted how transitioning to a low-carbon, sustainable growth path could deliver a direct economic gain of US$26 trillion through to 2030 as compared to business-as-usual. An Accenture study on the circular economy identifies US$4.5 trillion of additional economic output that could be unlocked by 2030 (rising to US$25 trillion by 2050) through circular business models that decouple economic growth and natural resource consumption.

Delivering on the SDGs and realizing Vision 2050 offer a compelling growth strategy for the private sector and the global economy. Today, it also offers a sustainable route to generating the demand that many economies desperately need to recover from the damage the COVID-19 pandemic has caused. However, we also have to recognize that shifting toward sustainable growth will inevitably bring about short- and medium-term costs. Existing business models will be disrupted; whole sectors will need to transition away from unsustainable product offerings; and although the creation of new infrastructure can be a source of demand, it will nonetheless need to be financed by governments, investors and businesses, all aligned on the long-term value they are pursuing. In short, to reap the rewards of transformation we must invest in our future and carefully manage the transition risk.

COVID-19 HAS REVEALED JUST HOW FRAGILE SEVERAL ASPECTS OF OUR SYSTEMS AND SOCIETIES HAVE BECOME.

The COVID-19 pandemic was both predictable and predicted.[37] Yet it took most of the world by surprise before ballooning into one of the biggest crises of the last hundred years. The pandemic brought a series of vulnerabilities in social and economic systems to the surface in a way that cannot be ignored:

1. DEPENDENCE ON ECONOMIC GROWTH

From the beginning, the trade-off between the effective control of COVID-19 and the resulting economic impacts has been a key factor and tension influencing the response of policymakers and societies all over the world. The longer the pandemic is with us, the less affordable (politically and economically) this trade-off becomes. Despite the rescue and stimulus packages, most countries have not been able to avoid an economic downturn. Businesses have had to shut. Huge numbers of people have lost jobs and income. Many are unable to pay rent, buy food, and in some countries, rich as well as poor, they struggle to access health insurance or even routine healthcare (a significant number of people struggled to cover their basic needs even before this crisis). Without the economy, society atrophies and governments gradually lose their authority and their ability to care for their citizens. The degree to which social stability and welfare depend on constant economic growth is a source of vulnerability.

2. HIGH LEVELS OF INEQUALITY

COVID-19 has played an important role in highlighting growing inequalities and has exposed the myth that everyone is in the same boat. We're all in the same storm, but not the same boat. How people experience the pandemic is partly determined by where they sit on the global wealth and income spectrum. From gig economy workers to migrant laborers, members of the so-called "precariat" and the most vulnerable members of our society are among those being hit the hardest. Even in the roll out of vaccines, both between countries and within them, we are seeing entrenched inequalities being painfully exposed.

3. WEAKNESS OF NORMS AND INSTITUTIONS THAT ENABLE COORDINATION AND COLLABORATION

Governments responded to the pandemic with a lack of coordination that demonstrates just how badly norms and institutions designed to facilitate collaboration have been eroded in recent years. For example, transnational institutions from the G20 to the EU were largely sidelined, medical equipment was fought over both between and within countries, and richer countries mostly failed to support poorer ones. This inability to coordinate a pandemic response effectively foreshadows how we will react to future or developing disruptions, without real changes to our collaborative capability.

4. UNDER-INVESTMENT IN HEALTHCARE SYSTEMS, SCIENTIFIC RESEARCH, AND PREPAREDNESS

The risk of zoonotic epidemics and pandemics is increasing as a result of deforestation, climate change, urbanization and global connectedness. We have largely ignored this threat. Despite its predictability, COVID-19 was able to overwhelm the health systems of even the world's richest countries rapidly (and repeatedly). It exposed how far from achieving universal health coverage many societies are. The rate of growth in public health spending has fallen significantly since 2010 as a result of austerity programs adopted by many governments in the wake of the 2007-8 financial crisis.[38] Scientific research that could inform better risk assessment and planning has also struggled to attract adequate investment and has often not been heeded.

5. OVER-EMPHASIS BY BUSINESS ON EFFICIENCY AND SHORT-TERM VALUE

As noted in a 2019 Harvard Business Review article, "resilient systems are typically characterized by the very features – diversity and redundancy or slack – that efficiency seeks to destroy."[39] Much of the corporate world has been fine-tuned to maximize efficiency. In addition, a relentless focus on maximizing short-term financial value, coupled with an excessive build-up of corporate debt during an era of low interest rates, has left many companies ill-prepared to deal with an economic shock such as the one triggered by COVID-19.

We explore the longer-term impacts of the pandemic in our Vision 2050 Issue brief: The consequences of COVID-19 for the decade ahead (released May 2020).

TIME FOR
ACTION

ACTION

TRANSFORMATION PATHWAYS

BUSINESS ACTION CAN DRIVE THE KEY TRANSFORMATIONS NEEDED TO BUILD A WORLD IN WHICH 9+ BILLION PEOPLE LIVE WELL, WITHIN PLANETARY BOUNDARIES, BY 2050.

To achieve Vision 2050, business, government and civil society must change the systems that have created the challenges we now face – and change them so profoundly that we can legitimately call it transformation.

Enabling 9+ billion people to live well, within planetary boundaries, will not be about putting scrubbers on smokestacks. It will be about changing what happens in the factory itself – and all that happens outside the factory to influence what goes on inside it, from consumer demand, to investment allocation, to government regulation and the competitive landscape.

Transformation means root cause-level change. It means reinvention, re-creation, and the emergence of completely new ways of thinking and acting based on fundamentally new premises and new sources of value.

Business can lead the process of transformation by doing what business does best: creating and commercializing solutions that people need and want, and engaging governments, investors and the public to make this possible in competitive markets. But this has to take place within the parameters of true value creation, rather than value extraction. True value, a concept developed in the original Vision 2050, is where social and environmental costs and benefits are internalized and reflected in the relative price of goods and services, and in companies' P&L statements, costs of capital and market valuations.

This section outlines a series of nine transformation pathways, highlighting areas where business is uniquely positioned to contribute to getting the world on track to realizing Vision 2050.

PEOPLE LIVING WELL...

...WITHIN PLANETARY BOUNDARIES BY 2050

ENERGY

TRANSPORTATION & MOBILITY

LIVING SPACES

PRODUCTS & MATERIALS

FINANCIAL PRODUCTS & SERVICES

CONNECTIVITY

HEALTH & WELLBEING

WATER & SANITATION

FOOD

OUR TRANSFORMATION PATHWAYS TO VISION 2050

OUR PATHWAYS TO VISION 2050

AS PART OF OUR EFFORTS TO REVISIT VISION 2050 WE HAVE DEVELOPED A COLLECTION OF NINE TRANSFORMATION PATHWAYS.

These pathways were identified through a comprehensive and human-centric approach. They represent the essential products and services that societies need, and that business exists to provide. Although not exhaustive they cover an extremely broad range of business activity and represent areas that the vast majority of industries should clearly be able to see themselves in.

These pathways are different to the nine critical action areas identified in the original Vision 2050, reflecting key technological, environmental, political and demographic developments that have taken place over the course of the past decade.

OUR NINE TRANSFORMATION PATHWAYS ARE:

ENERGY

TRANSPORTATION & MOBILITY

LIVING SPACES

PRODUCTS & MATERIALS

FINANCIAL PRODUCTS & SERVICES

CONNECTIVITY

HEALTH & WELLBEING

WATER & SANITATION

FOOD

Each pathway includes a vision of the way that particular societal need will be met in 2050, a series of transitions we consider critical to achieving each vision, and a list of ten action areas for business to focus on over the course of the next decade. These action areas span innovative products, services, technologies and business models, as well as ways that companies can help create the right enabling conditions for change. These lists are not exhaustive; rather, they contain what WBCSD members consider the most urgent and important priorities for companies in the crucial decade ahead, and will help to inform the development of WBCSD's strategic focus areas moving forward.

OUR PATHWAYS AND THE SDGS

These nine pathways are designed to complement the Sustainable Development Goals by translating their ambitions into clearly actionable areas of business activity. Connections between the SDGs and our Vision 2050 pathways are highlighted in Fig. 9 on the next page and are subsequently explored at an SDG target level as we lay out each transformation pathway in detail over the coming pages.
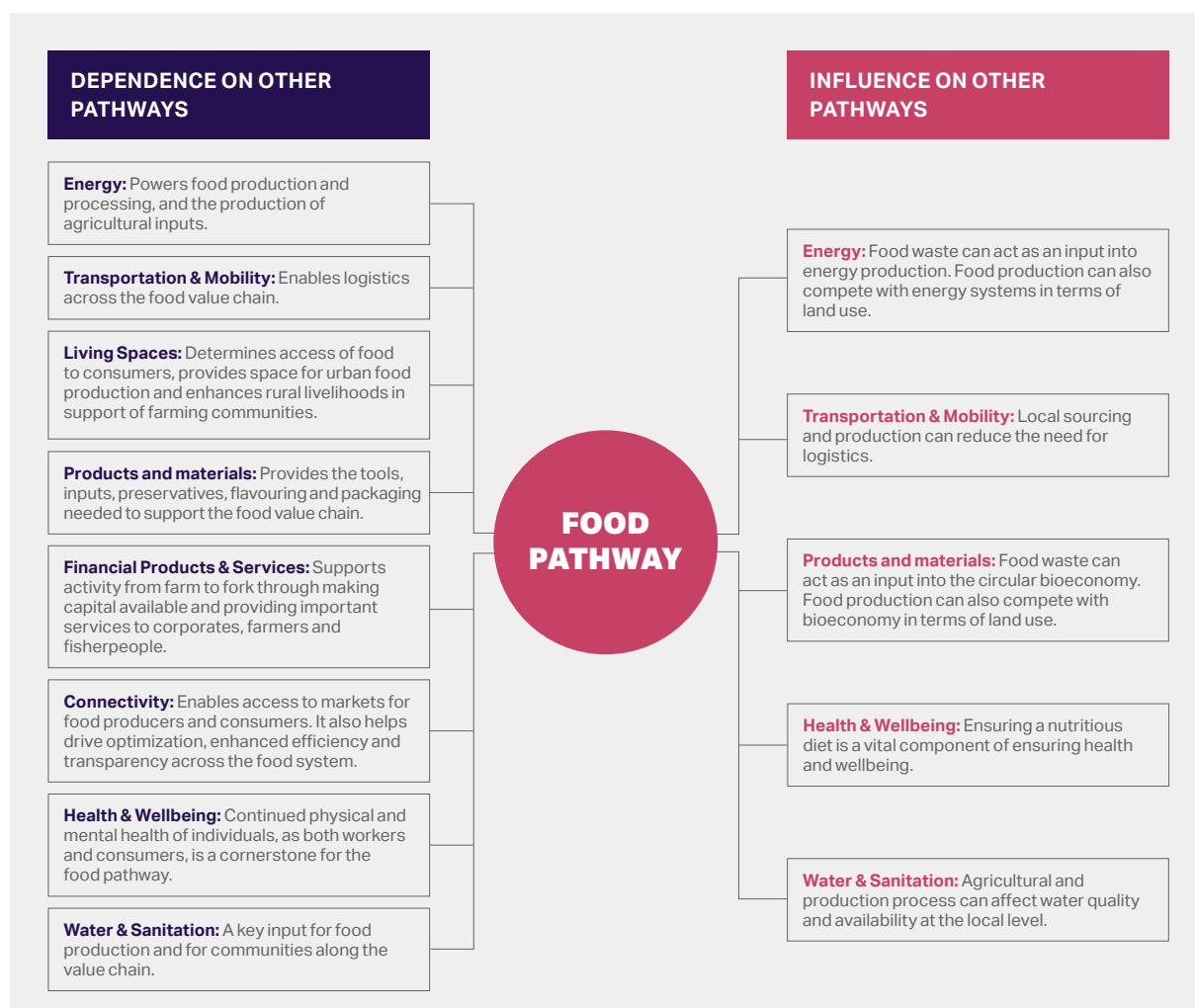
RECOGNIZING INTERCONNECTIVITY

Although we have structured this work around nine pathways, we recognize that the pathways are highly interlinked, and that none can be considered in isolation. Indeed, remaining conscious of these interconnections will be vital to ensuring that progress is made toward Vision 2050. We need to remain constantly aware of broader knock-on effects, positive and negative, and the potential for trade-offs across all of our transformation pathways. This interconnectivity is illustrated in Fig. 10 on the next page, taking our Food pathway as a central point of focus.

Therefore, while certain pathways may hold more relevance for particular industrial sectors than others, it is important that companies explore these pathways holistically, identifying opportunities and responsibilities across the broad range of societal needs that are highlighted.

FIG. 9: VISION 2050 PATHWAYS AND THE SUSTAINABLE DEVELOPMENT GOALS

Pathway
Energy
Transportation & Mobility
Living Spaces
Products & Materials
Financial Products & Services
Connectivity
Health & Wellbeing
Water & Sanitation
Food

FIG. 10: EXAMPLE OF VISION 2050 PATHWAY INTERCONNECTIONS WITH A FOCUS ON OUR FOOD PATHWAY

DEPENDENCE ON OTHER PATHWAYS

Energy: Powers food production and processing, and the production of agricultural inputs.

Transportation & Mobility: Enables logistics across the food value chain.

Living Spaces: Determines access of food to consumers, provides space for urban food production and enhances rural livelihoods in support of farming communities.

Products and materials: Provides the tools, inputs, preservatives, flavouring and packaging needed to support the food value chain.

Financial Products & Services: Supports activity from farm to fork through making capital available and providing important services to corporates, farmers and fisherpeople.

Connectivity: Enables access to markets for food producers and consumers. It also helps drive optimization, enhanced efficiency and transparency across the food system.

Health & Wellbeing: Continued physical and mental health of individuals, as both workers and consumers, is a cornerstone for the food pathway.

Water & Sanitation: A key input for food production and for communities along the value chain.

FOOD PATHWAY

INFLUENCE ON OTHER PATHWAYS

Energy: Food waste can act as an input into energy production. Food production can also compete with energy systems in terms of land use.

Transportation & Mobility: Local sourcing and production can reduce the need for logistics.

Products and materials: Food waste can act as an input into the circular bioeconomy. Food production can also compete with bioeconomy in terms of land use.

Health & Wellbeing: Ensuring a nutritious diet is a vital component of ensuring health and wellbeing.

Water & Sanitation: Agricultural and production process can affect water quality and availability at the local level.

WE CAN *POWER A NET-ZERO WORLD*

ENERGY POWERS THE ECONOMY AND MAKES IT POSSIBLE FOR PEOPLE TO LIVE THE KINDS OF LIVES THEY ASPIRE TO.

It exists in different forms, such as electricity; heat; and solid, liquid or gaseous fuels. The energy system is defined as everything involved in the production, conversion, storage, delivery and use of energy. On the energy supply side, the system includes the extraction and refining of oil and gas, coal and uranium mining, and thermal and renewable generation plants. The system also includes modes of delivery including oil and gas pipelines, shipping, and electricity transmission and distribution networks. On the demand side, key components of the system include energy use in industry, transport and buildings.

OUR 2050 VISION FOR ENERGY

A SUSTAINABLE ENERGY SYSTEM PROVIDING RELIABLE AND AFFORDABLE NET-ZERO CARBON ENERGY FOR ALL

RELIABLE AND AFFORDABLE ENERGY FOR ALL
All individuals, communities and organizations have access to the reliable and affordable energy they need to live well. This energy fuels our transport, provides comfortable home and working environments, and powers our industrial and innovation processes. Resilient infrastructure produces and delivers this energy worldwide.

DEMAND FOR AND DELIVERY OF NET-ZERO CARBON ENERGY
Total global greenhouse gas emissions from the energy system are consistent with limiting global warming to a 1.5°C temperature increase above pre-industrial levels. Businesses and consumers demand net-zero carbon energy as standard. Radical innovations – in the generation, conversion, transmission, distribution, storage and use of energy – have supported the decarbonization of the global energy system. Where emissions remain unavoidable, carbon removal, sequestration and use solutions are deployed.

AN EFFICIENT ELECTRIC ENERGY SYSTEM
The energy system has become largely electric and digitalized. Circularity and energy efficiency have been designed into all manufacturing processes, living spaces, and transport modes worldwide.

BUILT ON THE FOUNDATIONS OF A JUST AND FAIR TRANSITION
The energy system transition has happened in a just, equitable and inclusive way, where clean energy is affordable to all. It has created millions of new jobs while contributing to enhanced health and wellbeing through improved air quality. Individuals whose livelihoods were vulnerable to the shift toward a net-zero carbon economy have been successfully upskilled or reskilled and are empowered to prosper. Human rights are protected and respected throughout the energy value chain.

KEY TRANSITIONS

ZERO CARBON ELECTRICITY GENERATION TECHNOLOGIES ARE FURTHER INNOVATED AND ADOPTED GLOBALLY AT SPEED

- Unabated fossil fuel generation is phased out, driven by the removal of fossil fuel subsidies, the introduction of incentives for net-zero carbon energy, and carbon pricing.

- Financial institutions shift investments from fossil fuels to zero- and low-carbon energy sources. New business models and financing mechanisms overcome cost barriers, enabling existing and emerging low-carbon technologies to mature and be deployed. Businesses and governments develop robust strategies to minimize and manage the impact of sunk fossil fuel investments and other unrecoverable costs.

- Clean electricity generation technologies are rapidly scaled up around the world. Solar and wind expand exponentially to make up more than 60% of electricity generation by 2050, while other technologies, such as hydro, nuclear and biomass, also play an important role.

- Power grids manage increased supplies of renewable electricity, and respond to mounting demand, through flexible solutions including demand-side management and energy storage technologies such as batteries and hydrogen.

- Policies are developed to ensure that suitable on- and offshore areas are available to meet future demand for renewable energy generation, while simultaneously respecting the rights of local communities, protecting biodiversity and aligning with other essential land uses such as food production.

- Companies capture emerging opportunities to leverage their existing expertise in order to transition to new business models, repurpose buildings and other assets, and restore land.

NET-ZERO CARBON ENERGY BECOMES AFFORDABLE, RELIABLE AND RESILIENT

- Business works with governments, civil society organizations, consumers and other stakeholders to ensure that reliable, net-zero carbon energy services are accessible and affordable for all.

- Incentive schemes, subsidies and initiatives such as the Task Force on Climate-related Financial Disclosures (TCFD) and green and transition taxonomies help to foster significant investment in the infrastructure needed to provide reliable and resilient net-zero carbon energy across the globe.

- Innovations in grid integration and energy storage help to ensure constant and reliable access to energy for communities around the world.

- Business supports government and municipal leaders in incorporating resilience into new infrastructure planning, and collaborative action is taken to ensure existing energy systems and related public infrastructure are sufficiently protected from future disruptions.

HEAVY INDUSTRIES AND HEAVY-DUTY TRANSPORT DECARBONIZE

- With policy support, harder-to-abate heavy industry sectors (including cement, steel and chemicals) decarbonize through a combination of materials efficiency and circularity, energy efficiency improvements, and innovative decarbonization technologies.

- Alternative electro-fuels, such as low-carbon hydrogen produced through electrolysis, and sustainable biomass or biogas, replace fossil fuels in industrial high heat-generating processes.

- Heavy road transport, shipping and aviation decarbonize through a combination of electric solutions, electro-fuels and sustainable low-carbon biofuels.

- Where full decarbonization is not achievable, all carbon emissions are effectively captured, reused or stored.

UNAVOIDABLE EMISSIONS ARE TACKLED VIA NATURAL AND INDUSTRIAL CARBON REMOVAL AND STORAGE SOLUTIONS

- Where technical or economic constraints mean that it remains unfeasible to eliminate residual emissions, carbon neutralization measures supplement, but do not substitute, science-based emissions reduction efforts. Companies follow a mitigation hierarchy that prioritizes eliminating sources of emissions within their value chain.

- Credible and reliable nature-based solutions, including avoided deforestation, reforestation and afforestation projects, are deployed at scale. Nature-based solutions follow robust social and environmental principles, ensuring protection and restoration of naturally occurring ecosystems and biodiversity, while implementing stringent social safeguards.

- Carbon capture, usage and storage technologies achieve scale as solutions for hard-to-abate sectors, supported by public policy and ongoing research and development. Opportunities for industrial symbiosis emerge, further enhancing economic viability.

ELECTRIFICATION, CIRCULARITY AND DIGITALIZATION MAKE ALL SECTORS HIGHLY ENERGY EFFICIENT

- Energy efficiency improves exponentially across all sectors including transport, buildings and industry, in part driven by a rapid increase in electrification. Electricity becomes the main energy carrier, accounting for over 50% of total final energy consumption by 2050.[40]

- Supply- and demand-side efficiencies are enabled through the digitalization of the power sector through smart grid technologies and other emerging business models. Digitalization also allows for more efficient network management and monitoring, providing power grids with real-time adaptive capabilities to balance variable generation and demand at local levels. Digitalization is accompanied by robust cyber-security.

- Shifts toward circular, sharing and service business models propel efficiencies and help to reduce emissions. The energy sector itself adopts more circular models in terms of the materials and fuels that it uses.

SHIFTS IN BEHAVIOR AND DEMAND ACCELERATE THE TRANSITION TO NET-ZERO CARBON ENERGY

- Decarbonizing the global energy system moves up the political agenda, driven by widespread public activism. This leads to more ambitious policy action to support zero carbon energy carriers, including carbon pricing and energy taxation. Policies are designed to protect consumer purchasing power.

- Businesses increasingly switch to zero carbon energy. A range of different sectors come to rely on technology that needs clean energy, creating further demand.

- Significant players in the global economy, including the financial sector, continue to divest from fossil fuel-related activity to support the transition to net-zero carbon energy sources.

- Public awareness campaigns, education initiatives and advertising empower people with better information on where their energy comes from, and its impacts. At the same time, technological developments and financial incentives help people to take up more sustainable energy offerings.

THE ENERGY TRANSITION LEAVES NO ONE BEHIND

- The low-carbon energy transition creates at least 18 million new jobs by 2030.[41] Businesses, governments, labor unions and civil society organizations come together to develop long-term strategic plans to address any adverse impacts the transition may have on vulnerable workers and communities.

- Business proactively engages with workers and empowers them to benefit from emerging technologies and business models. Measures such as near-term employment and wage protections, medium-term upskilling, reskilling and investment in alternative industries, long-term education and innovation, help to ensure worker prosperity.

- In parallel, business, government and multi-stakeholder initiatives continually step up collaborative efforts to eliminate human rights violations along the energy value chain.

RELEVANT SDGs

3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.

7.1 By 2030, ensure universal access to affordable, reliable and modern energy services.

7.2 By 2030, increase substantially the share of renewable energy in the global energy mix.

7.3 By 2030, double the global rate of improvement in energy efficiency.

7.A By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology.

7.B By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular the least developed countries, small island developing states, and land-locked developing countries, in accordance with their respective programmes of support.

8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.

8.7 Take immediate and effective measures to eradicate forced labor, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labor, including recruitment and use of child soldiers, and by 2025 end child labor in all its forms.

8.8 Protect labor rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment.

9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally-sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities.

11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management.

12.2 By 2030, achieve the sustainable management and efficient use of natural resources.

12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse.

12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature.

13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.

13.2 Integrate climate change measures into national policies, strategies and planning.

13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.

14.2 By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, by strengthening their resilience, and taking action toward their restoration in order to achieve healthy and productive oceans.

15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species.

ENERGY
ACTION AREAS FOR BUSINESS
2020 – 2030

01 Construct no new coal power plants. Plan and implement a phase-out of all unabated coal power generation by 2040 and reduce the share of coal in total global electricity generation to less than 10% by 2030.

02 Advocate for policies, such as carbon pricing, that will lead to the effective removal of fossil fuel subsidies and will integrate environmental externalities into market prices to an extent that favors low- and zero carbon solutions.

03 Send a strong demand signal by sourcing net-zero carbon energy for all operations while encouraging and supporting supply chains and customers to do the same.

04 Collaborate with peers, cities and governments around the globe to align on common net-zero carbon ambitions, set science-based targets, and drive implementation accordingly.

05 Ramp up investment and accelerate innovation to drive down the cost of existing solutions, commercialize breakthrough technologies, and digitalize the energy system. In particular, invest in the development and deployment of energy storage technologies and robust power grids to cater for increasing demand.

06 Transition to circular designs and business models to reduce energy demand and resource use across the value chain.

07 Electrify energy end-use wherever possible in buildings, mobility and industry, while also scaling up development and deployment of sustainable fuels to provide the high-temperatures required for industry and long-distance transport.

08 Support information-sharing and education initiatives to increase people's understanding and energy-aware behavior.

09 Invest in high quality nature-based solutions to remove emissions from the atmosphere while also enhancing biodiversity and ecosystem services. When fossil fuels cannot be displaced by low-carbon energy carriers, deploy carbon capture and storage technologies.

10 Mobilize coalitions with policymakers and other stakeholders to develop comprehensive strategies that ensure respect for human rights throughout the energy value chain and support a just and fair energy transition while phasing out fossil fuels.

WE CAN KEEP ON MOVING, SMARTER

TRANSPORTATION AND MOBILITY HELP DEFINE THE RANGE OF PRODUCTS, SERVICES AND EXPERIENCES THAT PEOPLE HAVE THE OPPORTUNITY TO ACCESS AND ENJOY.

Transportation involves the movement of people, animals and goods from one place to another across land, water or air. The concept of mobility centers around providing people with safe access to the people, places, goods and services they need to live a healthy, happy and fulfilled life. The transportation and mobility system includes the vehicles, services and infrastructure needed for a range of transport modalities – from walking and biking, to driving, flying and shipping.

OUR 2050 VISION
FOR TRANSPORTATION & MOBILITY

SAFE, ACCESSIBLE, CLEAN AND EFFICIENT TRANSPORTATION OF PEOPLE AND GOODS

MOBILITY ENABLES OPPORTUNITY FOR ALL

Accessible, affordable, high-quality transportation options allow both urban and rural populations to access social and economic opportunities. People's mobility needs – including access to other people, places, goods and services – are met regardless of gender, age, ability, socio-economic status or geography. Global transportation infrastructure is connected, optimized and resilient, and forms the foundation of dynamic local, regional and global economies and communities.

HEALTH AND SAFETY ARE PARAMOUNT

The number of transport-related fatalities is close to zero. Transportation systems are designed and operated to protect the health and safety of all people and enhance quality of life in communities. Autonomous capabilities and connectivity across vehicles and transportation infrastructure help to maximize road safety and reduce risk of injury. Air and noise pollution and their impact on health has been widely eliminated through collective action in cities around the world, and more active mobility choices foster enhanced health and wellbeing.

TRANSPORTATION IS CLEAN AND EFFICIENT

The transportation of people and goods respects planetary boundaries and safeguards the regenerative capacities of the environment. Innovation in battery- and fuel cell-powered electric vehicles, renewable fuels, and highly fuel-efficient and hybrid engines have made net-zero transportation with no associated air pollutants a reality – including in heavy freight, shipping and aviation. Infrastructure and vehicles are connected and operate as part of an optimized mobility system. Circular and sharing economy approaches have helped to reduce demand for assets, materials, energy and water. People are aware of the environmental impacts of transportation and make sustainable mobility choices.

TRANSPORTATION SYSTEMS RESPECT PEOPLE AND COMMUNITIES

Human rights are protected and respected throughout transportation and mobility value chains. Infrastructure and urban planning processes protect the rights and foster the wellbeing of local communities. The transition to new transport modes has been just, fair and inclusive, accompanied by the reskilling and upskilling of workers globally. Legal and policy frameworks have been reimagined to support the rights of workers in the transportation and mobility areas of the gig economy.

KEY TRANSITIONS

BATTERY, LOW-CARBON FUEL AND EFFICIENCY INNOVATIONS DECARBONIZE TRANSPORTATION

- By 2050 all vehicles have zero carbon electric drivetrains as technology improves, costs decline and the policy landscape shifts. Passenger battery electric vehicle (BEV) sales rise exponentially, while sales of internal combustion passenger vehicles peak and decline well in advance of 2050.

- Hydrogen-powered fuel cell electric vehicles (FCEVs) complement BEVs, particularly for heavier vehicles and long-distance transportation.

- Heavy-duty land transport transitions to zero-emission drivetrains.

- The decarbonization of fuels and a focus on engine efficiency lead emissions in shipping to drop.

- Hydrogen, electric and low-carbon fuel replaces petroleum-based fuel consumption across the aviation industry, spurred on by new industry regulations. These efforts are supported by innovations in new lightweight materials.

- Efforts to restructure global value chains and optimize patterns of freight movement enable drastic reductions in the carbon intensity of logistics.

INFRASTRUCTURE DEVELOPMENT AND PLANNING PAVE THE WAY FOR SUSTAINABLE, RESILIENT AND INCLUSIVE MOBILITY

- Efficient inclusive transportation infrastructure connecting urban and rural areas is expanded and upgraded globally, supported by the emergence of new funding models.

- Public authorities focus on maintaining and enhancing the quality, viability and resilience of urban public transit infrastructure.

- Urban development centers around lower-impact modes of transport. Pedestrian and cycle paths provide efficient, safe and healthy alternatives to cars. Urban planning also integrates dedicated spaces and infrastructure for non-motorized vehicles, personal electric micro vehicles and ride-hailing and car-sharing accessibility.

- All new transport infrastructure is designed and built with a focus on long-term resilience to natural, social and health-related shocks. Existing infrastructure is assessed for resilience and upgraded or retrofitted as needed.

- Urban planners and builders adopt and standardize vehicle-powering technologies such as electric charging infrastructure, hydrogen and other low-carbon fuels. Electricity grids are upgraded to meet escalating charging demand from net-zero energy sources.

- Innovations in infrastructure and traffic management systems enhance road safety and help reduce road traffic injuries and deaths to close to zero.

- Science-based methods for assessing potential environmental and social impacts of the design, construction and operation of transport infrastructure are mandated and widely deployed, supporting the regeneration of natural and social systems.

CIRCULAR OPPORTUNITIES ARE UNLOCKED AND SCALED ACROSS THE TRANSPORTATION AND MOBILITY SECTOR

- Circularity is incorporated into all phases of design, sourcing, production and operations in relation to transportation and mobility.

- Markets for recycled automotive, aviation and shipping materials are scaled rapidly, and end-of-life segregation and upcycling is made possible at low cost, fostering new economic opportunities.

- As automotive supply chains transition to more circular models, vehicle distribution and maintenance networks diversify to become re-manufacturing hubs.

- A thriving market for recycled batteries emerges that recovers nearly 100% of battery materials.

SELECTIVE DEPLOYMENT OF AUTONOMOUS VEHICLES ENHANCES EFFICIENCY, SAFETY AND ACCESS

- Zero-emission autonomous passenger vehicles are deployed in shared fleets in urban areas where traffic is controlled and predictable, enhancing road safety and efficiency.

- Autonomous goods management in warehouses – as well as autonomous, electric last-mile delivery – increase efficiency and resilience, while reducing emissions.

- Long-distance freight truck platooning increases fuel efficiency and road safety.

- Light-freight electric delivery drones enhance access to essential goods and services for remote populations.

- Autonomous vehicles and their inbuilt software are designed and enhanced to ensure that errors and unanticipated behaviors do not result in death or injury.

MOBILITY SOLUTIONS DIVERSIFY, SHIFTING MOBILITY HABITS WHILE INCREASING SAFETY, CONVENIENCE AND EFFICIENCY

- Walking, cycling and personal micro-mobility become the norm for travelling short distances (in cities that are redesigned to ensure essential services are available within close proximity). A range of complementary low-impact vehicles and shared mobility options are available for longer journeys.

- Sustainability-proven, convenient and comfortable mobility service providers such as taxi, ride-hailing and car-sharing companies become a central part of the mobility ecosystem. Technology helps to merge them with public transit into integrated mobility-as-a-service service offerings.

- Individuals become more aware of the environmental and social impact of their mobility and transportation behaviors and choices, while policymakers ensure that the price of different mobility options reflects environmental and social externalities.

- Employers and employees embrace teleworking, reducing global demand for travel as well as easing rush hour congestion and overcrowded public transport, and decreasing the amount of time people spend commuting. Companies continually challenge themselves on the need, frequency and mode of business travel.

- Employers also widely adopt sustainable corporate transportation and mobility policies such as electric fleets, vehicle sharing and incentives for walking, biking and using public transport.

DATA-SHARING IMPROVES URBAN MOBILITY SYSTEMS

- Information and communications technology innovations and new standards for data acquisition, sharing and analysis allow for more connected urban mobility and logistics.

- Connected vehicles and infrastructure enable more efficient, effective intermodal logistics, urban planning, infrastructure and air quality management.

- Regional data-sharing models proliferate and transform the way mobility systems are conceived and managed, ultimately making mobility safer, cleaner, more efficient and accessible.

- Governments adopt policies that encourage ethical, cyber-secure and privacy-bound data aggregation and sharing in the context of transportation and mobility.

- Data-sharing allows cities to identify the solutions that best support sustainable development and to develop performance-based taxation and subsidy programs.

MULTI-STAKEHOLDER EFFORTS ENSURE THE TRANSITION TO A SUSTAINABLE MOBILITY SYSTEM LEAVES NO ONE BEHIND

- Social equity and justice are incorporated as central tenets in infrastructure and mobility planning. Fair user fees are employed across all transport modes and shared transport services are designed to be affordable and accessible for all.

- Consistent due diligence, disclosure and remediation in line with the UN Guiding Principles on Business and Human Rights help to address adverse human rights impacts in the mobility and transportation value chains.

- In the face of rapidly expanding demand, stakeholders across the battery value chain come together to eliminate human rights violations and ensure safe working conditions.

- The rise of autonomous vehicles, the transition to electric vehicles, and the emergence of mobility-as-a-service models are accompanied by extensive, proactive and collaborative efforts to address the potential impacts on jobs. Companies take a people-centric approach and engage with and empower workers to benefit from emerging technologies.

- Business works with governments to advance legal and policy frameworks that ensure that the rights of workers in the gig economy are recognized and protected.

RELEVANT SDGs

3.6 By 2020, halve the number of global deaths and injuries from road traffic accidents.

3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.

8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.

8.7 Take immediate and effective measures to eradicate forced labor, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labor, including recruitment and use of child soldiers, and by 2025 end child labor in all its forms.

8.8 By 2030, protect labor rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment.

9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human wellbeing, with a focus on affordable and equitable access for all.

11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons.

11.6 By 2030, reduce the adverse per capita environmental impact of cities, by paying special attention to air quality and municipal and other waste management.

12.2 By 2030, achieve the sustainable management and efficient use of natural resources.

12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse.

12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature.

13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.

13.2 Integrate climate change measures into national policies, strategies and planning.

13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.

15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species.

TRANSPORTATION & MOBILITY

ACTION AREAS FOR BUSINESS
2020 – 2030

01 Develop and adopt ambitious sustainable corporate mobility policies that foster the electrification of corporate fleets, the highest possible vehicle safety standards, vehicle sharing, active mobility and teleworking.

02 Continue to invest in the development of innovative electric charging and energy storage technologies that can be deployed across mobility platforms, and help to bring passenger battery electric vehicles to market at all price points and segments.

03 Collaborate with governments, cities, industry peers and across sectors on the deployment of connected and interoperable charging infrastructure.

04 Scale the use of low-carbon fuels for long range and heavy-duty transportation.

05 Work with local and national organizations to agree and operationalize responsible data-sharing initiatives related to transportation that create public and private value.

06 Engage in dialogues with policymakers, operators and labor unions to explore potential impacts on employment associated with the roll-out of mobility-as-a-service models, automated and electric vehicles, and innovations in production-line technology. Ensure that workers are engaged and empowered as new technologies emerge.

07 Ensure human rights are respected across transportation and mobility value chains, developing and improving internal policies and systems for human rights due diligence as set out by the UN Guiding Principles on Business and Human Rights.

08 Develop, test and scale economically viable business models for mobility-as-a-service, connected urban logistics and vehicle-to-city connectivity.

09 Develop, test and scale opportunities surrounding circularity in the automotive industry and across the whole transport and mobility system.

10 Develop and adopt guidelines and standards for the roll-out of sustainable transport infrastructure that contributes to the regeneration of natural and social ecosystems.

WE CAN MAKE THE WORLD FEEL AT HOME

LIVING SPACES ARE THE AREAS WHERE PEOPLE RESIDE, WORK AND SPEND THEIR LEISURE TIME.

People's living spaces play important roles in their physical and psychological health, their relationships and the quality of their work. This transformation pathway considers the needs of both urban and rural communities, and the combined efforts of public and private sector actors to create a built environment that provides adequate housing, workplaces, and spaces for leisure and community engagement. The urban planning, architecture, construction, maintenance, real estate, retail, hospitality and leisure industries all have roles to play.

EXPLORE THE LIVING SPACES PATHWAY BUSINESS ACTION AREAS

OUR 2050 VISION
FOR LIVING SPACES

HEALTHY AND INCLUSIVE LIVING SPACES, THRIVING IN HARMONY WITH NATURE

LIVING SPACES PROMOTE HEALTH AND WELLBEING
The way we think about and engage with the spaces in which we live and work has shifted radically. We recognize the influence of our living and working spaces on almost every aspect of our lives – from how we sleep to how we socialize, from how productive we are to how safe and secure we feel. By 2050, built environments facilitate the health and wellbeing of individuals and communities alike and have adapted to meet the needs of growing and increasingly urban populations.

AFFORDABLE HOUSING AND COMMUNITIES THAT WORK FOR ALL
Adequate, safe, resilient and affordable housing is available to all. Infrastructure provides inclusive access to fundamental services, economic opportunities and education.

Urban environments integrate green and public spaces and ensure universal access to clean air, food, water and sanitation. Urban and rural planning respects and safeguards cultural identity and heritage. Human rights are protected and respected throughout the construction value chain.

A NET-ZERO CARBON, RESILIENT, ADAPTABLE AND REGENERATIVE BUILT ENVIRONMENT
All buildings have net-zero operational carbon emissions. The carbon footprint of buildings (embodied carbon) has also been reduced to zero. Climate resilience is a key consideration in infrastructure planning. Cities depend on, value and maintain strong links to the environment and strive for restoration of the natural world.

LIVING SPACES THAT HARNESS THE POTENTIAL OF RECYCLED AND RENEWABLE MATERIALS
Buildings are designed to minimize material use and maximize suitability for renovation and adaptation. Recycled and renewable materials that are regeneratively managed sit at the core of construction.

KEY TRANSITIONS

BUILDING AND INFRASTRUCTURE DESIGN SHIFTS TO FOCUS ON USERS' HEALTH

- Occupants' health and wellbeing play an increasingly central role in building design and construction. Buildings are designed to be comfortable, safe and secure spaces that foster positive social interaction, healthy and active lifestyles, focused work, creative expression, relaxation and rest.

- Strict regulations reduce the use of hazardous materials in the built environment across design, construction, operation and deconstruction. Only materials that pose no health risk are used.

- Exposure to ambient and household air pollution declines as policies and investments support clean mobility and transportation, clean household energy and other innovations.

- Enhanced waste management, noise management, optimal temperature management and access to daylight all help people live and work free of risks to their health.

INFRASTRUCTURE AND BUILDINGS INCREASINGLY INTEGRATE AND RESPECT BIODIVERSITY

- The environmental footprints of buildings and infrastructure are minimized. Buildings generate their own energy onsite using renewable sources, and capture and treat their own water. All buildings are constructed from non-toxic and sustainably-sourced materials.

- Biodiversity becomes a key component of urban planning. Natural systems such as forests, mangroves and wetlands are increasingly valued for providing core infrastructure and ecosystem services. Green infrastructure helps solve an array of challenges from managing stormwater to improving air quality.

- Nature's value to cities and communities starts to be accounted for. This leads to stronger political and commercial efforts to protect nature effectively.

- Urban areas are designed to ensure universal accessibility to green spaces, connecting people with nature and the physical and psychological benefits it brings.

CITIES AND BUILDINGS PAVE THE WAY TOWARD NET-ZERO CARBON

- Cities, in partnership with national regulators, implement strong policies and programs to reduce GHG emissions in existing building stocks and ensure that new buildings are constructed with the lowest possible footprint. By 2030, all new buildings operate at net-zero carbon and there has been a reduction in embodied carbon of at least 40% from 2020 levels. This reaches 100% by 2050.

- Electricity grids are upgraded to meet escalating demand from net-zero energy sources.

- New and refurbished buildings are highly energy efficient and come to include renewable energy production capacity and/or energy storage capabilities by default.

- The agreement and adoption of common metrics along the building and construction value chain help to establish clear decarbonization pathways, facilitating the transition to net-zero.

- Fast-growing cities discourage urban sprawl and steer infrastructure investments toward more compact and efficient growth.

THE EMERGENCE OF RESILIENT URBAN AND RURAL COMMUNITIES

- Long-term resilience is integrated into urban and rural infrastructure and planning, with planners enhancing their capacities to adapt, learn and transform.

- Cities and local authorities lead societies in adapting to major climatological changes and embracing resilience. This includes resilience to extreme weather events, changing sea levels, water scarcity, increased temperature, lower agricultural harvests and fewer material resources.

- Buildings' capacity to manage storm-surge flooding and heat waves is enhanced. Water is collected and diverted to new uses, green spaces are used to reduce drought, and technological advancements support heat regulation and healthy indoor climates.

- Cities and communities foster resilience to other potential environmental and social shocks, including pandemics.

- Universally accessible early warning systems and emergency planning are put in place globally. Urban and rural inhabitants are well-prepared to roll out emergency protocols.

A SHIFT TOWARD CIRCULAR LIVING SPACES THAT MINIMIZE CONSUMPTION AND WASTE

- Circular thinking is increasingly adopted across built environment business models, ownership structures, construction practices and management, creating a range of market and employment opportunities.

- Incentives and innovations support a drastic reduction in material use in buildings. Building standards are developed and enforced to ensure new buildings are designed to increase their suitability for renovation and recycling. Older buildings are preserved, rather than demolished, and serve new functions.

- Policies stimulate the widespread application of secondary and renewable bio-based construction materials that are modular and deconstructable.

- Accurate sustainability performance information becomes available for all building materials, enabling the development of reliable life cycle assessments. The use of building passports is mainstreamed and scaled.

- Service-based models grow substantially. Many companies expand their product offerings to include construction and maintenance services, enhancing efficiency and enabling closed product loops. Reuse, repair and refurbishment markets also grow, generating significant employment.

CITIES ARE MADE TO WORK FOR ALL

- Government and business partner to ensure high-quality, affordable, accessible and adaptable housing is available for people at all socio-economic levels.

- Neighborhoods are designed and redesigned to be accessible, inclusive, safe and secure. They provide access to opportunities for employment, food, culture, healthcare, mobility, education, and healthy and active lifestyles.

- Cities are developed in a way that safeguards cultural and natural heritage.

- Consulting with local stakeholders, planners and architects design inclusive, green and bio-diverse community spaces, and create multifunctional buildings that support a range of interactive recreational activities.

- Infrastructure adapts to meet the needs of ageing populations, with accessible, connected and inclusive housing.

RESPECT FOR HUMAN RIGHTS IS EMBEDDED ACROSS THE CONSTRUCTION AND MATERIALS SECTORS GLOBALLY

- Urban and rural areas are developed in a manner that respects the rights and needs of local communities and displaces no one.

- Construction projects ensure fair living wages for workers and strive to attain the highest possible standards of health and safety.

- Governments, cities and businesses come together to ensure that modern slavery, forced labor and child labor are eliminated from the construction sector and the value chains of the materials upon which it relies.

- As construction practices evolve, workers are continually upskilled, reskilled and empowered to prosper.

RELEVANT SDGs

1.5 By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters.

3.4 By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and wellbeing.

3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.

6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity. Substantially reduce the number of people suffering from water scarcity.

7.3 By 2030, double the global rate of improvement in energy efficiency.

8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.

8.7 Take immediate and effective measures to eradicate forced labor, end modern slavery and human trafficking and secure the prohibition and elimination of child labor.

8.8 By 2030, protect labor rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment.

9.1 Develop quality, reliable, sustainable and resilient infrastructure to support economic development and human wellbeing, with a focus on affordable and equitable access for all.

9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally-sound technologies.

11.1 By 2030, ensure access for all to adequate, safe and affordable housing and basic services, and upgrade slums.

11.3 By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries.

11.5 By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the economic losses relative to gross domestic product caused by disasters, with a focus on protecting the poor and people in vulnerable situations.

11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management.

11.7 By 2030, provide universal access to safe, inclusive and accessible green and public spaces, in particular for women and children, older persons and persons with disabilities.

12.2 By 2030, achieve the sustainable management and efficient use of natural resources.

12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse.

12.8 By 2030, ensure that everyone has relevant information and awareness for sustainable development and lifestyles in harmony with nature.

13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.

13.2 Integrate climate change measures into national policies, strategies and planning.

13.3 Improve education, awareness-raising and capacity on climate change mitigation, adaptation, impact reduction and early warning

15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species.

LIVING SPACES

ACTION AREAS FOR BUSINESS
2020 – 2030

01 Implement short-, medium- and long-term science-based targets to reduce the whole life carbon footprint of built structures toward net-zero emissions. Collaborate with clients, suppliers and all actors across the built environment to ensure targets are met and to drive net-zero construction and renovation measures.

02 Contribute to the development of national and sectoral decarbonization roadmaps, and engage with authorities at the regional, national and local levels to advocate for the targets, building codes and planning, permitting and procurement processes needed for a sustainable built environment.

03 Unlock the potential of digitalization to facilitate data recording and transfer among stakeholders and across life cycle stages to promote more holistic urban planning, greater transparency and enhanced efficiency across the built environment sector.

04 Create ways for occupants to play a role in minimizing the environmental impacts of their living and working spaces.

05 Develop circular business models to maintain the value of materials and resources throughout the lifetime of built structures. Innovate to make circular options more cost-competitive, convenient and dependable.

06 Future-proof buildings and infrastructure to withstand environmental, social and health-related shocks through urban planning, performance standards and construction practices.

07 Develop and adopt science-based targets for nature, which factor in impacts from material extraction to construction to building end-use. Integrate nature-based solutions into design and construction efforts.

08 Innovate and collaborate on new techniques and models to ensure the delivery of quality affordable housing that promotes health and wellbeing, in both existing and new developments.

09 Conduct and enhance due diligence in line with the UN Guiding Principles on Business and Human Rights with a view to respecting human rights and ensuring decent working conditions throughout the construction value chain, including in the informal economy.

10 Develop comprehensive strategies to support a just transition for workers that may be affected by emerging construction methods, materials and technologies.

WE CAN MAKE THINGS, BETTER

**THIS PATHWAY IS ABOUT "THINGS":
THE GOODS PEOPLE USE TO FULFILL THEIR
NEEDS AND ASPIRATIONS, AND THE ASSETS
AND MATERIALS BUSINESSES NEED TO
OPERATE AND GROW.**

It spans the entire product life cycle, from extraction and processing of raw materials to product manufacturing, distribution and sale, to end-of-life processing and recovery.

OUR 2050 VISION
FOR PRODUCTS
& MATERIALS

RESOURCE USE IS OPTIMIZED TO MEET SOCIETY'S NEEDS WHILE ALLOWING THE SYSTEMS THAT PROVIDE RESOURCES TO REGENERATE

THE ECONOMY IS CIRCULAR
The circular economy principles of reduce, reuse, repair, refurbish and recycle have been embraced by individuals, businesses and governments. Goods and services are made universally available in a manner that neither exceeds the planet's capacity to renew resources nor pollutes the natural environment. New policies, business models, industrial ecosystems and diversified materials have arisen to support the circular economy, generating significant market value as well as a wealth of skills development and employment opportunities across both developed and emerging economies.

PRODUCTS ARE CIRCULAR BY DESIGN
Companies have designed out waste and made closed loops a reality across value chains. Virgin, non-renewable materials consumption has dramatically declined. Products are developed without harmful substances and are designed to maximize utility whether through extensive reuse, repair or repurposing, before finally being recycled or biodegraded. Across all sectors, traceable, renewable and recycled materials are key inputs into manufacturing and re-manufacturing processes.

PRODUCT LIFE CYCLES MAXIMIZE VALUE AND PROTECT NATURE
All materials are recognized as valuable resources and are carefully managed to ensure that their full economic potential is maximized before being returned safely to biological and technical cycles. An effective and consistent global recycling infrastructure ensures that all products can be efficiently collected and transformed back into valuable raw materials at the end of their life, without leaking into the natural environment. Historic waste has been cleaned up and natural environments restored wherever possible.

THE CIRCULAR ECONOMY LEAVES NO ONE BEHIND
Sharing, service and product life extension business models have contributed to greatly improved access to essential products and materials at affordable prices all over the world. Companies take a people-centric approach to the integration of new business models and production technologies, ensuring that they engage with workers and communities, and empower them to benefit from emerging developments, while continued opportunities for livelihoods and entrepreneurship are available. Business and governments continually work to ensure that human rights are protected and respected and companies support the health, safety and wellbeing of workers everywhere.

KEY TRANSITIONS
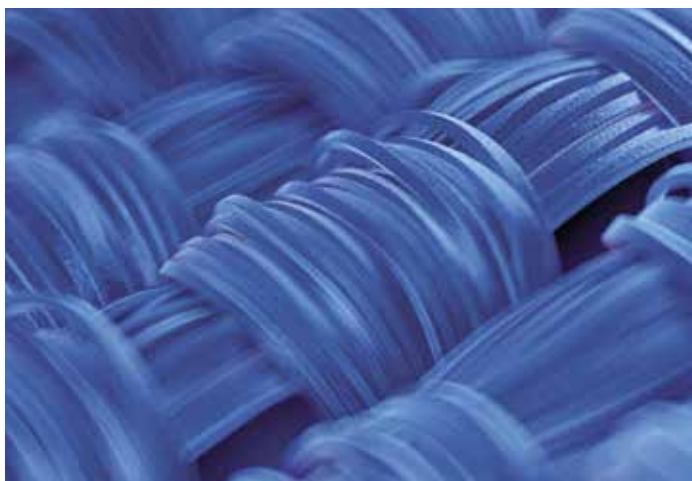
CIRCULAR BUSINESS MODELS BECOME THE NORM, CREATING ECONOMIC, SOCIAL AND ENVIRONMENTAL OPPORTUNITIES

- Governments work with businesses and other stakeholders to develop regulatory structures that maximize long-term value. This is done through a combination of frameworks that encourage recycled and renewable materials, maximizing product lifespans and recycling. This creates a market that prefers secondary materials and only turns to non-renewable, primary materials when no alternatives are available, in turn, prompting the widespread normalization of circular models.

- Companies innovate and bring to scale new technologies and business models, creating substantial new markets that spring from and enhance the circular economy.

- Investment enables developing countries to make significant advances in digital and materials innovation, and to embed sustainable production and consumption at the heart of their economies.

- The emergence of a more circular and service-based economy creates a wide range of jobs across industrial sectors globally. Job losses that result from the circular transition are managed in an inclusive and responsible manner with workers being reskilled and upskilled accordingly.

- A thriving circular economy provides workers and businesses with greater opportunity to transition from the informal to the formal economy, while respecting workers' rights and ensuring lasting opportunities for income security, livelihoods and entrepreneurship.

A CIRCULAR BIOECONOMY PLAYS AN INCREASINGLY CENTRAL ROLE IN GLOBAL ECONOMIC ACTIVITY

- A circular bioeconomy plays an important role in reinforcing a circular, low-carbon economy, contributing to efforts to mitigate climate change while also providing materials to satisfy society's needs for food, feed products and energy.

- All industries (including construction, chemicals and textile sectors) seize opportunities to complement or substitute non-renewable and fossil-based materials with bio-based resources that are renewable and sustainably managed.

- Biological resources are recovered and reused wherever possible. At the point where these resources can no longer be reintroduced into the economy, they are safely returned to nature as nutrients.

- Wood and fiber products are sourced from healthy, working forests that also provide multiple benefits such as carbon storage, clean air and water, natural habitats and rural livelihoods.

GOODS AND SERVICES MEET THE NEEDS OF COMMUNITIES AROUND THE WORLD WHILE LEAVING NO ONE BEHIND

- Circular models of production along value chains ensure that the needs of a growing global population are met at the drastically lower rates of per capita primary resource use needed if our activities are to remain within planetary boundaries.

- Everyday products are made more accessible and affordable through resale, renting and service models, breaking down traditional barriers to ownership and allowing the shared use of idle assets. This allows people to improve their quality of life, sustainably.

- Businesses, governments and multi-stakeholder platforms work to ensure that human rights are protected and respected throughout global supply chains, collaborating to eradicate forced and child labor, modern slavery and human trafficking.

- The shift to a more circular economy and the widespread adoption of emerging business models and technologies occur in a people-centric fashion, ensuring that rights are respected and that workers are engaged and empowered to benefit from transformation.

MATERIAL COLLECTION AND RECOVERY IMPROVES EXPONENTIALLY

- Laws against pollution and waste in the environment, and taxes on landfills, become routinely and consistently enforced, strengthening the case for reuse, recycling and composting.

- The food, feed, natural materials and energy products that make up the bioeconomy are produced to be reintroduced into a circular system through cascading uses, reprocessing, and eventually composting and anaerobic digestion. These cycles are also designed to regenerate living systems, such as soil.

- Solutions such as take-back schemes and reverse logistics become business as usual. A range of stakeholders including manufacturers, retailers, government agencies and local municipalities support the collection of used products, materials and packaging, and their reintroduction into the manufacturing cycle. The volume of materials collected versus sold reaches near parity.

- Recycling is made easier for consumers. Consistent information on how to deal with different products and materials at the end-of-use is made universally available.

- Strong collaboration develops among end-of-use logistics and material processing firms. Processing and manufacturing companies work increasingly closely with recovery companies to secure competitive advantage through high-quality supply security and reduced production costs.

THE FLOW OF WASTE INTO THE ENVIRONMENT IS ENDED AND NATURE IS RESTORED

- Waste systems transform at national, regional and local levels. Cross-sector collaboration, investment and standardization drive enhanced stewardship of materials and products – such as plastics, electronics, textiles, construction materials, automotive components and household goods – at different stages of their life cycle and value chain.

- Innovations emerge that help to advance and bring to scale technologies that make recycling and recovering materials easier. Consistently designed infrastructure is established to collect, sort, manage and recycle household and municipal waste, especially in rapidly developing parts of the world. This significantly reduces and eventually ends the flow of waste into the natural environment.

- Products that contain plastics and other materials that cannot be collected and recycled are designed to completely biodegrade without harmful materials, as a last resort.

- Large-scale global clean-up efforts mobilize to remove plastic and other waste that has found its way into the environment. Waste that is collected from the environment re-enters the economy.

PEOPLE EMBRACE CONSUMPTION THAT IS CIRCULAR, REGENERATIVE AND SOCIALLY RESPONSIBLE

- Society reassesses its relationship with consumption. Responsible consumption and return behaviors are increasingly valued and rewarded through policy-driven incentives and pricing models.

- Consumer behavior shifts toward circular models of consumption as awareness grows of increasing resource scarcity and the environmental impacts of waste. Circular and sharing models become more available, affordable, practical and desirable across a broad range of products and services. Consumers come to value access more than ownership and increasingly accept repaired, refurbished and second-hand products.

- Business plays a significant role in educating and driving consumer appetite for circular economy products and responsible consumption patterns. Companies invest in innovation to make sustainable lifestyles possible, aspirational, affordable and accessible.

- Relevant information about the provenance and sustainability performance of products across supply chains becomes both widely available and comparable, enabling more sustainable purchasing decisions.

- Enhanced consumer awareness of the environmental impacts of packaging waste leakage informs behavior change, while business continually explores innovative sustainable packaging solutions.

TECHNOLOGY ADVANCES ARE DEPLOYED RESPONSIBLY AND DRIVE IMPROVED EFFICIENCY AND TRANSPARENCY ACROSS VALUE CHAINS

- Advances in robotics, artificial intelligence and machine learning make it possible for machines to work alongside humans, driving economic and resource efficiency gains and creating value at each stage of the manufacturing process.

- Technological advances make recycling, repair, remanufacturing and collection processes safer and more automated, leading to more efficient recycling yields and enabling recovery of previously unrecovered materials.

- Technology solutions also transform supply chain transparency. Materials, products and packaging are tracked across value chains using cloud-based, distributed ledgers and other digital technologies. These enable the monitoring and management of supply chain risks and potential adverse human rights impacts, promoting responsibility and resilience, and supporting the recycling and re-use of materials. Technology supports enhanced transparency and accountability for the environmental and social impact of products throughout their life cycles.

RELEVANT SDGs

6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally.

6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity.

7.3 By 2030, double the global rate of improvement in energy efficiency.

8.4 Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the 10-Year Framework of Programmes on Sustainable Consumption and Production, with developed countries taking the lead.

8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.

8.7 Take immediate and effective measures to eradicate forced labor, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labor, including recruitment and use of child soldiers, and by 2025 end child labor in all its forms.

8.8 Protect labor rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment.

9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally-sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities.

12.2 By 2030, achieve the sustainable management and efficient use of natural resources.

12.3 By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses.

12.4 By 2020, achieve the environmentally-sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment.

12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse.

12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature.

13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.

13.2 Integrate climate change measures into national policies, strategies and planning.

13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning

14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution.

15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally.

15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species.

PRODUCTS & MATERIALS
ACTION AREAS FOR BUSINESS
2020 – 2030

01 Develop new business models to ensure product life cycles are extended for as long as possible, prioritizing maintenance and refurbishment where appropriate.

02 Integrate circularity and next-life use into all aspects of business strategy from product design to go-to-market, after-sales service and end-of-life collection. Map and identify value chain gaps in capabilities related to closing circular loops, and work to address them internally and together with partners.

03 Invest in the innovation and adoption of sustainable and circular biological products that store carbon and substitute non-renewable and fossil-based materials, while also setting ambitious, science-informed goals that contribute to nature recovery.

04 Account for the true value of products and materials by factoring in natural, social and human capital costs. Update accounting principles to encourage longer life.

05 Establish consensus on and uptake of a common set of definitions and metrics to enhance decision-making, collaboration and disclosure of circular performance and linear risk.

06 Employ a people-centric approach to innovation, investing in the continual upskilling, reskilling and empowerment of workers in the face of emerging business models and new technologies.

07 Engage in positive advocacy with policymakers to create a playing field that ultimately favors secondary materials.

08 Develop and improve internal policies and systems for human rights due diligence as set out by the UN Guiding Principles on Business and Human Rights and **ensure human rights are respected** across all global value chains.

09 Drive collaborative efforts that cut across value chains to invest in improved local capacity and infrastructure for the collection and processing of materials necessary to support circular business models, particularly in developing countries.

10 Collaborate on campaigns to drive global consumer behavior change, targeting enhanced acceptance and preference for durability and serviceability as well as refurbished and recycled products while also making recycling as easy and convenient as possible.

WE CAN
ALL
INVEST
IN OUR
FUTURE

FINANCIAL SERVICES AND INVESTMENT ARE AT THE HEART OF ALL ECONOMIC ACTIVITY. THEY UNDERPIN, UNDERWRITE AND DRIVE ACTION AND OUTCOMES ACROSS ALL INDUSTRIAL AND SERVICE SECTORS.

They are vital to ongoing social and economic stability and resilience. Financial products include corporate and personal financial mechanisms and transactions which provide the means to give or receive investment and loans and obtain security through insurance. Financial services are the means by which financial products are delivered and monitored, such as investment and payment services, retirement planning, mortgage broking and accountancy. The extent to which these products and services are oriented toward supporting and driving sustainable development outcomes is critical for the achievement of Vision 2050.

OUR 2050 VISION
FOR FINANCIAL PRODUCTS & SERVICES

ALL FINANCIAL CAPITAL AND FINANCIAL PRODUCTS AND SERVICES ARE MOBILIZED TO SUPPORT SUSTAINABLE DEVELOPMENT

THE FINANCIAL SYSTEM RECOGNIZES THE VALUE OF SOCIAL AND ENVIRONMENTAL OUTCOMES ALONGSIDE FINANCIAL PERFORMANCE

All financial institutions, finance professionals and economic agents understand and apply a multi-capital approach to value, connecting societal and environmental capacity, thresholds and outcomes with enterprise and market value. Accounting systems, processes and principles help to ensure that this value is recognized and understood.

FINANCIAL CAPITAL ALLOCATION ENABLES SUSTAINABLE DEVELOPMENT

Capital allocation decisions across the investment chain recognize and prioritize sustainable development outcomes. Capital markets properly value inclusive, impactful, sustainable business practices, rewarding the most sustainable companies. Failure to manage environmental, social and governance (ESG) risks and opportunities is a major barrier to commercial success. Within financial markets, instruments provide a variety of different mechanisms for capital market actors to contribute to sustainable solutions and outcomes.

THE FINANCIAL SYSTEM HAS ACCESS TO COMPREHENSIVE AND COMPARABLE DATA ON CORPORATE SUSTAINABILITY PERFORMANCE

Material, decision-useful, forward-looking ESG information is communicated by all companies on a timely basis and informs the decision-making of actors throughout the investment chain. The quality of disclosure continually evolves and improves in line with sustainable development priorities.

THE FINANCIAL SYSTEM WORKS FOR EVERYONE

Financial products and services are universally accessible. Financial literacy is widespread and individuals appreciate their influence on the global financial system. The financial system in turn reflects the preferences and values of the beneficiaries and savers that it serves.

KEY TRANSITIONS

MARKETS AND FINANCIAL INSTITUTIONS EMBRACE A BROADER CONCEPT OF VALUE

- Widespread recognition emerges across the financial system that, in addition to financial capital, there are other categories of value that society – and institutions within society – benefit from. These include natural, social and relationship, human, intellectual and manufactured capital. Companies and capital markets recognize the importance of internalizing negative and positive externalities and understand them as sources of risk and opportunity that can affect business and investment performance.

- Approaches to categorizing and recognizing wider concepts of true value are further developed and mainstreamed. Accounting and valuation practices evolve to fully support the integration of these multiple sources of capital in support of public interests.

- Professional education for financial analysts, treasury, risk management, insurance and investment management increasingly integrate a multi-capital approach.

CULTURE AND BEHAVIOR SHIFT

- Governments, regulators, capital market actors and companies work together to enable a cultural and behavioral shift that helps to reduce instances of short-termism, excessive speculation and leverage and foster long-term resilience and value creation in support of a financial system that contributes to sustainable development.

- Policymakers strengthen regulatory guidance around the need for ESG considerations to be integrated into investor practice as a key component of fiduciary duty. Discussions around fiduciary duty also move beyond investors to include other actors along the investment chain.

- Incentive structures are reviewed to position sustainability performance outcomes as key components of short- and long-term remuneration across the financial system.

- ESG's importance in investment decision-making is incorporated into professional codes of ethics and qualifications to provide the necessary culture, tools and knowledge to encourage and require investment professionals to act.

- Actors across the financial system signal the importance of sustainability issues through their interactions with peers and wider networks along the investment chain. Asset owners and managers use engagement to encourage more sustainable corporate behavior.

CAPITAL IS MOBILIZED IN SUPPORT OF SUSTAINABLE DEVELOPMENT

- The entire financial system reinforces the mobilization of assets to finance sustainable business practices. Funds are allocated toward sustainable products, and ESG considerations are integrated across all aspects of financing and investment decision-making. The cost of capital decreases for sustainable business activities, while increasing for those that are unsustainable.

- Asset owners put increasing pressure on asset managers to integrate ESG considerations into all financial investments, making the consideration of long-term sustainability risks and opportunities an explicit part of the investment mandate and asset manager selection process. Asset managers, in turn, pressure issuers to manage and report on ESG risks and opportunities.

- Investment consultants and banks enhance efforts to provide advice and sell-side research that helps to ensure asset owners and managers are aware of the long-term sustainability risks and opportunities within their clients' portfolios. Credit rating agencies also improve the integration of sustainability issues into their assessments of credit risk.

- Banks take action to align their customer financing activities with the Paris Agreement and sustainable development.

ROBUST MARKET INFRASTRUCTURE FOR FINANCIAL PRODUCTS IN SUPPORT OF SUSTAINABLE DEVELOPMENT EMERGES

- Meaningful and rigorous dialogue between companies and investors provides impetus for the development of critical system architecture that supports institutional and technical efforts to mobilize capital in support of sustainable development.

- A clear, globally recognized definition of sustainable investing is developed, including standardized terms and products. Consistent terminology, definitions and clear product labeling, backed by standards and verification, emerge to ensure the impact of sustainable investment products and to prevent mis-selling.

- Financial instruments, services and products (including insurance, securities, derivatives, bonds, structured products, etc.) that contribute to inclusive, impactful, sustainable and resilient outcomes, emerge and achieve scale.

- Convergence of standards enables the development of integrated indices and benchmarks, which provide users with comprehensive information on risk, returns, impacts and outcomes.

COMPANIES ENHANCE THE STRATEGIC INTEGRATION AND REPORTING OF ESG TO FACILITATE SUSTAINABLE CAPITAL ALLOCATION BY FINANCIAL INSTITUTIONS

- More and more businesses place sustainability at the core of corporate decision-making, with ESG signals becoming key considerations for CFO, treasury, corporate secretary and investor relations functions. ESG becomes a fundamental aspect of strategic analysis, enterprise risk management, equity performance and corporate resilience.

- Material, decision-useful and forward-looking ESG information is communicated by more and more companies on a timely basis, allowing investors to leverage it for assessments and responsive valuation. Financial institutions encourage companies to adopt best practice ESG disclosure guidelines, aligning with initiatives such as the Task Force on Climate-related Financial Disclosure (TCFD). Asset owners and managers drive companies to disclose sustainability information of increasingly better quality.

- Collaborative platforms bring companies and investors together to improve the specification, consistency and exchange of ESG information and communication, facilitating the emergence of more comprehensive, robust and comparable data on corporate sustainability performance.

- Regulators work to increase the consistency, timeliness and adoption rates of the disclosure of ESG information. Stock exchanges globally start to mandate ESG disclosure for listing requirements.

PEOPLE'S VALUES ARE RESTORED TO THE HEART OF THE FINANCIAL SYSTEM

- Enhanced global financial literacy makes individuals more aware of their role in the financial system and empowers them to take action to align the system better with their sustainability and ethical preferences.

- Individuals start to demand that their investments are aligned with sustainable development outcomes and build sustainability factors into the mandates they give to those who manage their money. Investors work to incorporate beneficiaries' and savers' sustainability-related preferences, regardless of whether these preferences are financially material.

- Retail banks provide customers with appropriate advice and incentives on how to support sustainable development through their personal savings, investments and pension products.

- Companies ensure that their corporate retirement plans integrate ESG considerations and are aligned with sustainable development, in line with growing employee demand.

FINANCIAL SERVICES SUPPORT INCLUSION AND EQUITABLE ACCESS AT SCALE

- Perspectives in the financial sector shift to support the development of products and services that enable universal financial participation. Large-scale and infrastructural product availability is balanced with micro-level product design and delivery.

- Organizations focus on supporting personal and social resilience and security in all corners of society. Financial products and services providers work to facilitate universal access to an increasingly diverse set of services for individuals including savings, insurance and credit.

- Access to sustainable finance for low-income communities, as well as micro-, small- and medium-sized enterprises, improves exponentially.

- Digital and mobile technologies are leveraged to overcome barriers to accessing financial services including geography, cost and disenfranchisement.

- Multi-stakeholder collaborations mobilize efforts to enhance financial literacy levels globally.

RELEVANT SDGs

1.4 By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance.

5.A Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws.

8.10 Strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all.

9.3 Increase the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets.

10.5 Improve the regulation and monitoring of global financial markets and institutions and strengthen the implementation of such regulations.

12.6 Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle.

12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature.

13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.

13.2 Integrate climate change measures into national policies, strategies and planning.

13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.

15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species.

17.3 Mobilize additional financial resources for developing countries from multiple sources.

FINANCIAL PRODUCTS & SERVICES
ACTION AREAS FOR BUSINESS
2020 – 2030

01 Advocate for an enabling a sustainable finance policy environment that supports transparency, evolution of concepts of fiduciary duty, and strategic approaches to valuing externalities.

02 Companies incorporate ESG-related risks and opportunities and natural, social and human capital impacts and dependencies into accounting processes and valuation assumptions.

03 Asset owners build clear and consistent ESG requirements and performance metrics into the instructions given to investment consultants and asset managers.

04 Retail and investment banks embed sustainability throughout their business models, developing a range of sustainable finance instruments, ensuring their own loans and investments are sustainable, and developing robust analysis of ESG factors on the sell side.

05 Corporates and investors come together with standard-setters and regulators to develop clear guidance on the specification, consistency and comparability of decision-useful sustainability-related information and communication.

06 Identify and address incentives that reward and give rise to short-term financial performance outcomes at the expense of sustainable development.

07 Credit ratings agencies enhance their analysis of the ESG risk exposure of sectors and companies across a range of issues including climate change, human rights, nature loss and water scarcity.

08 Support professional development standards and codes of ethics that foster sustainable finance capabilities and behaviors.

09 Develop investment allocation transparency for beneficiaries, pension holders and other retail investors, so that they can see where and how their money is invested, as well as associated sustainability-related impacts.

10 Facilitate access at scale to financial products and services, using accessibility as a fundamental design principle to support equity and financial inclusion while also exploring new partnerships and initiatives to enhance financial literacy globally.

WE CAN CONNECT PEOPLE

THIS TRANSFORMATION PATHWAY FOCUSES ON THE DIGITAL TECHNOLOGIES AND PLATFORMS THAT CONNECT PEOPLE TO OTHER PEOPLE, TO INFORMATION, AND TO AN EVER-EXPANDING RANGE OF PRODUCTS AND SERVICES.

It also covers solutions that connect and communicate with objects via the internet (the Internet of Things). By extension, this pathway also covers the infrastructure, equipment and devices – from smartphones to computers to satellites – that these solutions depend on.

EXPLORE THE CONNECTIVITY PATHWAY BUSINESS ACTION AREAS

OUR 2050 VISION FOR CONNECTIVITY

RESPONSIBLE CONNECTIVITY BRINGS PEOPLE TOGETHER, ENHANCES TRANSPARENCY AND EFFICIENCY, AND DRIVES ACCESS TO OPPORTUNITY

CONNECTIVITY EMPOWERS EVERYONE

Digital and communication technologies provide universal connectivity, allowing all people to connect with each other and to critical information and basic services including finance, education and healthcare. This, in turn, contributes to fair, prosperous and inclusive societies with radically reduced inequality around the world. People also have access to the skills needed to flourish in a digital world.

DATA OPTIMIZES PERFORMANCE AND EFFICIENCY

The Internet of Things has reached its full potential. Widespread use of connected devices enables vast amounts of information to be collected and analyzed, driving the optimization of processes and procedures across a wide range of industries. This facilitates enhanced performance and efficiency, reduced emissions, improved water stewardship and dematerialization.

SUSTAINABLE DEVELOPMENT CAN BE TRACKED AND MANAGED

Digital advances allow real-time tracking and observation of the world and its key natural and man-made systems. This ensures transparency with regard to emerging environmental and social challenges, and enables targeted interventions to be made in a timely and coordinated manner.

CONNECTIVITY RESPECTS PEOPLE AND THE ENVIRONMENT

Environmental and social impacts along the digital supply chain have been mitigated. Raw materials are sourced responsibly, data centers are powered by clean energy, and circular and sustainable end-of-life practices are widespread. International collaboration and global standards have enabled secure networks and effective governance mechanisms, ensuring that data integrity and privacy is protected. The boundaries between freedom of expression and hate speech are clearly defined and upheld, protecting the former and eradicating the latter.

KEY TRANSITIONS
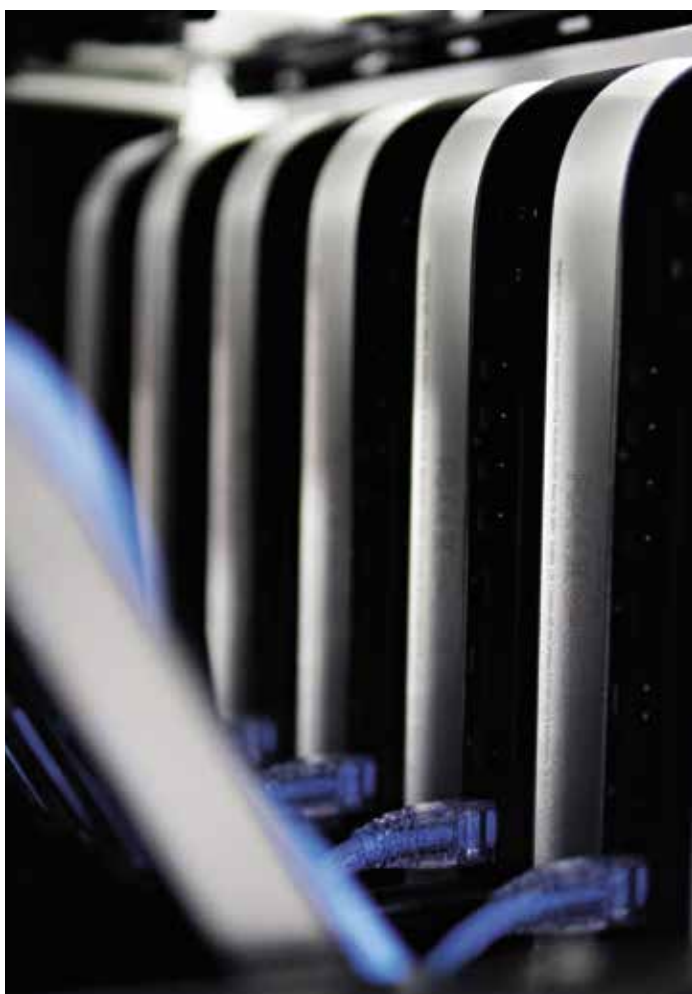
UNIVERSAL ACCESS TO BROADBAND AND DIGITAL SERVICES LEAVES NO ONE BEHIND

- High-quality, reliable digital infrastructure is put in place globally. Business and government collaborate to make affordable broadband and mobile access a reality for all. Connected devices become readily available, at affordable prices, irrespective of location.

- Governments and business align to address low levels of digital literacy, focusing on building skills and enhancing collaboration with the education sector.

- Connectivity and digital literacy enable individuals to use the internet responsibly and to harness its full potential for employment, communication, information and entertainment purposes. Critical services such as finance, healthcare and education are increasingly delivered through online and mobile technology solutions, driving greater social and financial empowerment, poverty reduction, improved health outcomes and reduced inequality.

DIGITAL PLATFORMS ENRICH SOCIAL INTERACTION AND CIVIC ENGAGEMENT

- People leverage platforms to build and strengthen relationships with family, friends, customers and colleagues alike. The global nature of the digital environment fosters rich cultural and normative diversity.

- Governance structures emerge to address challenges such as cyber-bullying, hate speech, violent extremism and discrimination online.

- Digital tools empower individuals to participate in civil society actions and to contribute to democratic processes more broadly.

- Platforms and content providers adopt stringent policies and practices that prioritize transparency and truth, and mitigate the risk of undermining democratic processes, including by addressing the spread of disinformation leading to misinformation.

- Checks are put in place to protect against the emergence of digital monopolies and ensure that individual platforms do not possess undue levels of influence.

CONNECTIVITY ENABLES COLLABORATION, INNOVATION AND THE EMERGENCE OF NEW BUSINESS MODELS AND WAYS OF WORKING

- Digital platforms and technologies enable collaborative networks within and across industries, driving new partnerships and opportunities for innovation.

- In many areas, digitalization enables a shift from traditional business models to platforms and networks that form the heart of a new digital economy, enhancing product and service offerings and creating a host of new economic and employment opportunities.

- New ways of remote working, learning and collaborating, which became mainstream during the COVID-19 pandemic, continue to be embraced by employers and employees.

CONNECTED DEVICES LEAD TO IMPROVED PERFORMANCE AND EFFICIENCY

- Companies benefit from maturing technologies which make the Internet of Things (IoT) easier to implement across a variety of environments. Sensor technologies become cheaper, more advanced and more widely available. Computing power increases and applications shift toward cloud and edge computing solutions.

- As connectivity between things and organizations improves, vast amounts of data are collected and analyzed, enhancing productivity and efficiency, and optimizing energy, material and water use across a broad range of sectors.

- New standards emerge to tackle data privacy issues around connected devices.

THE HEALTH OF NATURAL AND SOCIAL SYSTEMS IS CONTINUOUSLY TRACKED

- Connectivity takes on a critical role in enhancing global capacity to monitor the status of the natural world, and emerging impacts upon it. Partnerships between governments, businesses and civil society emerge to track the conditions of global forests, watersheds, fisheries and other critical natural systems in real time.

- Continuous monitoring also enables negative impacts and illegal or harmful practices to be identified early, empowering people everywhere to take timely action to protect the natural environment.

- The processing of complex datasets facilitates more targeted and impactful support for poverty and hunger alleviation, healthcare, education and disaster recovery efforts in the communities that need them most urgently.

- Companies leverage new levels of data quantity, quality and sharing, as well as blockchain technology, in order to monitor and manage supply chain risks and ensure responsible, sustainable sourcing.

GOVERNMENTS AND BUSINESS STRENGTHEN DIGITAL SECURITY, RESPONSIBILITY AND TRUST

- Recognition of the importance of data privacy and security grows exponentially throughout society, and organizations are increasingly held accountable.

- International guidelines that enable the flow of data and services while protecting the right to privacy are widely adopted. Businesses take the lead in ensuring the right to privacy is upheld.

- Companies partner with government, civil society and innovators to develop norms and practices that enhance trust in the digital economy.

IMPACTS OF DIGITAL GROWTH ARE MITIGATED THROUGH RESPONSIBLE MODELS OF PRODUCTION AND CONSUMPTION

- Technological innovation and decarbonization significantly reduce the environmental impact of both digital infrastructure and hardware.

- Electronic products are designed to be repaired, recovered, recycled and reused. Cross-sector collaboration, investment and standardization drive massive reduction, and enhanced stewardship, of electronic waste.

- Regulators, companies and civil society groups align to ensure that human rights are protected and respected throughout connectivity value chains, from minerals and metals sourcing to content oversight.

- Multi-stakeholder initiatives are convened to monitor and address the impacts of digital disruption on job markets. Companies empower workers to benefit from new technologies and provide appropriate learning, training and support.

- Consumers are made increasingly aware of the environmental and social impacts of their digital behaviors.

RELEVANT SDGs

1.4 By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance.

3.8 Achieve universal health coverage, including financial risk protection, access to quality essential healthcare services and access to safe, effective, quality and affordable essential medicines and vaccines for all.

4.3 By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university.

5.B Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women.

8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.

8.7 Take immediate and effective measures to eradicate forced labor, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labor, including recruitment and use of child soldiers and, by 2025, end child labor in all its forms.

8.8 Protect labor rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment.

9.C Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020.

10.2 By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status.

12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse.

12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature.

13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.

13.2 Integrate climate change measures into national policies, strategies and planning.

13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.

16.7 Ensure responsive, inclusive, participatory and representative decision-making at all levels.

16.10 Ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements.

17.8 Fully operationalize the technology bank and science, technology and innovation capacity-building mechanism for least developed countries by 2017 and enhance the use of enabling technology, in particular information and communications technology.

CONNECTIVITY

ACTION AREAS FOR BUSINESS
2020 – 2030

01 Collaborate with governments, sector peers and financial institutions to deliver the infrastructure and service offerings needed to ensure affordable, reliable internet connectivity for all.

02 Collaborate with governments on wider initiatives to expand digital literacy and address the digital skills gap, particularly for underrepresented groups.

03 Collaborate across the ICT sector, and with civil society and governments, to build transparent and impartial infrastructure for monitoring the state of the natural world and understanding impacts in real time.

04 Harness the power of emerging digital technologies to advance supply chain transparency and traceability mechanisms, and drive open access to data.

05 Implement and help shape emerging best practices to ensure that data is safeguarded throughout connectivity value chains and that people's right to privacy is protected.

06 Convert all data centers to 100% net-zero energy.

07 Continue to implement and enhance efforts to conduct human rights due diligence throughout connectivity value chains in line with the UN Guiding Principles for Business and Human Rights.

08 Embrace circular economy principles to prevent exponential growth in e-waste and depletion of natural resources.

09 Engage with workers in the process of designing, adopting and working with new digital technologies, and equip them with the skills they need to benefit from these technologies.

10 Adopt stringent policies and practices to stem the spread of disinformation and take concrete steps to protect users from online crime, extremism, hate speech, discrimination and cyber-bullying.

WE CAN HELP PEOPLE FEEL BETTER

HEALTH AND WELLBEING ARE FUNDAMENTAL TO PEOPLE'S ABILITY TO LIVE WELL.

This transformation pathway captures the full spectrum of activities to enhance people's physical and mental health – from preventing and curing communicable and non-communicable diseases, to ensuring robust global healthcare systems and encouraging healthy lifestyles. While the healthcare and pharmaceutical industries clearly have strong roles to play, so do companies in a wide range of other sectors, from food to the built environment.

OUR 2050 VISION

FOR HEALTH & WELLBEING

THE HIGHEST ATTAINABLE STANDARD OF HEALTH & WELLBEING FOR EVERYONE

PEOPLE LIVE HEALTHY LIVES
By 2050, everyone enjoys the highest possible standard of health and wellbeing, living healthy and fulfilled lives.

HEALTH IS PROMOTED AND PROTECTED
The healthcare system focuses strongly on disease prevention. Governments support efforts to empower individuals to take more control over and improve their health through their lifestyles and diets. Businesses have rebalanced product portfolios and services in favor of healthier lifestyles, and marketing activities focus on encouraging healthy choices and behaviors. The spread of disease is prevented through immunization, early detection and treatment, and robust global systems of epidemiological surveillance and response. Wildlife habitats are conserved and protected with a view to eradicating the emergence of zoonotic diseases.

EVERYONE HAS ACCESS TO ROBUST, RESILIENT AND SUSTAINABLE HEALTHCARE SERVICES
All people have access to affordable essential healthcare services in their communities, including preventive, promotive, protective, curative, rehabilitative and palliative care throughout their lives. As a result, incidence of diseases declines and many more people survive infectious and non-communicable diseases. Health systems are resilient to shocks and prepared for pandemics. They are well-governed, well-coordinated, well-equipped, efficient, sustainable and operated by a skilled workforce.

WORKPLACES PROMOTE WELLBEING
Businesses work to promote strong cultures of health and wellbeing throughout their operations and supply chains. Educational programs help to promote workers' physical and mental health, and all companies take measures to ensure the health and safety of their staff at all times.

KEY TRANSITIONS

BUSINESSES EVOLVE PRODUCTS AND SERVICES TO PROMOTE HEALTHY LIFESTYLES

- Governments, businesses and civil society groups collaborate to promote and enable healthier lifestyles for people from all socio-economic groups, helping to prevent and reduce the impact of non-communicable diseases.

- Businesses, supported by government policy and civil society groups, re-balance and innovate product portfolios to support healthy diets and lifestyles.

- Reliable health information, personal health management software, healthy and nutritious foods, and better fitness and sports infrastructure enable people to change their lifestyles.

- All products are made safe and free from harmful ingredients or materials. Regulations and voluntary measures lead to the eradication of unhealthy or addictive products and services. Efforts are also made to combat the negative mental health impacts of products and services, including social media.

- Responsible marketing promotes healthy choices, behaviors and lifestyles. Business refrains from marketing unhealthy products, particularly to children and adolescents.

HEALTH LITERACY IS PROMOTED GLOBALLY AND TRUST IN SCIENCE IS RESTORED

- Governments, businesses and civil society groups collaborate to drive education across the world on hygiene, health, mental wellbeing, scientific literacy, sexual and reproductive health, and family planning.

- Companies promote education and awareness around physical and mental health throughout their workforces, supply chains and in the communities in which they operate.

- Social media platforms address the uncontrolled dissemination of health-related misinformation.

INVESTMENT BUILDS CAPACITY TO PREVENT THE EMERGENCE AND SPREAD OF COMMUNICABLE DISEASES

- Emerging technology makes health systems more proactive, allowing a greater focus on prevention, earlier diagnosis of disease, and more continuous monitoring of patient health.

- Funding for essential health services in low- and middle-income countries is increased, strengthening routine immunization and improving the quality and availability of data to inform planning.

- Health systems take action to build resilience and prepare for pandemics through partnerships, improved logistics and stockpiling of essential equipment.

- Governments and businesses invest in building systems for rapid development, approval and delivery of safe and effective vaccines and treatments to tackle fast-moving pathogens.

- Governments and businesses invest significantly in disease surveillance and the establishment of global databases, while simultaneously upholding efforts to ensure data privacy is protected.

- System-wide measures are taken to address the threat of antimicrobial resistance and ensure the continued effectiveness of antibiotics.

POLICY, INVESTMENT AND INNOVATION ENSURE UNIVERSAL ACCESS TO HEALTHCARE

- Governments adopt policies and partner with businesses, where appropriate, to provide individuals with access to essential healthcare services in their communities throughout their lives.

- Reliable telehealth technologies and systems are scaled up to help ensure universal access to healthcare.

- Healthcare companies develop, scale and replicate inclusive business models that address more diseases in more countries, and explicitly include people with low incomes in the customer base. They support international trade agreements designed to ensure the poorest can benefit from innovation, while also developing equitable pricing and access-oriented licensing strategies.

- A range of efficient health insurance systems are established to meet the needs of all patients, from national health insurance to microinsurance.

- Healthcare companies increase research and development for communicable and non-communicable diseases associated with poverty.

HEALTHCARE SYSTEMS EMBRACE NEW TECHNOLOGIES RESPONSIBLY

- Technologies, such as synthetic biology and digital health, revolutionize capacity to prevent, diagnose and treat many diseases, enabling a step change in efficiency and outcomes.

- As new technologies are introduced, regulators implement rules informed by a range of stakeholders to protect patients' health, safety and privacy.

BUSINESSES SAFEGUARD HEALTH AND WELLBEING IN THEIR OPERATIONS AND SUPPLY CHAINS

- Businesses cultivate a culture of health and wellbeing in their operations and supply chains, promoting the highest attainable standards of physical and mental health for everyone, and creating an environment in which employees are encouraged to prioritize self-care.

- All employers adopt and evolve the highest standards of occupational health and safety, enabling and empowering employees to remain free from injury, harm and disease.

- Companies foster mental health by promoting a healthy work-life balance, creating peer-based wellbeing networks, and conducting specialist stress management training.

- Businesses champion human and labor rights throughout their operations and supply chains. They implement the United Nations Guiding Principles on Business and Human Rights and other appropriate international frameworks, and ensure effective remedial actions are taken promptly and transparently when necessary.

THE CLIMATE AND NATURE CRISES ARE RECOGNIZED AS HEALTH CRISES

- Stakeholders increasingly recognize the risks to human health that the climate and nature crises pose. These risks include respiratory stress due to poor air quality, the impacts of heatwaves, the emergence of zoonotic disease, and the mental health impacts of life in a more turbulent world.

- Businesses advocate for effective policies that promote healthy environments. They lead by example by dramatically reducing emissions of greenhouse gases and other air pollutants, and by drastically curbing use of substances that harm health.

- Businesses collaborate with governments to enhance the capacity of national health systems and international networks to handle health risks and shocks while supporting the most vulnerable.

RELEVANT SDGs

2.1 By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round.

2.2 By 2030, end all forms of malnutrition. By 2025, achieve the internationally agreed targets set to reduce stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons.

3.1 By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births.

3.2 By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births.

3.3 By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases.

3.4 By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and wellbeing.

3.5 Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol.

3.7 By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes.

3.8 Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all.

3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.

3.B Support the research and development of vaccines and medicines for the communicable and non-communicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines, in accordance with the Doha Declaration on the TRIPS Agreement and Public Health, which affirms the right of developing countries to use to the full the provisions in the Agreement on Trade Related Aspects of Intellectual Property Rights regarding flexibilities to protect public health, and, in particular, provide access to medicines for all.

3.C Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States.

5.6 Ensure universal access to sexual and reproductive health and reproductive rights as agreed in accordance with the Programme of Action of the International Conference on Population and Development and the Beijing Platform for Action and the outcome documents of their review conferences.

6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all.

6.2 By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.

8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.

8.7 Take immediate and effective measures to eradicate forced labor, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labor, including recruitment and use of child soldiers and, by 2025, end child labor in all its forms.

8.8 Protect labor rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment.

13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.

13.2 Integrate climate change measures into national policies, strategies and planning.

13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.

15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species.

HEALTH & WELLBEING
ACTION AREAS FOR BUSINESS
2020 – 2030

01 Innovate and re-balance product portfolios to support healthy diets and lifestyles, while moving away from addictive and harmful offerings.

02 Influence consumer behavior toward more healthy diets and lifestyles via marketing activities, information campaigns and collaborative education platforms. Refrain from marketing harmful products.

03 Scale business models to address indoor and outdoor air pollution, particularly in highly industrialized and densely populated urban environments.

04 Implement programs that ensure the highest standards of health, safety and wellbeing for employees throughout global operations and value chains, while expanding access to basic preventive services at places of employment.

05 Support efforts to safeguard biodiversity and eradicate the conversion of wildlife habitats to prevent the future spread of zoonotic diseases.

06 Collaborate with governments and inter-governmental organizations to invest in systems that build international health systems' resilience to respond to pandemics and other health risks.

07 Collaborate with policymakers to establish clear standards and guidelines to uphold data privacy in the context of an evolving digital healthcare system.

08 Develop new technologies that enhance capacity to prevent, diagnose and treat diseases, with a focus on ensuring access to healthcare in low- and middle-income markets.

09 Collaborate with governments and other stakeholders to eradicate antimicrobial resistance due to the misuse of antibiotic treatments and invest in new antibiotics to ensure their continued effectiveness in treating infection.

10 Fundamentally reshape perceptions of the boundaries of the healthcare system, underlining the importance of healthy lifestyles and cross-sector collaboration. Work to understand and account for the true value of health-related externalities.

WE CAN KEEP WATER FLOWING FOR ALL

WATER IS ESSENTIAL TO ALL LIFE AND SITS AT THE HEART OF OUR EFFORTS TO FEED AND POWER OUR SOCIETIES AND ECONOMIES GLOBALLY.

Access to water around the world relies on natural cycles as well as built infrastructure that enables water to be extracted, treated, distributed, collected, and recycled for domestic, industrial and agricultural use. This pathway also focuses on sanitation, where water and health intersect – for example through good hygiene and proper disposal and treatment of human waste.

OUR 2050 VISION
FOR WATER & SANITATION

THRIVING AQUATIC ECOSYSTEMS THAT SUPPORT FOOD, ENERGY AND PUBLIC HEALTH FOR ALL

WATER AND SANITATION ARE AVAILABLE FOR ALL
Safe, reliable drinking water and adequate sanitation and hygiene services are universally available and play an important role in protecting health and wellbeing. Open defecation has been eliminated and robust waste management systems are in place for all.

WATER IS APPROPRIATELY VALUED
Water is recognized, and appropriately valued, as being critical for socio-economic development, and as playing a key role in strengthening the resilience of social, economic and environmental systems. Recognizing the true value of water, users adopt highly water-efficient behaviors and solutions, and they actively contribute to minimizing and addressing water pollution.

WATER AND SANITATION RESOURCES ARE MANAGED IN A CIRCULAR FASHION
Water is managed efficiently and equitably. It is used, reused and recycled in efficient, fit-for-purpose ways across industries, cities and rural areas. International cooperation and capacity-building programs have been expanded to support water harvesting, efficiency, treatment, recycling and reuse worldwide. Sanitation resources (including wastewater and sewage) are used, reused and upcycled efficiently and safely into renewable resources such as energy, power, nutrients, proteins and high-value chemicals.

WATER QUALITY AND ECOSYSTEMS ARE PROTECTED
All wastewater is treated and upcycled for reuse. Pollution has declined to minimal levels while the dumping and release of hazardous chemicals and materials have been eliminated. Environmental flows of water are maintained, and water-related ecosystems are thriving and conserved. The quality of water bodies is closely monitored globally.

KEY TRANSITIONS

INFRASTRUCTURE AND TECHNOLOGY ARE DEPLOYED FASTER TO ENSURE UNIVERSAL ACCESS TO WATER

- Sufficient clean and safe drinking water is made accessible and affordable for all, including previously under-served and vulnerable groups.

- Strong governance systems and international public-private collaborations drive improvements in water-related infrastructure facilitating the supply, conveyance and storage of water globally.

- Sustainable technological solutions scale up to increase water availability where it is needed by tapping non-traditional water resources and making water infrastructure smarter.

- Water reuse and recycling help to meet water demand without increasing water stress, especially in urban areas relying on more distant water sources. Wastewater is treated to a stricter and globally harmonized quality standard that is safe and adequate to users' needs.

THE TRUE VALUE OF WATER IS RECOGNIZED BY ALL

- The social, cultural, aesthetic, environmental, economic, recreational and educational value of freshwater and water-related ecosystems is universally recognized and accounted for, ensuring a high level of engagement in preservation and restoration efforts from a range of stakeholders.

- Water valuation becomes a key driver of corporate behavior, informing water allocation to the most productive purposes and minimizing water-related negative externalities.

- Water-related challenges and risks attract widespread attention among institutional investors and are integrated into portfolio management practices.

- Supportive policies and advancements in technology and product design align to shift domestic water usage toward much higher efficiency, especially in areas with lower water availability. Water-efficient household appliances and water-saving behaviors receive significant investment and innovation, and become commonplace.

- Consumers become increasingly aware of the value of water and embrace less water-intensive products and practices.
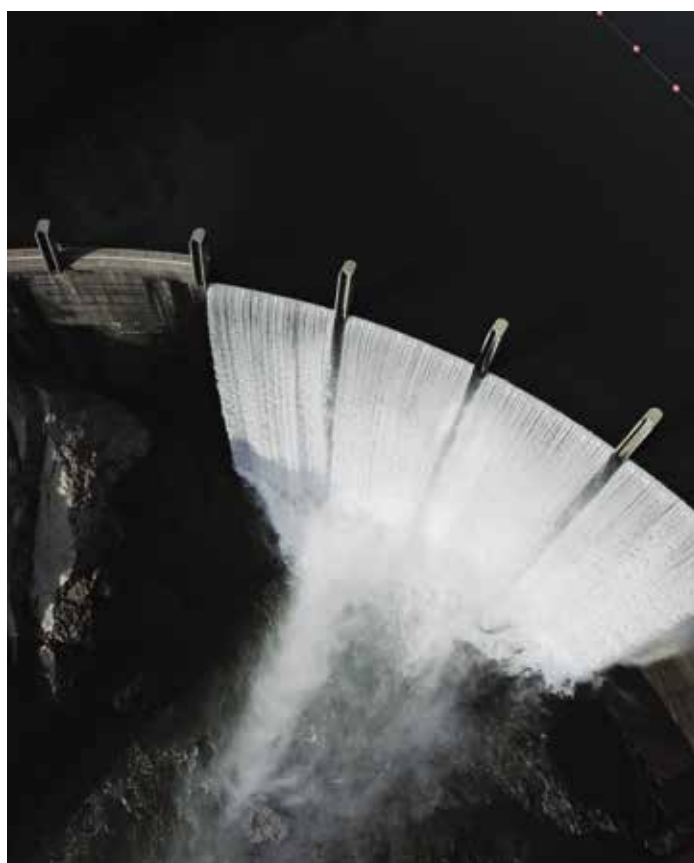
INTEGRATED WATER RESOURCE MANAGEMENT APPROACHES ARE WIDELY IMPLEMENTED

- Integrated water resource management approaches ensure water withdrawals respect basin-level thresholds, including through transboundary cooperation where relevant. This helps to limit water stress levels across the globe.

- Businesses transition from water and wastewater management to water stewardship. They embrace new stakeholder-inclusive processes that include both site- and catchment-based actions.

- Water, land and related resources are managed in a coordinated way in the context of food and agriculture. This maximizes economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems.

- Solutions are adapted to local hydrologic, geopolitical, social and environmental contexts. They take into account local institutional and infrastructure legacies, financial and other resource constraints, and social impacts.

TARGET-SETTING, MEASUREMENT AND DISCLOSURE DRIVE WATER STEWARDSHIP ACROSS SECTORS

- Science-based targets for water are embraced as key to meeting or exceeding sustainable freshwater quantity and quality thresholds in the catchments in which companies operate, source or sell.

- Businesses implement standardized processes for measuring, managing and disclosing their dependencies and impacts on water, and actively engage with value chain partners and investors to improve performance.

CIRCULAR WATER MANAGEMENT BECOMES THE NORM

- All sectors embrace strategies, initiatives and emerging technologies to reduce, reuse and recycle water, while also recovering resources and replenishing watersheds.

- Innovation in resource recovery from wastewater scales rapidly. The recovery of resources such as energy, chemical nutrients and metals generates important inputs into the wider circular economy.

- Companies leverage opportunities for collaboration. They use treated wastewater to help meet water demand from other industries, as well as their own operations.

RELIABLE SANITATION AND HYGIENE SERVICES BECOME AVAILABLE FOR ALL AS THE SANITATION ECONOMY THRIVES

- Safely managed, physically accessible and culturally acceptable sanitation services reach the entirety of the population, helping to eliminate open defecation.

- All companies ensure their employees have access to water and sanitation, and promote safe hygiene practices at work and beyond.

- Businesses collaborate with governments on new sanitation systems that recover costs for governments and generate revenues for the private sector. New product categories and service models help to deliver sanitation at scale for all contexts and incomes.

- Circular economy approaches are increasingly applied to sanitation as new technologies enable resource recovery and reuse. Biological waste becomes a valuable resource as it is processed to recover nutrients and water, and to create value-added products such as renewable energy, organic fertilizers and proteins.

- Digitalized sanitation systems help to optimize data for operating efficiencies and maintenance, while also providing insights into consumer and public health. Dissemination of digital and genomic technologies throughout the sanitation system, from toilets to treatment, contribute to substantial improvements in personal and public health surveillance and infectious disease monitoring.

COLLABORATIVE EFFORTS REGENERATE WATER-BASED ECOSYSTEMS AND MINIMIZE WATER POLLUTION

- International cooperation and capacity-building efforts ensure that water-related ecosystems are protected and restored.

- Uncontrolled point source pollution ceases, ensuring discharges do not reduce the quality of water bodies or the health of associated ecosystems and people.

- Non-point source pollution from diffuse sources, such as agriculture, is abated. Actions are taken to limit fertilizer and agrochemical runoff through adequate field application technologies, improved land management practices and water source protection. Water pollutants are eliminated through concerted efforts across value chains.

- Stakeholders along global value chains come together to tackle the issue of marine plastics, cleaning up areas where plastic waste is concentrated and stemming the flow of waste at source.

RELEVANT SDGs

2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters, and that progressively improve land and soil quality.

3.2 By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births.

3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.

6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all.

6.2 By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.

6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally.

6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity, and substantially reduce the number of people suffering from water scarcity.

6.5 By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate.

6.6 By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes.

12.2 By 2030, achieve the sustainable management and efficient use of natural resources.

12.4 By 2020, achieve the environmentally-sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment.

12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature.

14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution.

14.2 By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience. Take action for their restoration in order to achieve healthy and productive oceans.

15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements.

WATER & SANITATION
ACTION AREAS FOR BUSINESS
2020 – 2030

01 Establish appropriate water targets at the corporate level that are informed by science and help to drive context-specific watershed actions.

02 Strengthen corporate disclosure of water-related dependencies and impacts, referring to the true value of water.

03 Implement water stewardship approaches that drive socially and culturally equitable, environmentally sustainable and economically productive water use.

04 Safely treat all wastewater and increase water recycling and reuse while reducing pollution and eliminating the release of hazardous chemicals and materials.

05 Enhance consumer awareness of appropriate water behaviors and innovate around products that help reduce water use in day-to-day activities.

06 Advance water-smart agriculture solutions to support production in the context of growing water scarcity.

07 Take action to ensure access to safe drinking water and adequate sanitation, while also raising awareness about hygiene practices, throughout company operations and supply chains.

08 Collaborate with governments to advance the policies, safety standards and blended finance solutions needed to build water and sanitation-related infrastructure in under-served regions and stimulate a thriving sanitation economy.

09 Come together with peers and wider stakeholder groups to consolidate and enhance water and sanitation-related data availability.

10 Collaborate on, and invest in, efforts to clean up, restore and monitor water-related ecosystems.

WE CAN PROVIDE HEALTHY DIETS FOR ALL

FOOD FUELS OUR BODIES AND PLAYS A POWERFUL ROLE IN HUMAN HEALTH, PRODUCTIVITY, CULTURE AND POTENTIAL.

At the same time, food is an opportunity for enjoyment, creativity and connection with other people. The food system includes everything involved in feeding people and animals, from farming and fishing to processing, trading, marketing, distribution, consumption and disposal. It is deeply connected with agriculture, land use and working forests for non-food purposes, such as timber and fiber, as competition increases for fertile land.

OUR 2050 VISION FOR FOOD

A REGENERATIVE AND EQUITABLE FOOD SYSTEM PRODUCING HEALTHY, SAFE AND NUTRITIOUS FOOD FOR ALL

EVERYONE HAS ACCESS TO NUTRITIOUS AND AFFORDABLE FOOD
By 2050 everyone has access to enough nutritious and affordable food to thrive. The food system delivers tasty diets that contribute to healthy lifestyles, while consumers are empowered to make purchasing decisions that support their health. Undernutrition, overnutrition, and rates of obesity and diet-related non-communicable diseases have drastically decreased.

SUSTAINABLE PRODUCTION RESTORES AND SAFEGUARDS NATURE
Food production operates within planetary boundaries. The global food system is resilient, carbon neutral and regenerative. It supports biodiversity, and protects and nourishes ecosystems on land and below water.

FOOD IS CONSUMED SUSTAINABLY
People understand the importance of diets that respect planetary boundaries, and are able to eat sustainably while preserving and celebrating their food culture. Consumers value food and treat it with respect, changing their behaviors to minimize waste.

VALUE CHAINS ARE PROSPEROUS, EQUITABLE AND FREE FROM HUMAN RIGHTS ABUSES
Value is distributed fairly along food value chains. Rural economies are revitalized and thriving; farmers, fisherpeople and workers throughout all food value chains earn fair and resilient incomes, and enjoy good and safe working conditions. Child labor, forced labor, modern slavery and human trafficking have all been eradicated throughout the food system on a global scale.

KEY TRANSITIONS

AGRICULTURE BECOMES MORE PRODUCTIVE, REGENERATIVE AND RESILIENT

- Farmers combine traditional techniques with advanced precision farming technologies and inputs such as soil monitoring, drip irrigation, seeds, feeds, fertilizers and crop protection products.
- Climate-smart agricultural practices are scaled up, with agriculture increasingly functioning as a net carbon sink instead of a source of greenhouse gas emissions.
- Food production is confined to existing farmland, and companies establish supply chains that are free from deforestation and land conversion, effectively halting the conversion of forests and other natural spaces to agricultural use. Degraded areas are transformed back into productive land and agri-business invests in restoring biodiversity and landscapes.
- The human and environmental risk from inputs in agriculture is continuously reduced and the use of inputs is optimized, minimizing environmental impacts.
- Agricultural subsidies are reoriented to incentivize sustainable farming practices and halt deforestation. These efforts are supported by local community engagement and by effective regulation and oversight.
- Animal husbandry operates within planetary boundaries and regenerative capacities. Bans on cage farming and long-haul transportation of live animals, together with mandates on the humane slaughter of all farmed species, advance animal welfare.

THE FOOD SYSTEM SUPPORTS HEALTHY, PRODUCTIVE AND WELL-GOVERNED OCEANS

- As fishing and aquaculture deliver an increasing proportion of the global protein mix, business plays a leading role in multi-stakeholder initiatives to guarantee that the world's oceans are effectively managed, and endangered populations are protected and restored.
- Overfishing is halted. Action is taken to ensure that fish populations reach or remain at sustainable levels, that fisheries are well-managed, and that fishing and aquaculture respect other species and wider habitats. Essential habitats – including estuaries, wetlands, mangrove forests and coral reefs – are protected and restored through multi-stakeholder collaboration.
- Business innovates new sources of nutrients and protein for fish feed, allowing the fish farming industry to grow sustainably and preventing overfishing of forage fish species.
- Emerging technologies enable seafood traceability at scale.
- Cross-sector collaboration and investment enhance product and material stewardship and large-scale clean-up efforts to tackle the issue of marine plastic.

DIETS BECOME HEALTHY AND SUSTAINABLE

- Diets shift to become more balanced and optimized for health and environmental outcomes. These shifts account for regional outcomes with a significant share of fruit & vegetable and wholegrain, a reasonable balance of plant-based and animal-based proteins, and a minimal share of red meat, processed meat, added fats, sugar and salt, and refined grains.
- Companies adjust their product portfolios to make it easy and attractive for consumers to make healthy dietary choices. Businesses significantly redesign product formulations and distribution systems to encourage a global shift toward healthy diets from sustainable food systems, offering affordable, seasonal, culturally appropriate, highly nutritious and diverse ingredients.
- Business innovation helps to develop and scale an array of new, healthy and sustainable protein sources, including those based on plants, insects, fungi, aquatic organisms and lab-cultured meat.
- Businesses adopt responsible marketing strategies that support the transition to healthy and sustainable diets globally and move away from promoting unhealthy options. Policy instruments supporting healthier dietary choices also emerge.

THE WORLD MOVES TOWARD A CIRCULAR FOOD SYSTEM WITH ZERO LOSS AND WASTE

- Businesses across the food system, including producers, restaurants and retailers, lead the way in reducing food loss and waste from farm to fork by developing metrics, setting targets, and implementing new policies and practices.

- Business develops a range of innovative approaches to minimize food waste, including extending the shelf life of perishable food, optimizing storage and supply chain infrastructure and efficiency, and improving demand forecasting.

- Public awareness and advertising campaigns stimulate a large and rapid shift in social norms that makes wasting food unacceptable. Improvements in date labeling and portion size help consumers change their behavior.

- Unavoidable waste along the food value chain is redistributed or harnessed for applications in materials or energy as part of an increasingly thriving circular bioeconomy. New legislation and emerging technologies help to close the food system loop.

EQUITABLE DISTRIBUTION OF VALUE THROUGHOUT THE FOOD VALUE CHAIN

- Companies along the food value chain collaborate to ensure that value is shared fairly with farmers and fisherpeople, helping to eradicate poverty and drive rural development.

- Companies also help build capacity on both small- and large-scale farms to adopt locally-appropriate new practices and technologies that are more productive, resilient and regenerative.

- Businesses, governments and civil society work together to ensure a just transition, building resilience and creating new jobs in the rural economy, while supporting and reskilling workers affected by market shifts.

- Businesses, governments and multi-stakeholder platforms work to ensure that human rights are protected and respected throughout the food value chain, collaborating to eradicate forced and child labor, modern slavery and human trafficking, and ensure workers' health, safety and wellbeing.

END-TO-END TRANSPARENCY IS BUILT FROM FARM TO FORK

- Businesses, civil society groups, policymakers and investors collaborate to achieve end-to-end traceability and track comprehensive and consistent data across food supply chains.

- New levels of data quantity, quality and sharing help ensure responsible and sustainable sourcing, increased farmer income, decreased food fraud, and reduced food loss and waste.

- Data enhances companies' capacity to account for the true value of natural, social and human capital used in their food supply chains and to reduce their externalities. This data also supports governments in their efforts to implement appropriate incentives and regulations.

- Consumers benefit from more information on where and how their food is produced, which enables a shift toward more healthy and sustainable dietary choices, and brings consumers closer to farmers.

THE TRUE VALUE AND COST OF FOOD IS ACKNOWLEDGED AND ACCOUNTED FOR

- Momentum grows behind new approaches that assess the true value and cost of food, factoring in links with ecosystem services and human health.

- Companies throughout the food value chain scale efforts to measure and value their dependencies on natural, social and human capital as well as the positive and negative impacts of their operations and supply chains.

- Businesses use this information to make decisions and mitigate long-term risks to their business, people, society and the environment. This information also increasingly attracts attention from institutional investors who integrate it into portfolio management practices. Appreciation of the true value and cost of food also motivates policy reform.

RELEVANT SDGs

2.1 By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round.

2.2 By 2030, end all forms of malnutrition. By 2025, achieve the internationally agreed targets set to reduce stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons.

2.3 By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fisherpeople, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment.

2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.

2.A Increase investment – including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technological development and plant and livestock gene banks – in order to enhance agricultural productive capacity in developing countries, in particular the least developed countries.

3.4 By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and wellbeing.

6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally.

6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity. Substantially reduce the number of people suffering from water scarcity.

6.5 By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate.

6.6 By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes.

8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.

8.7 Take immediate and effective measures to eradicate forced labor, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labor, including recruitment and use of child soldiers and, by 2025, end child labor in all its forms.

8.8 Protect labor rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment.

12.2 By 2030, achieve the sustainable management and efficient use of natural resources.

12.3 By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses.

12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature.

13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.

13.2 Integrate climate change measures into national policies, strategies and planning.

13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.

14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution.

14.4 By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics.

15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements.

15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally.

15.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world.

15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species.

FOOD
ACTION AREAS FOR BUSINESS
2020 – 2030

01 Adopt and disseminate agricultural and aquaculture practices that are resilient, regenerative, circular, and that produce higher yields with higher levels of nutrition.

02 Evolve and invest in redesigned food product portfolios to reduce environmental externalities, provide healthier options, and maximize positive impacts on people and planet. In particular, drive R&D around protein substitution with a focus on disruptive technologies and re-imagined animal feed sources.

03 Through marketing and education campaigns, shift consumer and employee behavior toward more healthy and sustainable food choices, and reduced food waste. Refrain from marketing unhealthy foods.

04 Establish deforestation and land conversion-free food supply chains while also forming and joining global coalitions to invest in restoration efforts.

05 Set targets, develop metrics, and implement practices and programs to minimize food waste across the supply chain. Reimagine food distribution systems that are built upon principles of circularity and reduce the level of packaging required to maintain quality and safety.

06 Set science-based targets for reducing emissions from agricultural production and related land use change to establish a clear, accountable pathway to hold temperature rises to 1.5°C. Turn agriculture into a carbon sink.

07 Engage with policymakers to reorient subsidies and regulations to incentivize sustainable agricultural practices, healthier consumption patterns and reduced food loss and waste.

08 Develop and improve internal policies and systems to perform human rights due diligence as set out in the UN Guiding Principles on Business and Human Rights and ensure human rights are respected across all food value chains globally.

09 Account for the true value of food by factoring in natural, social and human capital costs. At the same time collaborate to advance transparency and traceability mechanisms throughout the food value chain and drive open access to data.

10 Ensure that value is shared equitably throughout the value chain, with farmers and fisherpeople receiving their fair share.

TIME FOR A MINDSET SHIFT

PROFOUND SYSTEMS TRANSFORMATION WILL NOT BE BROUGHT ABOUT BY STICKING TO OUR EXISTING IDEAS AND PRIORITIES.

A number of our current mindsets stand in the way of the transformations that are required to realize a world in which 9+ billion people can live well, within planetary boundaries. Over the next decade we need to unlock change in a way – and at a rate – that has so far eluded us. It is not enough to know what needs to be done. We need to accept that radical shifts in all parts of society will be required, including business.

Critically, the required transformations will depend on three shifts in strategic business mindsets: reinventing capitalism to reward true value creation, not value extraction; building long-term resilience; and taking a regenerative approach to business sustainability.

Business mindsets in these three areas will guide the way in which decisions are made over the next decade – they are foundational to the transitions and actions required across our Vision 2050 transformation pathways. Ultimately, these mindsets are critical to long-term business success.

MINDSET SHIFT // 01
REINVENTION

Reinvention means recognizing that our current system of capitalism is producing outcomes that are unsustainable. Generating long-term returns requires a transformed model of capitalism that rewards true value creation, rather than value extraction.

MINDSET SHIFT // 02
RESILIENCE

Resilience means enhancing business' capacity to anticipate, embrace, and adapt to changes and disruptions in order to safeguard its long-term success.

MINDSET SHIFT // 03
REGENERATION

Regeneration means moving beyond a "doing no harm" mindset to one in which we build the capacity of our social and environmental systems to heal and thrive.

MINDSET SHIFT // 01
REINVENTION

Reinvention means recognizing that our current system of capitalism is producing outcomes that are unsustainable. Generating long-term returns requires a transformed model of capitalism that rewards true value creation, rather than value extraction.

Reinvention involves a fundamental shift in the purpose of business and the global economy as a whole – from the pursuit of financial profits for their own sake, to the pursuit of true value.

WHY THE REINVENTION OF CAPITALISM IS NECESSARY

Capitalism is the main operating system for today's global economy. Most production is guided and most income is distributed through markets on a for-profit basis. This is true across all major economies, albeit with significant differences between countries in terms of culture, regulation and degree of state involvement.

Capitalism's combination of for-profit enterprise and competitive markets has contributed to innovation, wealth creation and rising living standards. However, it is also generating outcomes that are unsustainable – socially, environmentally and economically. At the same time, its innovative power and tremendous reach are essential if we are to tackle our toughest challenges.

The core problem is that capitalism as we know it today does not distinguish between value creation and value extraction. By privileging returns on financial capital over the preservation (let alone accumulation) of other forms of capital, our current version of capitalism has dangerously depleted the natural, social and human capital that underpins economic value creation. In addition, risks are socialized while rewards are privatized, and decades of market concentration is threatening competition, a critical and core feature of capitalism.

We see failures at three levels – the way we think about and measure economic and business performance; market structures and dynamics that favor financial value extraction; and weak institutions that are not able to regulate markets

effectively enough to ensure they function efficiently, fairly and sustainably. Together, these failures lead to negative societal outcomes and stand in the way of companies' ability to fully pursue the transformations that are required to bring about Vision 2050.

Ten years ago, Vision 2050 included an "Economy" pathway that made it clear that a radical shift in the way companies do business was required if the overall vision was to be achieved. It advocated that we move toward economies that reward true value creation, not value extraction. We still stand by this vision. Capitalism needs to be reinvented to reward value creation that internalizes all social and environmental costs and benefits. This needs to be reflected in the relative price of goods and services, and in companies' P&L statements, costs of capital and market valuations.

Today, asking questions about the kind of capitalism we need has gone from niche to mainstream. Society is increasingly aware of the negative outcomes our operating system creates; COVID-19 has underscored problems with the status quo and further propelled the capitalism debate into the mainstream. Even avowed capitalists are among those now calling for a fundamental reset. Not simply because the status quo is unsustainable, but because the ideological backlash being triggered threatens to make things worse. Klaus Schwab of the World Economic Forum has warned that, without meaningful change to the way capitalism works and the outcomes it generates, "the ideological pendulum – already in motion – could swing back toward full-scale protectionism and other lose-lose economic strategies".[42]

Reinventing capitalism is, therefore, not simply a social and environmental agenda: it is about creating the conditions for long-term business success. A liveable planet, cohesive societies, free and fair markets overseen by robust, inclusive institutions – these things are essential for any business to thrive in the long run. Ensuring that markets reward behaviors that strengthen the environmental and social systems underpinning economic prosperity is squarely in the private sector's best interest.

A reinvented capitalism that generates true value will ensure that we see:

1 More well-run companies, making better decisions, delivering the necessary product, service and business model innovations that generate true value and contribute to a flourishing society.

2 Capital markets that properly value inclusive, sustainable business practices, rewarding the companies with the greatest positive social and environmental impact.

3 More capital being mobilized toward businesses, assets and solutions that deliver more sustainable outcomes and create true value for society.

WHAT DOES A REINVENTION MINDSET LOOK LIKE?

Companies cannot reinvent capitalism on their own. But they can recognize that the system they are part of is undermining the social and environmental systems that underpin economic prosperity and work to ensure markets do not reward further decline. Companies, especially big multinational ones, can play a role in addressing the negative outcomes from our current approach, and corporate mindsets must shift to reflect that fact: they have the ability, the influence and the incentives to push for change. Markets – and the outcomes they deliver – are shaped both by those participating in them, such as businesses and investors, and those overseeing them, such as governments and regulators. For that reason, business can and must both walk the talk through its actions, and advocate for changes to the "rules of the game".

There have been many high-profile proposals for a reinvented, reimagined or reset capitalism in recent years, and all share characteristics.

UNDERSTANDING TRUE VALUE

True value, a concept developed in the original Vision 2050, is where social and environmental costs and benefits are internalized and reflected in the relative price of goods and services, and in companies' P&L statements, costs of capital and market valuations.

A CAPITALISM THAT REWARDS TRUE VALUE CREATION WILL BE CHARACTERIZED BY FIVE FEATURES:

1 **STAKEHOLDER-ORIENTED**

Rather than shareholder-value-maximizing.

2 **IMPACT-INTERNALIZING**

Rather than impact-externalizing.

3 **LONG TERM**

Rather than short term.

4 **REGENERATIVE**

Rather than degenerative.

5 **ACCOUNTABLE**

Rather than unaccountable.

Together, these features will shift the purpose of business so that it generates long-term true value for all: employees, customers, suppliers, communities, the natural environment and, of course, shareholders.

Capitalism has been reinvented before – generally in response to periods of profound crisis, as happened following the Great Depression and World War Two, and again following the "stagflation" era of the 1970s. It is likely that we are living through another period in which a series of rolling shocks to the system – resulting from rapid technological change, mounting inequality, and the intensifying impacts of ecological overshoot, compounded by trade wars and a potential COVID-19 Domino Effect[43] – are creating conditions conducive to reinvention.

Our challenge now is to move from talk to action – from tinkering to transformation – and that will depend on a mindset of reinvention. It is vital that business leaders, investors, regulators, governments and civil society actors work together to address the root causes of contemporary capitalism's negative outcomes and reinvent it to deliver true value to society.

We explore this mindset shift in more detail in our Vision 2050 issue brief ah ok

. The issue brief includes specific guidance on the actions that business, and the CFO community in particular, can drive, alongside aligned asks for policymakers.

RESILIENCE

Resilience means enhancing business' capacity to anticipate, embrace, and adapt to changes and disruptions in order to safeguard its long-term success.

Resilience is not about having strong defenses and being resistant to change. It is about anticipating, embracing and adapting to changes and disruptions. Companies must shift their mindsets to recognize that they are only as resilient as the systems they are a part of.

WHY LONG-TERM RESILIENCE IS NECESSARY

Resilience is increasingly being adopted in management and sustainability thinking, but, as a relatively new concept for business, a common definition or approach is yet to be agreed. COVID-19's arrival revealed a wide range of systemic vulnerabilities (economic, social and environmental): it has demonstrated how major disruptions can snowball through interconnected systems. Around the world, we realized that our societies were nowhere near as resilient as we believed, let alone as they needed to be.

We have stripped much of the slack out of our systems. The post-1970s period of globalization saw companies become ever more devoted to efficiency, and guided by "just-in-time" thinking. Over a similar period, fiscally-stretched governments have had to cut operating budgets and defer investment in public goods such as infrastructure, health and education. In addition, our societies push further and further into the natural world, and the demands we place on the natural resources we rely on have increased fourfold, with global material use exceeding 100 billion tonnes in 2020.[44]

Slack, it turns out, is necessary insurance and essential to our ability to react to disruptions, let alone adapt to them. And with political, cultural, environmental and economic volatility all set to remain high over the next 10 years, it is safe to assume that there are more shocks and disruptions in store. Resilience is something we are going to need more of, especially if we are to support the scale of systems transformation that Vision 2050 requires.

An expanded understanding of resilience sits at the core of long-term success. Companies are only as resilient as the ecosystems, communities, economies and societies they operate in. True resilience is not about withstanding change: it is about embracing it. It is not only about access to raw materials and operational efficiency, but also recognizing and protecting the enormous investments and value found in skilled and healthy workforces and vibrant communities. It is about protecting and enhancing vital ecosystems, and ensuring that strong institutions, transparent rule of law, and healthy national and local budgets can support the resilience of the system overall. True resilience prioritizes the transformational role of innovation in finding ways to create value in the face of challenges and disruptions.

When businesses recognize that they are part of a wider system, their understanding of resilience shifts from making themselves robust and able to resist change, toward a mindset of adaptation and evolution that is required if they are to continue to exist as employers, as value-generators for shareholders, and as members of communities around the world.

WHAT DOES A RESILIENCE MINDSET LOOK LIKE?

Resilience is what will provide companies with both the impetus and confidence to drive the kinds of transformations that Vision 2050 demands. WBCSD has defined resilience as a business's ability to anticipate and prepare for change, then adapt to circumstances in the manner that provides the greatest chance of thriving over the long term. It is dynamic and consciously transformational.

RESILIENT COMPANIES EXHIBIT FOUR KEY CHARACTERISTICS:

1

DIVERSITY

The variety among the components of a system. This characteristic includes redundancy or having slack in a system. It encompasses diversity in a people sense – for example in skills, opinions and backgrounds. Diversity also means having multiple options for achieving certain goals.

2

MODULARITY

The ability to separate and recombine a business system's components. A major benefit of modularity is that it enables flexibility and a variety of operation and response modes. Both the connectivity and openness of a system are key to achieving modularity. A practical example of modularity is the seamless connectivity and just-in-time qualities that make a supply chain efficient, coupled with enough supply chain diversity or redundancy to ensure that a single interruption or issue does not halt supply altogether.

3

COHESION

The way in which a resilient system is likely to be founded on social togetherness and trust. Cohesive organizations are inclusive, have strong leadership and a vision of value for the full range of stakeholders, especially the most vulnerable.

4

ADAPTABILITY

The ability to respond to changing conditions to make a business enduring. Adaptability is rooted in planning for multiple inherently uncertain scenarios, and draws on diversity, modularity and cohesion to change or transform in response to system conditions. It requires feedback loops, triggered when thresholds are breached. It also involves learning from past experiences to adjust approaches going forward.

These four characteristics need to be considered across a range of different corporate functions that are critical to the resilience of the organization as a whole, such as supply chain management, procurement, treasury, corporate governance, risk management, human resources and strategy. Applying a resilience mindset in these areas will enable companies to better anticipate, embrace and adapt to changing conditions, and recognize the role they play in strengthening the resilience of the stakeholders in their value chains and the communities and societies in which they operate.

Every CEO needs to anticipate at least one major shock in their tenure and prepare to lead accordingly. To be truly resilient in the long term, companies will need to put plans in place for inevitable disruptions while also driving and thriving in the process of transformation at the heart of Vision 2050. We have identified a number of ways companies can leverage the key characteristics of resilience to do this. These include:

- Leading with purpose and values, offering employees a clear and inspirational direction during times of profound change, allowing a company to be more agile and decisive.
- Putting people first, from the C-suite to the contractor.
- Engaging stakeholders in strong, mutually dependent and beneficial relationships.
- Re-examining supply chains to strike the right balance between efficiency and resilience and revisiting responsibility for social and environmental impacts.
- Embedding long-term thinking and risk management into strategic planning.
- Accelerating the transition to sustainable business models and systems, since companies that work proactively are most likely to survive the profound changes that are coming – and thrive.

We explore this mindset shift in more detail in our Vision 2050 issue brief: Building Long-term Business Resilience

MINDSET SHIFT // 03
REGENERATION

Regeneration means moving beyond a "doing no harm" mindset to one in which we build the capacity of our social and environmental systems to heal and thrive.

Adjusting to the reality of a depleted environment and rising social tensions, many businesses have embraced the need to operate more sustainably. In recent years, these activities have mostly focused on taking action to mitigate negative environmental and social impacts – on doing less harm.
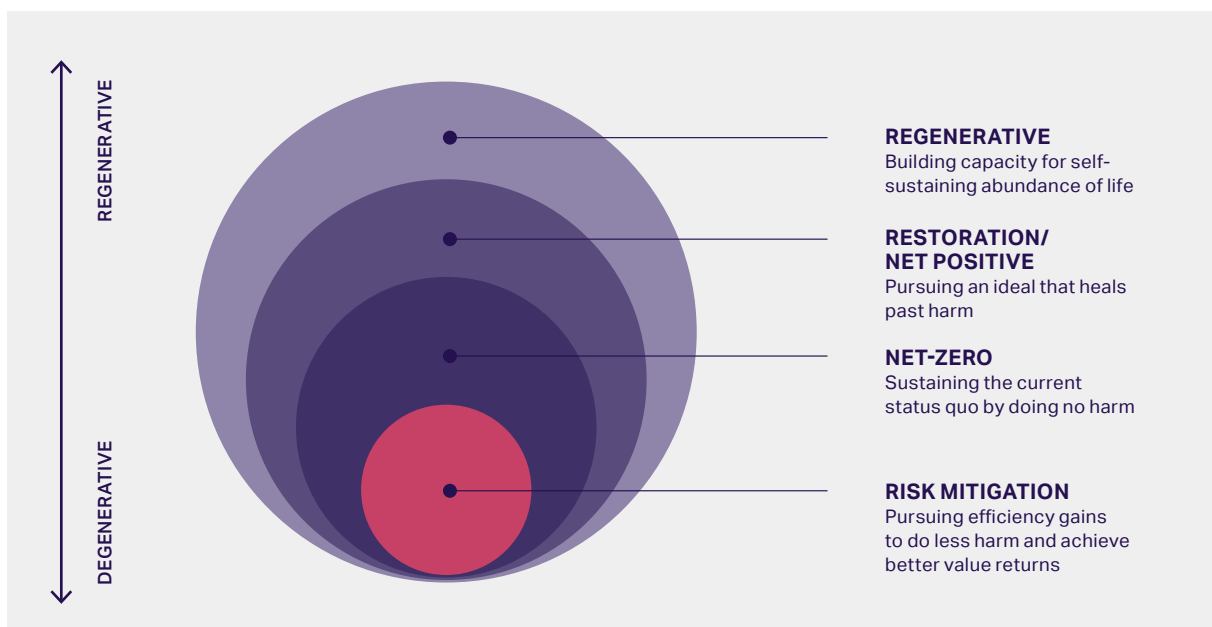
Some action has been ambitious, for instance corporate commitments and science-based targets to achieve net-zero carbon emissions. But unfortunately, even pursuing "net-zero" impact – while critical – is ultimately insufficient. We urgently need to put more back than we take out, in order to repair the harm that has already been done and restore critical global systems that are in decline.

Yet continuous restoration alone cannot be our ultimate goal. Restoring nature and society whilst operating with the same extractive mindset and practices will not create the long-term shift that we need to see toward self-sustaining abundance. To lay the foundations for a truly prosperous world by 2050, in which 9+ billion people are living well, within planetary boundaries, we need to stretch our ambitions and mindset toward creating a positive, self-perpetuating wave of regeneration that builds the capacity for all life to grow, evolve and thrive.

In the face of spiraling social tensions and ecosystem tipping points, we have to stop just trying to sustain the status quo and take on a regenerative mindset.

WHY IS A REGENERATIVE MINDSET NECESSARY?

Human society is part of – and completely dependent on – the living world around us. Science tells us that we are in a downward spiral, at risk of triggering key ecological tipping points. Yet nature, including humanity, has an in-built capacity to grow, evolve and thrive, which could catalyze a positive wave of regeneration even in the face of very challenging conditions.

WHAT DOES A REGENERATIVE MINDSET LOOK LIKE?

Within industrialized economies, our way of looking at the world has been heavily shaped by metaphors of machines and production lines. A regenerative mindset helps us to reconnect to the particular characteristics of being "alive". Unlike mechanical systems or the products they produce, living beings are each unique, and ecosystems don't degrade over time or have a maximum capacity – instead, they have the potential to heal, grow, evolve and create new conditions for more prosperity and wealth. They are resilient as they react and adapt to change.

FIG. 11: EVOLVING TOWARD A REGENERATIVE MINDSET

REGENERATIVE
Building capacity for self-sustaining abundance of life

RESTORATION/
NET POSITIVE
Pursuing an ideal that heals past harm

NET-ZERO
Sustaining the current status quo by doing no harm

RISK MITIGATION
Pursuing efficiency gains to do less harm and achieve better value returns

REGENERATIVE

DEGENERATIVE

Many of our sustainable innovations in recent years have naturally embraced and enabled these unique attributes to some extent, through industrial ecology, circular economy approaches and a growing recognition of the importance of diversity to business success.

At present, regenerative thinking and practice are advancing most visibly in agriculture. Instead of the more extractive and efficiency-driven mindset that has defined much of modern industrialized agriculture, we are seeing producers adopt practices that inherently rehabilitate and strengthen the health and vitality of ecosystems that crop, livestock and forest production depend on. Regenerative approaches focus on increasing biodiversity, enriching soil health, improving watersheds and capturing carbon. They are also building capacity for equality and prosperity for all individuals along the supply chain – recognizing that human communities are also an integral part of our living world and our agricultural system.

The conversation about regenerative thinking and practice now needs to broaden from agriculture. We urgently need to apply the creative capacity of business to explore how we can operate regeneratively across all systems and sectors. Our transformation pathways include a selection of regenerative actions that business can take. A shift toward more regenerative mindsets across the global business community will help to both implement known actions and identify many more.

Understanding of how to apply regenerative thinking in a business context is still at a relatively early stage.

HOWEVER, AT THE CORE OF THIS MINDSET ARE THREE KEY CONCEPTS:

1 EMBRACING SPECIFICITY

No two living beings, communities or ecosystems are the same. Taking a regenerative approach involves recognizing that every place in which a business operates (and each of the communities that it is a part of and sells to) is unique, and is accompanied by its own set of opportunities and challenges. It is important for business to take an approach that is context-specific and customized to particular operating environments, rather than a model built on "scaling best practice".

2 SUPPORTING THE CAPACITY TO GROW, DEVELOP AND EVOLVE

Although business cannot control the behavior of the communities and ecosystems that it is a part of, it can work to replenish their underlying capacity.

This is about going beyond problem-solving for existing challenges and recognizing the future potential these social and ecological systems have. It is about enabling them to evolve and grow in their unique circumstances, instead of imposing a pre-defined set of interventions. A regenerative mindset is not about trying to restore "back" to a point in history; a self-sustaining system that builds its own abundance will not necessarily look like anything that has come before.

3 THINKING SYSTEMICALLY

A business cannot be regenerative without understanding the complex web of interconnections that make up the system that it is a part of. The health of every business is intrinsically linked to the health of the system as a whole, and every action has ripple effects that can be felt across each system. It is critical to redefine business purpose beyond inward-facing targets for growth or shareholder returns, and to focus on the contributions that business can make to value chains that work toward the long-term health and prosperity of people and planet.

These concepts are applicable at every level of business operation. From valuing diversity and creating a nurturing environment for employees, to how business perceives its role within a wider ecosystem of organizations, and informing how it can contribute to large-scale efforts to revitalize ecosystems.

Regeneration is a topic that will only increase in importance over the next 10 years. WBCSD will work with its members to ensure that developing a regenerative mindset and business practices becomes standard for forward-thinking companies all around the world.

TIME TO
SUCCEED

IT'S NOT ENOUGH TO KNOW WHAT NEEDS TO BE DONE: WE ALSO NEED TO UNDERSTAND HOW TO DO IT.

The transformation of systems does not take place in silos, within individual companies or even single industries. It is the result of actions taken across industries and societies. It is catalyzed by macrotrends and innovations, and enabled by factors ranging from mindsets to regulations.

Ultimately, transformation will be influenced by, and rely on, the aspirations and actions of us all. Business no longer has time to wait for the stars to align – for the right regulations, the right market conditions, the right innovations to fall into place. Achieving Vision 2050 demands that business understands how systems transform, and what it can do to unlock the transformations that are required.

WE CANNOT TRANSFORM OUR BUSINESSES, ECONOMIES AND SOCIETIES TO ACHIEVE VISION 2050 WITHOUT UNDERSTANDING WHAT TRANSFORMATION TRULY MEANS: ROOT CAUSE-LEVEL CHANGE THAT DELIVERS FUNDAMENTALLY NEW OUTCOMES.

THE NEED FOR SYSTEMS THINKING

UNDERSTANDING SYSTEMS TRANSFORMATION

We cannot transform our businesses, economies and societies to achieve Vision 2050 without understanding what transformation truly means: root cause-level change that delivers fundamentally new outcomes.

For all the talk of transformation, there is relatively little clarity about what it means, let alone how it happens or the role companies can play to actually support it.

In recent years, more and more stakeholders have begun to use the terms "transformation" and "systems transformation" to describe what is needed to achieve sustainable development. These stakeholders include government policymakers, international organizations, civil society groups, academics, companies and their associations. All are realizing that our sustainable development challenges are complex, highly interconnected and systemic; no one actor or even group of actors, can address these challenges on their own. Many now recognize the extent of change required to achieve a truly sustainable future and that transformation will come with some initial costs.

WBCSD defines transformation as profound change in the systems that have created the social and environmental challenges we face – change that generates dramatically different, and more positive, outcomes and impacts for people and planet. Transformation tackles problems at the root cause level with completely new ways of thinking and acting, based on fundamentally new premises and sources of value.

Transformation stands in contrast to more ordinary, incremental change. Incremental change can occur more easily because it builds upon familiar concepts and doesn't threaten vested interests too much. Incremental change has a role to play in enabling transformation – for example, by creating new business models without cannibalizing current ones. But it can also serve to protect the status quo by giving the impression that sufficient progress is being made.[45]

Three common factors drive and shape systems transformation: macrotrends, innovations and enablers.[46] An overview of each follows.

MACROTRENDS

All systems operate in a broader context, and are subject to external pressures that can encourage change over time. Macrotrends are changes that are significant and sustained enough to have far-reaching impacts, such as aging populations, climate change, the rise of automation, a shift in the global economic center of gravity or retreat into more local trading blocks.

INNOVATIONS

As actors within a system react to the way the context is evolving, they develop innovations they believe will offer better performance or new possibilities. These include new technologies, business models and ways of fulfilling social functions – for instance, the internet, the circular economy, a universal basic income. Very often, transformations occur when multiple innovations combine to offer something completely new.
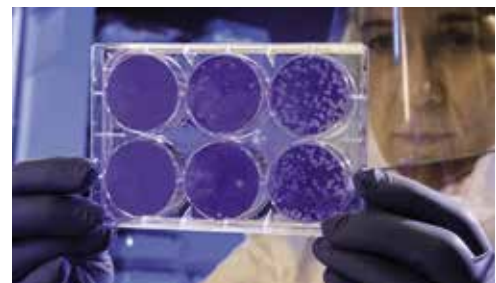
ENABLERS

Ultimately, a set of enablers react to trends and innovations, helping to change the way a system works. Enablers are forces that shape the incentives, power dynamics and capabilities of different actors in a system at scale – such as individual norms, values and behaviors, policy and regulation, information flows, financial flows and technology. Enablers propel change into the mainstream, thus transforming the system.
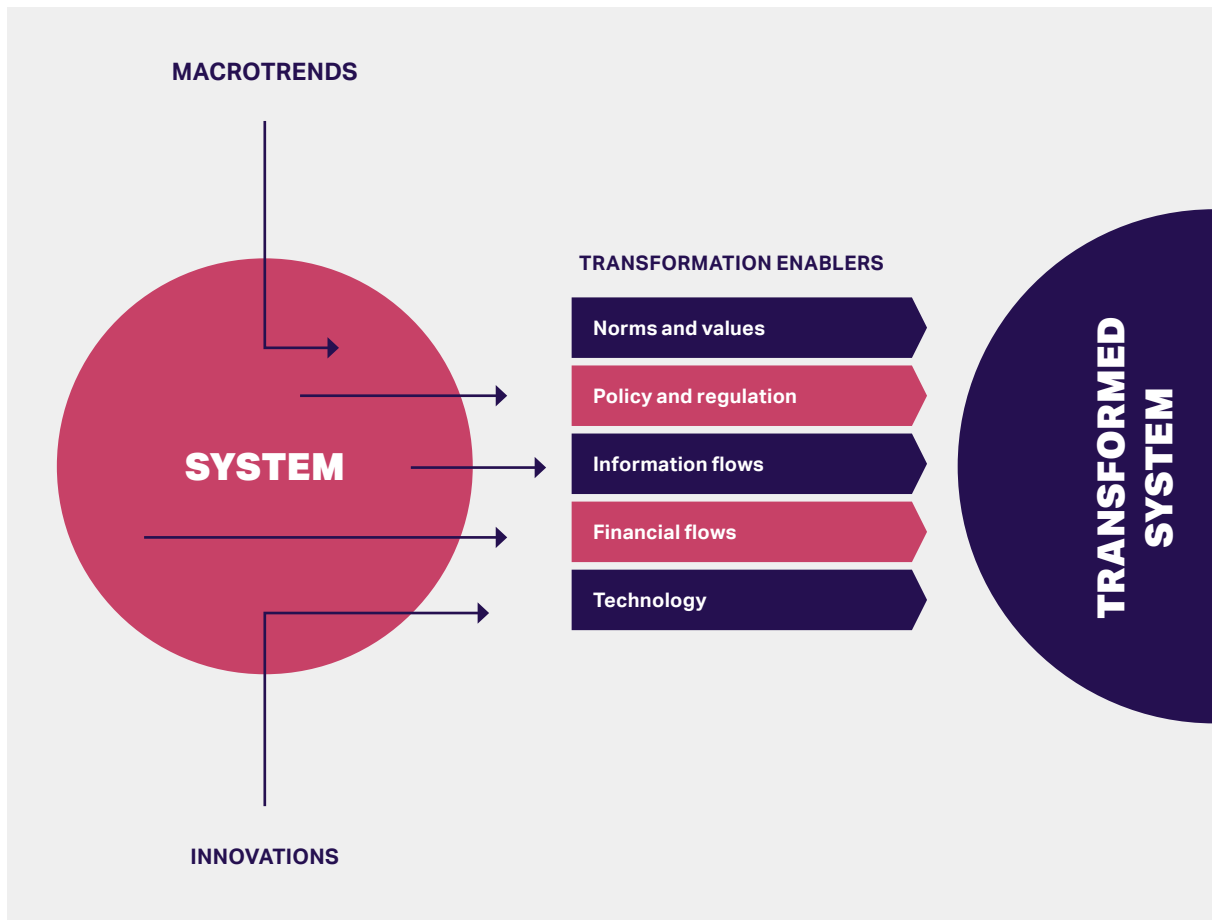
While this theory may be simple enough, the reality of systems transformation is complex, messy and unpredictable.

Because systems are made up of so many diverse, yet interconnected and interdependent actors, the process of systems transformation is distributed and adaptive. This means it is the product of many different actors experimenting, learning and adapting within parameters that are always changing as a result of one another's efforts. Over time, they develop new products, technologies, services, business models, public service delivery models, policy and regulatory innovations, voluntary standards, and cultural norms and behaviors, that together deliver new results. There is usually stiff resistance from groups with vested interests in the status quo. Systems transformation is organic and non-linear.[47] The process often defies advance planning and can be very hard to predict.

Nevertheless, a clear view of the macrotrends and innovations that can catalyze transformation, and the enablers that drive the process to fruition, helps business understand how, where, and when it can act to support change. Forward-looking businesses must collaborate, using insights, innovations and influence to steer the critical transformations outlined in the pathways toward Vision 2050.

UNDERSTANDING THE MACROTRENDS, INNOVATIONS AND ENABLERS THAT TOGETHER CATALYZE TRANSFORMATION, HELPS BUSINESS UNDERSTAND HOW, WHERE AND WHEN IT CAN ACT TO SUPPORT CHANGE AND PLAY A LEADERSHIP ROLE.

PAST BARRIERS TO
SYSTEMS TRANSFORMATION

Our original Vision 2050 projected that 2011-2020 would be the turbulent teens. Indeed, they were. Many of the "must-haves" we set out were not achieved. Not enough of the progress that we said would set us up for the transformation times, was made. To succeed in our efforts to realize transformation in the decade ahead we must consider why.

Will a better understanding of how systems transform help us see why transformation has eluded us? Can we look at the last ten years and pinpoint the past failures that have prevented societies from building on the foundations that we have been able to put in place, such as the SDGs and the Paris Agreement? Does increased clarity of these barriers to transformation provide us with insights and lessons that we can apply to similar obstacles that we may well face over the next decade? We can't afford to lose another 10 years.

As part of our efforts to revisit Vision 2050 we have engaged members of the global business community to identify what they perceived as the most significant barriers to transformation over course of the last decade. Our review revealed a broad range of barriers spanning from policies, to innovation costs and consumer habits. A selection of these barriers are laid out in Fig. 13 below:

WHAT WERE THE MOST SIGNIFICANT CROSS-CUTTING BARRIERS TO TRANSFORMATION?

Short-termism

A line could be drawn from a majority of the barriers identified back to the dominant norms and values that guide our decision-making – in business, in politics, in society – amplified by the specific circumstances of the last decade. An already-entrenched short-termism, on the part of companies, investors, policymakers and individuals, exacerbated by the need to recover from the 2008 financial crisis and return to the status quo, was (and likely still is) the primary barrier to transformation.

Alignment and ambition

In addition to the constraints that short-termism imposes, our collective mindsets weren't yet sufficiently aligned on the need for action. Absent a critical mass of public and institutional opinion in support of action, policy efforts such as the push for an effective price on carbon, or a shift in our measures (and timeframes) of success, were unable to advance, stalled by the supposed safety of status quo.

Transition costs

We have not been sufficiently transparent about the costs of transition or its likely effects on a range of different stakeholders. Amongst both policymakers and the business community, short-termism has also affected the way we have

FIG.13 BARRIERS TO TRANSFORMATION

NORMS AND VALUES

- The dominant model of capitalism and short-term self-interest
- Those creating the challenges are least likely to be affected by them
- Lack of global vision, leadership, consensus, momentum, trust and commitment.

POLICY AND REGULATION

- Lack of regulatory consistency and stability
- Incomplete, poorly funded and/or weakly-regulated policies
- Defensive corporate approach to policy and regulation.

INFORMATION FLOWS

- Cost of inaction not effectively communicated or understood
- A lack of understanding of sustainability issues and their systemic nature
- Not enough relevant information collected and shared with decision-makers.

FINANCIAL FLOWS

- Failure to account for true social and environmental costs and benefits
- Misaligned incentives preventing investment in transformation
- No agreement on how to handle the transition or transformation costs.

TECHNOLOGY

- Lack of systemic approaches linking behavior, infrastructure and technology
- Lack of public and private investment in transformational technologies
- Lack of incentives and investment in technology-driven efficiency improvements.

been thinking about unlocking transformation. The dominant entry point for addressing sustainable development challenges is the (financial or growth) opportunities that will flow from taking action. Yet the transition costs of the transformations we seek will be significant – enormous in fact – as will the costs of inaction. New infrastructure and networks need to be built, business models need to be reinvented, and whole industries (and the jobs that they provide) need to be reimagined and repurposed to serve society more sustainably. Acknowledging the true transition costs is an essential part of planning how we will approach transformation, and critical to working transparently and effectively with the strongest supporters of the status quo so that we can reverse their opposition to the progress our vision demands.

LESSONS WE CAN LEARN FROM THE LAST DECADE

Perhaps the most important lesson from the last 10 years is that how we respond to a crisis has profound effects on how we recover from it in the long term. The priorities embedded within the response determine the outcomes of the recovery. It is encouraging that, in the wake of the COVID-19 pandemic, so many governments around the world are talking in terms of "building back better, aligning rescue and recovery packages with a broader agenda of transformational goals.

However, just pumping money into the existing system, albeit toward societally positive purposes, will not be enough. Short-termism is an inevitable outcome of our current organizing models: without changes to our political and economic incentives, we will continue to face crippling tension between long-term requirements and short-term gains. A reinvention of capitalism, by both forward-looking business and policy leaders, will have the most tangible impact on shifting the rules of the game and overcoming one of the most significant barriers to change.

Any change to the policy landscape needs to reach beyond a single country or regional block in order for it to have truly transformational effect. Yet over the last 10 years we have seen international cooperation repeatedly attacked and sometimes subverted. Business has looked on as multilateralism has broken down, despite the negative effects this has had on investment opportunities, stability and security, as well as on the spread of innovation and the alignment of the global regulatory environment. As the world has retreated into more regional spheres of interest and influence, the incentives for more short-term zero-sum gain approaches increase. We must reverse these trends. None are beneficial to the future success of multinational corporations. Business cannot take national and international political stability for granted and must work to defend and promote it wherever it can.

The same is true of the information landscape. The last 10 years have seen a fragmentation of people's information ecosystems, with polarization and insulation providing fertile ground for dangerous misinformation to spread unchecked. The difficulty some governments have had in public acceptance of measures taken to control the COVID-19 pandemic demonstrates the real danger that fractured information realities pose. The erosion of a common set of societal facts is threatening the positive shifts that have occurred toward greater public understanding and support for action on sustainable development challenges. Efforts to improve public trust in the media, experts and institutions will be central to societally-supported transformations. At the same time, we must acknowledge that the appetite for misinformation is in part driven by the difficulties and discontent felt by many around the world, and addressing the ever-increasing levels of global inequality are central to efforts to improve the public's trust.

WHAT CAN WE DO DIFFERENTLY?

In this report, WBCSD has proposed three strategic business mindset shifts that we believe are precursors to the business community collaborating to overcome these kinds of barriers in the next 10 years. These mindset shifts lie at the heart of how business will make decisions. A model of capitalism that rewards true value generation in the long term will demand a change to the rules of the game, moving us away from short-term decision-making. A better understanding of true resilience will drive companies to more broadly consider the different factors that their long-term success depends on, and push them to address societal trends, developments and behaviors that threaten their long-term success. A more regenerative approach to business will shift the way in which companies value and nurture the ecosystems and communities that their success and stability depend on. These mindset shifts are what will move companies to take action in support of real transformation.

The rest of this chapter is dedicated to outlining what it takes to succeed once companies have decided to act. We show how exploring macrotrends, potential disruptions and maturing innovations help us to understand the world we will be taking action in. And we provide an overview of the various different factors that determine whether or not actions are able to succeed and scale – the key enablers of transformation that business must interact with more effectively going forward: innovation, investment, individuals and policy.

The biggest change in approach has already happened. The zeitgeist has finally caught up with the urgency of the challenges that we face. And while not everyone is aligned on the need for transformation, those who are not find themselves in a weaker position every day. Business can shift its approach and embrace these enablers of transformation, driving for wider collaboration, greater ambition and faster action in its efforts to build a better world.

UNLOCKING SYSTEMS TRANSFORMATION

Business has a crucial role to play in systems transformation. Our understanding of the way systems transformation happens, depicted in Fig. 12, offers a guide to where action is needed, revealing opportunities for business to drive transformations more deliberately and effectively in support of Vision 2050.

First, companies can ground their efforts to support sustainable development in a solid understanding of the way the world is changing and could change further. Exploring key macrotrends, plausible disruptions and emerging innovations allows companies to anticipate where their efforts could face headwinds or tailwinds, where better investments could be made, and where risks might need to be more carefully managed.

Second, companies can use their core competencies and influence with other stakeholders to leverage key internal and external enablers of transformation. These include innovation and technology, finance and investment, individuals and consumption, and policy and regulation.

If the last 10 years have taught us anything, it is that the world is becoming increasingly volatile, and that corporate, government or public ambition on sustainability challenges cannot unlock transformation on their own. Progress demands shared facts that drive the combined and aligned will and actions of all three groups.

GROUNDING OUR TRANSFORMATION EFFORTS IN REALITY

The world is always changing. To succeed as businesses seeking to make the world a more sustainable place, we must understand the forces driving these changes and the effects that we should expect to result from them. For our transformation strategies and solutions to succeed, we must ground them in the technological, economic, political and cultural realities that will influence their implementation – and progress toward Vision 2050.

Even at the best of times, we cannot predict the future. But even in today's more volatile world, we can identify the forces that are shaping our communities, cultures, economies and societies, and anticipate how they may act as

headwinds or tailwinds to our efforts to realize Vision 2050. Transformation will depend on us finding ways of countering the headwinds and leveraging the tailwinds to drive progress.

Taking a clear-eyed view of how the 2020s might evolve is central to our ability to develop effective strategies over the coming decade. Part of companies' future resilience will depend on their skill in anticipating potential changes in the business landscape and adapting to them, while also incorporating them into their risk management, R&D and strategy processes.

To support members' efforts to plan for an uncertain and unfolding future, this Vision 2050 update includes an investigation into the most powerful political, environmental, social, technological, economic and regulatory forces that could influence the next 10 years and that business will need to take into account.

MACROTRENDS & DISRUPTIONS

As per our understanding of systems transformation, two of the strongest pressures exerted on systems are macrotrends and innovations. Macrotrends can be further divided into two categories: macrotrends (trends that are already unfolding and can be foreseen with a relatively high degree of certainty, even if their implications are more ambiguous); and disruptions (events that are less certain to occur, but that would have significant impacts if they do e.g. pandemics, popular revolts, transformative technologies).

Some macrotrends, such as demographic change, are locked into our future already today. Others, for instance societal reactions to ongoing or increasing inequality, are less certain and can be influenced by powerful societal actors including governments and business. It is critical that business sees itself as an influential and active actor, with both agency and interest in future outcomes, not a passenger whose role is simply to react and adapt to events. This is also true of disruptions, the impacts of which can be mitigated.

Not all shocks are Black Swans – some can be predicted, including for instance a pandemic, or climate breakdown. In these cases, careful advance planning can greatly diminish the impact that a disruption might cause. Other disruptions, such as transformational technologies or game-changing legislation, can be actively pursued by business.

Through our investigations, we identified 12 macrotrends that most likely will, and 10 plausible disruptions that could, determine the global operating environment for business over the next decade. COVID-19 powerfully demonstrated that wildcard disruptions do happen – and have profound and likely long-lasting consequences, interacting with (and often accelerating) existing trends.

Our work on macrotrends, disruptions and the long-term impacts of COVID-19 can be explored in detail in two Vision 2050 issue briefs, issued in May 2020: Macrotrends & Disruptions Shaping 2020-2030 (and its supporting research document) and The Consequences of COVID-19 for the Decade Ahead. The 12 macrotrends and 10 disruptions identified are summarized in Figs. 14 and 15.

FIG. 14 MACROTRENDS EMERGING OVER THE NEXT DECADE

DEMOGRAPHICS

GENERATIONAL HANDOVER
Political, economic, cultural and innovation power will shift from the Boomers to Generations X, Y and Z.

POPULATION GROWTH IN ASIA & AFRICA
Sustaining rising prosperity and huge megacities will strain scarce resources. Migration will create political challenges.

ENVIRONMENT

WORSENING CLIMATE IMPACTS
More frequent and more severe weather does more damge to more people and becomes harder to ignore.

LOCAL POLLUTION, ENVIRONMENTAL DEGRADATION & SCARCITY CREATE IMPETUS FOR INNOVATION
People will suffer losses, instability and even displacement, driving innovation.

ECONOMY

SHORT-TERM CRISIS, LONG-TERM SLOWDOWN
Prior under-investment, weak demand, low productivity, and now COVID-19, will shape a shakey global economy.

PEAK GLOBALIZATION & THE RISE OF ASIA
Rival blocs and resource nationalism build as demand and power pivots east.

TECHNOLOGY

AUTOMATION IMPACTS EVERY INDUSTRY & COUNTRY
Automation will change lives, industries, economies: growth and disruption await.

DATAFICATION, FOR BETTER & WORSE
We will be smarter, more efficient and more surveilled. Datafication's efficiency and productivity gains come at a price.

POLITICS

POLARIZATION & RADICALISM ON THE RISE
High dissatisfaction feeds appetite for radical alternatives, serving up more nationalism but also Green New Dealism.

GEOPOLITICAL INSTABILITY
Weakened multilateralism and nations in decline contribute to the ongoing erosion of incentives for stability.

CULTURE

POST-MATERIALISM: ATTITUDES AND LIFESTYLES DIVERGE
Changing aspirations and habits born in the pandemic help on-demand service models to spread globally.

CULTURE WARS ESCALATE
Cultural clashes (young-old, rural-urban, rich-poor) contribute to polarization and in turn feed off it.

FIG. 15 POTENTIAL 'WILDCARD' DISRUPTIONS

FINANCIAL CRISIS

How much will COVID-19 cost... can we recover wisely... how will we pay when the next crisis comes?

GLOBAL PANDEMIC

Health systems are not prepared to handle a pandemic, and it seems neither are most economies.

MAJOR CONFLICT

Serious conflict is still a threat. Cyber-attacks e.g. on infrastructure would touch ordinary citizens in a conflict.

AN ECONOMIC 'SINGULARITY'

What happens when new jobs cannot be created in the same places where jobs have been destroyed?

SOCIETAL 'TECH LASH'

Society sours on the real costs of free tech, while treasuries tire of lost taxes and a lack of competition.

POPULAR REVOLTS & REGIME CHANGE

Inequality continues to rise, making more frequent and severe protests likely. How effective will they be?

A CLIMATE 'MINSKY MOMENT'

Climate risks, costs, disclosures and social pressures all combine to reorient financial flows – but how fast?

ENERGY TRANSITION TIPPING POINT

Will market forces lead to fossil fuel demand peaking and a marked acceleration in the energy transition?

BIOTECH BOOM

Disruption comes to food, medicine and materials as synthetic biology's massive potential emerges.

GLOBAL GREEN (NEW) DEAL

Momentum builds as citizens demand we seize this chance to rebuild economies and ecosystems, climate and communities.

INNOVATIONS

Innovations are an important source of pressure capable of initiating systems transformation – and a essential one too. This is highlighted in our Vision 2050 pathways, with progress in each dependent on transformational innovations.

Beyond the crucial importance of innovations to progress within our transformation pathways, innovations, just like macrotrends and disruptions, will shape the wider systems in which we have to work toward Vision 2050. Innovation is taking place all around the world every day. Today, there are a number of innovations that have reached a level of maturity that suggest they will almost certainly shape the next decade.

We have explored these influential innovations in our Vision 2050 issue brief Innovations That Could Shape and Transform 2020-2030, highlighting 25 innovations in three categories: technological innovations; business model innovations; and social innovations.

Transformation is rarely the result of a single innovation. More often, it happens when multiple innovations align and combine with social conditions to change the way we live. In this way, innovations have cascading effects that are hard to imagine when they are first introduced. Not all of these innovations are directed toward solving sustainability challenges. In fact, at this stage, many could have positive or negative impacts on our efforts to realize Vision 2050. Furthermore, they do not cover all the innovation gaps that exist within our transformation pathways. Nonetheless, identifying the innovations that are reaching maturity is critical to exploring the combinations that might be possible and the previously unsolvable challenges that they could help us to address.

FACTORING MACROTRENDS, DISRUPTIONS AND INNOVATIONS INTO OUR STRATEGIES

Progress within our Vision 2050 transformation pathways will depend on multiple different systems inputs. The macrotrends, disruptions and innovations investigated in our Vision 2050 issue briefs provide business and WBCSD with an overview of some of the most systemically significant pressures that will shape how the next 10 years unfold. We have taken these into account when defining our new Vision 2050 pathways; however regular reviews of how these and other macrotrends and innovations are evolving within society are essential if we are to keep our efforts to progress the pathways on track.

Forward-scanning is an increasingly important part of companies' ability to generate long-term value. For instance, taking a view of the effect of outside factors on business goals and offerings is a critical activity in support of corporate resilience, helping to improve risk management processes, leveraging scenario planning and strengthening materiality assessments. However, forward-scanning also helps to reveal what role business can play in supporting societally positive trends, opposing those that stand in the way of our vision and directing collaboration and investment toward the innovations that our Vision requires.

ENABLING TRANSFORMATION

Vision 2050's transformation pathways identify critical action areas for business that will support the transformations we need over the course of the next decade in order to achieve our vision. While some actions represent commitments business can make to change processes and policies within their own organizations, others are more focused on influencing a broader set of external factors that will enable transformation.

Building on our understanding of transformation and its enablers, we identify four important areas of interaction between business and the outside world: areas where business influence can help to create and shape markets, drive behavioral shifts and realize systemic change.

THESE AREAS ARE:

INNOVATION & TECHNOLOGY

FINANCE & INVESTMENT

INDIVIDUALS & CONSUMPTION

POLICY & REGULATION

Historically, business has treated these enablers as areas it is influenced by, rather than acknowledging extensive – and often active – interdependence. Business can choose which technologies to unleash or embrace. Business influences demand just as much as demand influences business. Business can be more actively invested in creating new markets. And business has long sought to influence the policy environment it operates within. It is time to stop thinking about the way these areas constrain business, and instead focus on the influence that business can bring to bear on these enablers in support of transformation.

The transitions and actions within our nine pathways will only be achieved if business uses its assets, capabilities, creativity, reach and voice to influence these four enabling areas in support of Vision 2050. This section provides a cross-cutting perspective on the importance of innovation and technology, finance and investment, individuals and consumption, and policies and regulations – and describes how business can approach these enablers of transformation to more effectively bring about progress and change at the rate and scale required to achieve our Vision 2050.

INNOVATION & TECHNOLOGY

WHY DOES IT MATTER?

Our transformation pathways to Vision 2050 lay out a range of grand challenges; innovation and technology will be central to solving many of these.

Innovation – the implementing of new ideas to create value – is vital to the achievement of Vision 2050, not only across products, but also across processes, management and business models, and in finance, policy and society as a whole. Technology is often the output of innovation, but also a means by which innovation can be accelerated. "Technology" refers to tools, machines or processes that create value or solve problems.

The pace of innovation today is unprecedented, even referred to as the "Fourth Industrial Revolution". Previous periods of significant innovation have brought massive impact, for better and for worse. While industrial revolutions of the past have delivered impressive gains in human progress and net prosperity, they have often come with social and environmental costs. How do we make sure that we do not make similar mistakes going forward? How can we use innovation to solve the grand challenges at the heart of Vision 2050, while avoiding the negative outcomes that often derive from new technologies?

Technologies are not inherently good or bad – their impact on society and the environment is a combination of the applications they are put toward, the way they are used, and any subsequent unintended consequences. Even where intentions are good, negative impacts often go hand-in-hand with positive ones. For example, artificial intelligence can amplify racial and gender biases.[48] Data-hungry digital technologies require significant amounts of energy.[49] And automation could potentially eliminate many jobs and livelihoods as it increases productivity.[50]

Despite the risk of negative outcomes, innovative ideas and technologies are desperately needed to tackle some of our trickiest problems. How do we decarbonize our society? How can we manage and prevent illness equitably? How do we handle unintended consequences that have already arisen, such as the spread of misinformation?

HOW CAN BUSINESS ENGAGE MOST EFFECTIVELY?

Innovation processes that set goals around social and environmental impact and anticipate and avoid negative unintended consequences will not only be good for society, but will lead to more resilient and sustainable business models. So how can companies harness this type of innovation?

Even in companies with world-famous innovation processes and multi-billion-dollar R&D budgets, there is value in examining the extent to which the innovation pipeline can contribute to society's future resilience. Below are some of the main ways in which companies can ensure they are innovating to unlock transformation toward Vision 2050, while taking extra care to avoid exacerbating existing problems or create new ones.

KEEPING SOCIAL AND ENVIRONMENTAL GOALS AND OUTCOMES TOP-OF-MIND THROUGHOUT THE INNOVATION PROCESS

From the outset of the innovation journey, companies should set innovation goals focused on solving social or environmental problems, and should anticipate and address the full range of impacts that new technologies, products, services and business models can create. Innovation projects should have to meet ambitious social and environmental targets as well as financial ones. Companies can begin by setting clear goals for the innovation process that are linked to corporate purpose, factoring in social and environmental impacts, and then conducting due diligence to predict and mitigate potential unintended consequences, considering the full product life cycle over the long term. Companies also need to get more comfortable with failure, and be ready to halt and rethink ideas that are found to have significant negative impacts.

Adopting a human-centric approach to design can help define the problem to be solved more holistically, broadening the focus from cost and quality to paint a fuller picture of what successful innovation looks like. Consultation and engagement with relevant stakeholders in the innovation process – including underrepresented groups – can enable companies to understand and address potential issues early on.

OPENING INNOVATION UP TO MAKE ENTIRE SUPPLY CHAINS, INDUSTRIES AND SYSTEMS MORE SUSTAINABLE AND RESILIENT

Collaboration and sharing across companies, value chains, industries, countries and sectors of society – with partners including customers, suppliers, start-ups and civil society groups – can help companies identify opportunities for innovation; develop and test solutions; scale them up; and nudge them into the mainstream. Bringing suppliers and customers along on the innovation journey will also help ensure that technologies can be resilient, sustainable or even regenerative along the entire value chain. Governments have always played a critical role in leading and funding the most ambitious innovation. Greater collaboration between business and governments on a range of innovation challenges, large and small, will help to set and align on mutually necessary, societally positive innovation agendas.

ESTABLISHING EFFECTIVE TECHNOLOGY GOVERNANCE MECHANISMS

To build trust and fulfill technology's potential, companies must not only identify expected impacts and potential unintended consequences in the design phase, but also monitor and address actual impacts in the implementation phase. Companies are going to have to establish (and join) industry-wide efforts to set guidelines around new technologies, understand what is happening in real time, and course-correct as needed – all in consultation with a full range of stakeholders. By leading on and contributing to governance efforts, businesses have the opportunity to pre-empt future risks and challenges, build strong stakeholder relationships and open doors to new collaborations.

GETTING PEOPLE READY TO WORK WITH NEW TECHNOLOGIES

Upskilling people to work with new technologies is essential to ensure equitable outcomes of current and future technological disruption. Businesses are uniquely placed to provide a large part of the new skills and training that society needs. Companies must invest in giving their managers, workers and customers the knowledge and skills to apply new technologies in ways that unleash the benefits while avoiding risks and harms. Externally, for example, companies can help governments and school systems identify priority new skills and develop new models of teaching them. Internally, companies need to engage with and empower their workforces to benefit from technology. Not just by providing them with training and support – it is equally important to communicate openly with employees, being transparent about the anticipated impacts, challenges and opportunities linked with new technologies, and helping users to envision the new roles that will be made possible.

BRINGING SUPPLIERS AND CUSTOMERS ALONG ON THE INNOVATION JOURNEY WILL HELP ENSURE THAT TECHNOLOGIES CAN BE RESILIENT, SUSTAINABLE, AND EVEN REGENERATIVE ALONG THE ENTIRE VALUE CHAIN.

FINANCE & INVESTMENT

WHY DOES IT MATTER?
Making progress along our Vision 2050 transformation pathways will require significant levels of investment: for instance, building infrastructure, scaling new business models and developing essential technologies.

The global financial system is more than adequately positioned to finance all of the changes needed,[51] but we need a fundamental shift away from financing activities that do not contribute to a sustainable and equitable future and toward those that do.[52]

There is a significant gap in finance for sustainable development, particularly in the developing world.[53] Currently, many sustainable investment opportunities are seen as difficult to finance for a range of reasons, including: that they are more likely to involve unproven technologies; that they take place in riskier geographies; that they have less scalability; and that they have longer payback periods.

Even though government-led policy and incentives can play a significant role, there are important actions that businesses can take to facilitate more sustainable finance, with or without government support. There is increasing awareness and willingness in the financial system to act upon the opportunity (and responsibility) presented by sustainable financing, and to put new incentives in place to facilitate financial flows. Momentum is gathering and can be seen for example in the growth of green, social and sustainability bonds, the increasing use of ESG criteria and the establishment of reporting frameworks such as the Task Force on Climate-related Financial Disclosures (TCFD).

HOW CAN BUSINESS ENGAGE MOST EFFECTIVELY?

Finding ways for companies to direct investment toward socially, environmentally and financially sustainable outcomes will be essential to achieving Vision 2050. What can companies do differently in the way they approach finance and investment?

The entrenched values and rules of the financial system currently fail to account for externalities, and therefore tend to incentivize short-term profit over long-term resilience and returns – value extraction, over true value generation. If this does not change, we will not be able to finance the innovation and infrastructure needed to achieve Vision 2050. Below are some of the main ways in which businesses in all sectors can help to change the priorities of the financial system. These are closely linked to our recommended business actions (and supporting policy positions) that will transform and reinvent capitalism more broadly.[54]

UNDERSTANDING, DEVELOPING, AND UTILIZING SUSTAINABLE FUNDING OPPORTUNITIES

Businesses should seek out suitable sustainable financial instruments to fund their ambitions and objectives. Existing products include green, social and SDG bonds, transition bonds, and revolving loan/credit facilities that tie borrowing terms to environmental outcomes or provide tax incentives for verified green projects. Where existing offerings do not meet needs, businesses can engage with capital providers and collaborate with different organizations to create new sustainability-linked offerings. Often, public-private collaboration can be a useful route to support socially beneficial outcomes and it comes at a lower risk for private investors, for example through blended finance mechanisms.

ENGAGING WITH INVESTORS AND PROVIDING THEM WITH THE DATA THEY NEED TO MAKE INFORMED DECISIONS

Our markets do not currently connect risk, returns and sustainable development. Communication and alignment between business and investors must be strengthened in order to finance, resource and scale solutions. To address this challenge, businesses can provide insight for investors on how they approach and manage sustainability – and how they expect this to shape their long-term success. This should be presented in a standardized way and should include perspectives on companies' strategic resilience; differentiation; development and planning; risk management and response; governance processes and practices; performance metrics and measures – including financial disclosures associated with sustainable products and services (e.g. CapEx, OpEx, R&D, return on sales, growth potential).

THE ENTRENCHED VALUES AND RULES OF THE FINANCIAL SYSTEM CURRENTLY FAIL TO ACCOUNT FOR EXTERNALITIES, AND THEREFORE TEND TO INCENTIVIZE SHORT-TERM PROFIT OVER LONG-TERM RESILIENCE AND RETURNS.

ADVOCATING CHANGES TO THE RULES OF THE FINANCIAL SYSTEM

Businesses should work with policymakers, regulators and broader industry groups to advocate policies that will level the playing field in favor of sustainable investments, such as carbon pricing schemes, standardized ESG disclosure requirements, reconsideration of incentives and subsidies, and updated approaches to (or interpretations of) fiduciary duty that mandate the consideration of all stakeholders. Businesses also need to support and advocate for changes to accounting rules that help them to assess the net present value and risk profile of sustainable projects more fairly, placing more importance on long-term viability and resilience.

REDIRECTING INTERNAL CASH FLOWS TO MORE SUSTAINABLE OUTCOMES

Companies should look at how they use cash. Internal allocation of capital expenditures and R&D investments should be considered using detailed information on social and environmental costs, benefits, risks and opportunities. For example, an internal carbon price can be used to ensure that climate impact is considered in cost-benefit analyses of project options. Companies should use similar criteria to assess their financial assets, investments and acquisitions, ensuring that invested money is utilized to advance sustainable transformation, through sustainable products and services or supporting infrastructure.

INDIVIDUALS & CONSUMPTION

WHY DOES IT MATTER?
Ultimately, creating a world in which 9+ billion people can live well, within planetary boundaries, will depend on the choices that are available to people, the options that they choose, and the way they are used. Each of us can, and will, contribute to transformation.

Individuals'values and behaviors matter – individuals are the ultimate implementers of many of the solutions that will progress the transformations that Vision 2050 requires. As consumers, individuals can help unlock transformation or block it, for instance through where they choose to live, what they eat, what they buy, how they dispose of waste, and how they move around. As citizens, individuals can embrace or reject new ideas, get involved in their local communities, support or resist equitable and progressive legislation.
As workers, individuals make myriad decisions in their day-to-day roles and can influence their employers to make organization-wide changes. If they have capital, individuals can choose consciously where to invest it. However, we must also acknowledge huge inequality in people's impacts and their access to choices. Around half of lifestyle greenhouse gas emissions can be attributed to the richest 10% of people.[53] And the richer people get, the more their environmental footprint grows,[54] even as they become more environmentally conscious,[55] meaning that those people most capable of embracing transformation toward more sustainable lifestyles and choices are also those likely to be living most unsustainably.

All things being equal, most people around the world want to live sustainable lifestyles.[57] Concern about the environment[58] and interest in health, wellness, quality of life, and self-improvement are on the rise. Despite this, many systemic factors stand in the way of people choosing a more sustainable lifestyle – basic needs are still out of reach for millions of people, and these will always be the first priority.

Even for those with more time and resources, a lack of sustainable options and trustworthy information can make a truly sustainable lifestyle difficult to achieve.

Addressing the impacts of people's consumption choices is challenging because in the short term, business success is often intimately tied to increasing consumption, whereas the simplest way of reducing environmental and social impact is by reducing the amount of materials that we consume. Furthermore, impacts stem from both offerings and their use, meaning that even sustainable products can be consumed unsustainably. Over the longer term however, these incentives should align. Business cannot survive in a world that has over-consumed its natural, human and social capital. The challenge is to find new business models that can decouple growth from environmental and social impact, and new ways of interacting with customers that offer more collaborative and ongoing relationships.

HOW CAN BUSINESS ENGAGE MOST EFFECTIVELY?
Giving people the options and incentives they need to make more sustainable choices will help accelerate transformation while opening new possibilities for more resilient business models. What can companies do differently to encourage and support better choices?

Offering more sustainable versions of products and services to those consumers informed and interested enough to choose them will not be enough to unlock transformation. Business has a role to play in enabling individuals to be agents of positive change – not only as consumers, but also as citizens, workers, and investors. Below are some of the main ways in which businesses can influence individuals in support of transformation toward Vision 2050.

SHAPING CULTURAL NORMS AND ASPIRATIONS ABOUT SUSTAINABILITY

To act sustainably, individuals first need to be aware of the issues and have relevant information that they can use to make informed decisions. Companies need to provide information in a clear and honest way, and remove greenwashing. Today's volatile information environment makes this particularly challenging and companies will ultimately need to support efforts to rebuild shared societal facts so that they can engage meaningfully with their customers. Communicating honestly will help brands build more trusting and loyal relationships. Companies will have to collaborate to ensure that information is provided in a consistent way, so that people can understand their footprint as a whole, the relative impacts of their choices, and the ways in which their own actions can drive change.

Information by itself is not enough though – sustainable living needs to be aspirational. Companies have a long history of shaping cultural norms and aspirations through advertising. Now, companies must use these skills to create demand for sustainable lifestyles – nudging people toward new patterns of consumption, peer influence and political engagement.[59] For example, sustainability can be more appealing when it is linked to widely-held values such as family, community and security,[60] and when people can see a diverse range of advocates from across political and social groups.[61] Psychological research has shown that social and moral rewards are more effective at changing behavior than financial incentives.[62]

MAKING ALL CHOICES GOOD CHOICES

When asked what business actions are most helpful to enable healthy and sustainable living, first and foremost people want businesses to provide affordable products and services that have lower negative impacts on the environment and society.[63] People don't want to be burdened with making the "right" choice – and why should they? Companies can access new groups of customers by working to create products and services that always meet people's needs and wants in sustainable ways, and that are affordable and accessible. Inherently unsustainable choices need to be discontinued if better alternatives are available to meet the same needs. It may be necessary to return to first principles, asking why customers value a company's products and services, and whether there are creative alternatives that could deliver that value more sustainably. Exploring alternatives to long-standing business models that rely on unsustainable material consumption will be necessary to ensure competitiveness as societal rules and norms transform to increasingly favor more sustainable models.

SUPPORTING REDUCED WASTE AND INCREASED CIRCULARITY

As well as increasing the proportion of recycled materials used in products, companies can also improve longevity, design for durability, and support people's ability to repair and reuse products. With "right to repair" regulation agreed in the EU and being considered in the US, this may soon become a necessity. Circular business models can offer new ways of engaging and building relationships with customers that have the potential to generate ongoing value and returns. Taking responsibility for what happens at the end of a product's life will require new relationships and collaborations, such as improving waste infrastructure, which can be inadequate in both rich and poor countries.

EMPOWERING PEOPLE

To fulfill their potential as agents of positive change (as consumers, employees, citizens and investors) individuals need time, resources and standing in their communities and societies. Companies must consider the roles they play in providing these things through employment, government relations and procurement practices. For example, companies can help by committing to living wages and good working conditions, including for contractors, gig workers and those in the supply chain, giving people the time and financial freedom to positively shape their lifestyles without worrying about how they will meet their most basic needs. Employers can also directly encourage and harness interest in sustainable living while engaging their employee base, e.g. by promoting more sustainable commuting practices, providing healthier (sustainable) catering options, recognizing green champions, holding sustainability-themed social events, and inviting ideas for green initiatives. Employees believe what they see – if they can see their company treating sustainability as important in the workplace, it gives them permission to make sustainable decisions and changes in their job.
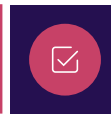
POLICY & REGULATION

WHY DOES IT MATTER?
Policy and regulation must be at the heart of any serious effort to achieve Vision 2050; markets cannot, and should not, deliver transformation on their own.

Policy and regulation can help to drive and unlock transformation in several ways: by preventing unsustainable practices, such as the use of toxic substances; by setting minimum standards, for example on health and safety; by incentivizing innovation through carrots and sticks such as subsidies and taxes; and by guiding investment in public goods that business growth and sustainable development depend on – from basic research, to transport infrastructure and education. Often, policy and regulation will help to accelerate other enablers of transformation, such as by changing investment rules, setting innovation targets or providing incentives to consumers.

At the same time, however, policy and regulation can – and often do – drive behavior in unsustainable directions. Examples include ongoing fossil fuel subsidies, biofuel mandates that drive deforestation and biodiversity loss, petrol and diesel taxes that deepen economic inequality. Some policies have been deliberately designed to drive unsustainable activities. But many well-meaning policies have also fallen short of their goals for reasons such as a lack of funding or enforcement capacity.

Today, many governments are rising to the challenge of sustainable development, heightening their social and environmental ambitions, and strengthening their approaches. But recent years have seen governments rolling back environmental protections, and populism and authoritarianism continue to pose a threat to global approaches to global challenges. Few countries seem to have public budgets that are adequate for the task of governing today's complex societies. Business can, and must, better support governments in the creation of policy environments that can intelligently incentivize, finance and accelerate transformation.

HOW CAN BUSINESS ENGAGE MOST EFFECTIVELY?
Policy and regulation are powerful tools to incentivize sustainable transformation. But what can business do to advance a more supportive policy environment?

While regulation can hurt companies' short-term interests, well thought-through, evidence-based regulation can also create the stable, predictable and level playing fields that companies depend on to invest, compete and thrive. While policies can only be developed and implemented by government, business must acknowledge that it profoundly influences the process and the outcomes.

In addition to complying with the law (in both letter and spirit), below are some of the main ways in which companies can go further to help shape policy and regulation that unlocks transformation toward Vision 2050.

EXCEEDING MINIMUM STANDARDS

Companies can use minimum standards or targets as an opportunity to demonstrate – to policymakers, and to their peers – that more is possible. By pushing past compliance, companies can show which regulations could be strengthened without putting undue pressure on business. Where regulatory standards do not exist, companies have worked together (in collaboration with nationally-backed standards organizations, NGOs and other third parties) to create their own market-based protocols, standards and regulations, such as the GHG Protocol, ISO14001, the Forest Stewardship Council and the Marine Stewardship Council.

While voluntary measures can never fix all market failures, in the absence of a sufficiently ambitious policy environment, "private regulation" and voluntary standards (through which companies can be held to account by NGOs for instance) can demonstrate responsibility, get ahead of slow regulation, convince regulators to push for accelerated agreement from government, so as to then be used as the basis for lifting standards through regulation.

ALIGNING ALL POLICY INFLUENCE ACTIVITIES TO CORPORATE PURPOSE STATEMENTS AND SUSTAINABILITY GOALS

Companies must review all of their efforts to influence policy, including lobbying; campaigns for or against policy proposals; political contributions and funding for industry associations; research studies; and think tanks. They must end activities that are not aligned with their own corporate purpose statements and sustainability goals and be transparent about the positions they support, and how these contribute to the transformations required by Vision 2050. Where industry associations are lobbying in ways that undermine sustainable transformation, companies will need to decide whether they are able to use their membership to influence the lobbying priorities in a positive direction, or if they would be better off cutting ties with the association.

BECOMING STRATEGIC PARTNERS IN THE POLICYMAKING PROCESS

To accelerate progress toward Vision 2050, companies must change the nature of the business-government relationship. The relationship must become strategic, focused on how to align and fulfill business' interests with those of society. For example, companies can develop policy advocacy partnerships with civil society organizations, community groups, international institutions and foundations, building capacity to bring societally-positive and publicly-appealing advocacy positions to policymakers. Rather than engage behind closed doors, companies should advocate for all relevant stakeholders to have seats at the table, in order to provide input at all stages of the policymaking process.

Measures such as these can encourage policymakers to set their sights high enough to match the scale and urgency of the challenges we face. These measures can also help supply the information and evidence policymakers need to craft effective policies and build the buy-in they need to develop and implement ambitious new initiatives.

USING THE INNOVATIVE CAPACITY OF BUSINESS TO GENERATE NEW POLICY IDEAS

Businesses are experts in their own industries and will often have access to unique expertise, ideas and data that can be useful inputs to the policymaking process. Businesses can contribute by sharing their experience with existing policies and the lessons they have learned, for instance in exceeding minimum standards and targets. They can also opt to create public forums to explore new ideas, undertake trials which could help to demonstrate the potential impact of a new policy, and assess impacts after a policy is implemented to its determine efficacy.

RATHER THAN ENGAGE BEHIND CLOSED DOORS, COMPANIES SHOULD ADVOCATE FOR ALL RELEVANT STAKEHOLDERS TO HAVE SEATS AT THE TABLE, TO PROVIDE INPUT AT ALL STAGES OF THE POLICYMAKING PROCESS.

POLICY POSITIONS THAT SUPPORT TRANSFORMATION

A stable, reliable and fair regulatory environment is absolutely essential to business operations and resilience. Furthermore, efforts by business to drive ambitious action on pressing global challenges, such as climate change, nature loss and inequality, will only achieve the necessary scale if policymakers level the playing field through legislation that mandates (corporate) behavior in support of sustainable development. At the same time, multinational corporations have unique capability and reach when it comes to policy: policy positions that support transformation, particularly when they are aligned across multiple industries and sectors, can represent an important driver for regulatory change.

Today, the COVID-19 pandemic is dominating policy discourse. It is also bringing companies and policymakers together more regularly and constructively than ever, as they work together to manage responses to the public health and economic crises affecting countries, communities and companies globally. Many countries are seeking to incorporate transformative change in their rescue and recovery packages, directing stimulus to economic activity in line with societal and environmental goals. This presents an incredible opportunity landscape for business to align on policy positions that support policymakers' ambitions, confident that other like-minded leading businesses are calling for the same policy progress, all around the world.

Achieving the transitions outlined in our transformation pathways, and entrenching the strategic mindset shifts we are calling for, will depend on a supportive global policy environment. Here we provide examples of the kinds of shared policy positions that WBCSD is already working to align companies on. We provide examples from five of the most critical challenge areas that we face: climate change, protecting nature, transitioning toward a circular economy, tackling inequality and reinventing capitalism.

POLICIES THAT BUSINESS SHOULD ALIGN ON

CLIMATE CHANGE

We must do more to address the climate emergency. Our highest priority is supporting countries to urgently increase their national commitments to bring them in line with the Paris Agreement, and adopt strong national plans and policies for implementing them.

In addition, leading multinational business should align on the need for:

- Clear and consistent long-term carbon pricing policies within a robust global carbon pricing framework, that ensure a just energy transition.

- Market signals and incentives that drive finance and investment toward low-carbon solutions including the resulting job creation.
- Incentives to build resilience to climate impacts, including strengthening collaborations with the private sector to work toward enhanced adaptation and increased resilience to current and future climate impacts.

Business has a track record of emissions-reducing initiatives and so it is able to demonstrate commitment to policymakers through the increasingly ambitious climate actions it is taking. These include efforts to set science-based corporate emissions strategies in line with a 1.5ºC scenario; widespread engagement with the recommendations of the Task Force on Climate-related Financial Disclosures; and support for a shift to low-carbon energy through procurement initiatives such as RE100.

PROTECTING NATURE

Over half of the world's GDP, $44 trillion of economic value, is at moderate or severe risk due to nature loss. Nature is of existential importance to society and business. WBCSD follows the Business for Nature policy recommendations, the most important of which calls on governments to provide direction and ambition by adopting global targets, informed by science, to reverse nature loss by 2030.

In addition, leading multinational business should align on the need to:

- Halt forest loss by 2030.
- Significantly increase incentives for and investment in Natural Climate solutions, which currently attract only 2 to 3% of public climate finance globally.
- Repurpose agricultural subsidies to encourage regenerative agricultural practices that will reduce GHG emissions from land and restore carbon sinks.

Business has done a lot of work over the last 10 years to create the necessary for a dialogue that is leading to increased ambition and action today (e.g. The Tropical Forest Alliance, the Food and Land Use Coalition,the Roundtable on Sustainable Palm Oil). These efforts have helped drive companies toward the setting of targets for nature in collaboration with organisations such as the Science Based Targets Network. The next level of corporate action will be innovation of nature-based solutions that link to climate targets and the reversal of nature loss, and scaling up investment in regenerative agricultural practices, in support of healthier soils, farmers and local communities.

TRANSITIONING TOWARD A CIRCULAR ECONOMY

The transition toward a circular economy is central to efforts to adopt more regenerative approaches to business activity. The circular economy has matured rapidly in recent years and is now well placed to support action on several business and sustainable development

challenges. As a priority, circular economy strategies should be incorporated into national commitments in order to contribute to urgent emission reductions, address ever-increasing levels of global waste, protect precious resources, create new jobs and accelerate the transition toward a circular economy.

In addition, leading multinational business should align on the need for:

- Harmonized definitions, standards, criteria, processes and language across jurisdictions that enable an efficient, safe, sustainable and responsible flow of secondary resources globally.

- Increased focus on leveraging public procurement rules and targets to drive demand for circular materials, components, products and services.

- More material collection and recovery capacity, including both infrastructure and incentives that support the collection of used products, materials and packaging, and their reintroduction into the manufacturing cycle.

Many companies around the world are already committed to and driving the transition to a circular economy. They have long been working to achieve zero waste in their operations; they are measuring and seeking to continuously improve their circular performance; and they are increasingly linking their circular strategies with their emissions reductions plans. Beyond the technical and policy challenges of bringing more secondary and bio-based materials into their products, the next stage in corporate action is to embed circular principles into core business strategies in order to fully capitalize on the opportunity.

TACKLING INEQUALITY

Inequality is eroding trust in our key institutions and represents an increasingly significant threat to the continued license to operate of both business and democracy itself. COVID-19 has brought inequality further into the spotlight, feeding on it, fueling it, and making it impossible to ignore. Business depends and thrives on social cohesion and stability, which relies on respecting human rights, advancing dignity, equality, economic inclusion and opportunity. As a priority, we need to tackle inequality of income and opportunity, unleashing productivity, innovation and growth, and improving social outcomes.

In addition, leading multinational business should align on the need for:

- The protection of human rights to ensure the participation and representation of those with less influence.

- A dynamic labor market that reduces fragility for workers, ensuring that every job is decent and protects and respects dignity and that all workers and businesses are empowered to benefit from emerging technologies as well as novel, flexible or non-traditional working arrangements.

- Investment in resilient infrastructure and social safety nets that ensure people have access to the foundations of a healthy and productive 21st century life.

- Minimum living wages based on evidence of the cost of living.

- The empowerment of women and girls and the removal of barriers to equal access to education, enhancing livelihoods and employment opportunities.

The global business community continues to pursue the operationalization of the UN Guiding Principles on Business and Human Rights. WBCSD and other like-minded organizations are working with business to create strategies and business models that enable an equitable, diverse, inclusive and empowering future of work – contributing to future-fit businesses, labor markets and social security mechanisms, that have people at their center.

REINVENTING CAPITALISM

In our earlier section examining past barriers to transformation, the most significant barriers all stemmed from the dominant mindsets, norms and values that guide our decision-making – in business, in politics, in society. WBCSD aligns with the OECD's prioritized building blocks of policy development for sustainable development and calls on governments to define, implement and communicate a coordinated long-term vision on sustainable development. Businesses and other financial actors can only succeed in driving a transformation agenda around capitalism if there are clear policy signals about regulatory commitment to long-term resilience and sustainability.

In addition, leading multinational business should align on the following most immediately impactful steps that governments can take to help reinvent capitalism so that it rewards true (long-term) value creation:

- Make disclosure of ESG risks and impacts mandatory and standardized.

- Revise fiduciary duties of company directors and investors to incorporate ESG risks and impacts.

- Shift the burden of taxation from "goods" to "bads" and ensure a level playing field globally.

For each of these policy asks, WBCSD has proposed directly linked actions that business can take at the same time. These are: to rigorously account for and report on ESG risks and impacts; to incorporate multi-stakeholder considerations into governance models, decision-making and incentives; and to pay taxes in a fair and transparent way. Furthermore, the level of ambition and action in this area has increased significantly in recent years, with companies driving progress in collaboration with regulators and standard setters, in particular on the convergence and standardization of mandatory reporting.

TIME FOR
LEADERSHIP

CREATING A WORLD IN WHICH 9+ BILLION PEOPLE CAN LIVE WELL, WITHIN PLANETARY BOUNDARIES, WILL REQUIRE LEADERSHIP AND PERSEVERANCE ACROSS EVERY PART OF SOCIETY.

While we have made progress over the last 10 years, we are not on track to achieve our vision. In this section, we look back to our original vision, reminding ourselves of the important lessons we can learn from it. At the same time, we summarize where this update to our vision helps advance business' ability to take action and drive transformation. We also look forward, taking stock of the unique moment that society and business find themselves in – recovering from tradgedy, but also better positioned than at any time in the last 50 years to unlock transformation at scale.

And finally, we provide a reminder – that shared vision and direction are nothing without action – and the type of action that is needed will require a form and level of business leadership we have rarely seen before. We conclude by outlining what it will take for each and every one of us to drive these transformations forward – shared vision, systems thinking, and foundational mindset shifts. These will be at the heart of business action to bring about a world in which 9+ billion people live well, within planetary boundaries.

VISION 2050 PROVIDES A FRAMEWORK TO HELP BUSINESS UNLOCK THE TRANSFORMATIONS THAT A SAFE AND SUSTAINABLE FUTURE DEPENDS ON. WE NOW CALL ON BUSINESS LEADERS TO LEVERAGE THIS WORK AND MAKE OUR VISION A REALITY.

LOOKING BACK MOVING FORWARD

Even though the original Vision 2050 was released amidst the fallout from the 2008 global financial crisis, the optimism of the time still shines out of its pages. It focused on the immense business opportunities available in the transition to a more sustainable world.

One opportunity trumped all others: our vision of 9+ billion people living well, within planetary boundaries. Achieving this was the ultimate prize for future societal and business success.

The original Vision 2050 report concluded that the transitions that would make our vision a reality would hinge on three main factors:

1 **Complex systems would provide the foundation for action and solutions**

2 **Business could not do it alone – critical collaborations needed to be established**

3 **The journey needed to begin immediately – delaying action would make the already ambitious targets even harder to achieve**

All of these factors still apply today: we are both closer to, and further away from, realizing our vision than we were 10 years ago. Significant gains have been made, particularly with regard to our understanding of the systems that we need to transform and the collaborations that will be essential to progress. But when it comes to critical challenges, such as biodiversity loss, pollution, inequality and waste generation, our problems have got bigger, not better.

The harsh truth is that we have moved closer to critical planetary boundaries and the limits of social cohesion and stability. In fact, what was an opportunity has become a necessity. At this point, delaying action makes achieving Vision 2050 impossible, and guarantees pain, suffering and even collapse – socially, environmentally, economically.

In this first update of Vision 2050, we have sought to provide our members and the wider business community around the world with a comprehensive overview of the work that needs to be done and how we can go about doing it. We have outlined the urgency of the situation; provided business and its stakeholders with an ambitious and achievable vision to work toward; detailed the actions that need to be taken in

essential areas of business activity; proposed foundational mindsets that business must adopt and that transformation will depend on; and laid out an understanding of both how transformational systems change happens, and what business can do to help to unlock it.

In short, this update is a strategic framework to help business unlock the transformations that a safe and sustainable future depends on. We call on business leaders to leverage this work, using it to guide action and make our vision a reality.

A UNIQUE, GENERATION-DEFINING MOMENT
The transformations that we are calling for will require enormous, determined and enduring effort from all corners of society. We have to be honest with ourselves about the nature of the voyage we are on if we are to have any hope of navigating the lulls and the storms that we will face just as often as a good winds fill our sails.

We know that resistance will be fierce. It will extend far beyond traditional vested interests – effective resistance to transformation can just as easily come from the relatively powerless, as was seen with the 2018/19 *Movement des Gilets jaunes* in France. Another, and perhaps more dangerous, type of resistance is emerging from the increasingly polarized information (and sometimes misinformation) ecosystems that are spreading around the world. This is undoubtedly to the detriment of public awareness and understanding of the challenges we all face, not to mention the fabric of society itself. We must acknowledge that whole, and sometimes vast, groups within society are not talking to each other anymore, and that they have radically different fears and hopes. We have not yet normalized the need for action of the types detailed in this report, nor the reality or scale of the transformations we must unleash. Not with governments, companies, employees or citizens. In short, our Vision 2050 is simply not shared by all.

Nonetheless, from a systems transformation perspective, the global tragedy that COVID-19 has unleashed actually provides us with fertile ground for change. The rolling shocks our system is experiencing – rapid technological change, rampant inequality, the intensifying impacts of ecological overshoot, volatile economies and the brutally harsh light the pandemic is shining on them all – create conditions conducive to transformation.

Although there is more work than ever to be done, and it is more urgent than ever that we do it, this may be the best opportunity we have faced in the last 50 years to succeed in unlocking the necessary transformation of our systems. This moment will define us for generations to come.

AN UNPRECEDENTED FORM AND LEVEL OF BUSINESS LEADERSHIP IS REQUIRED

Multinational companies are able to influence, empower and align actors up and down value chains, across geographies, cultures and socio-economic groups. While rightly recognizing the essential role that governments, civil society and the public at large will play in these transformations, it is also clear that multinational corporations have a unique ability to lead.

Understanding how important it is that people can truly live well, and do so within planetary boundaries, will drive forward-looking companies to ask themselves: what is their role in the kind of future we want to live and operate in; what are the pathways that will transition us to that future; and what can we do to accelerate that transition, while continuing to succeed today, and be resilient into the future?

Helping companies to answer these questions is what we set out to achieve with this update to Vision 2050. It creates a framework for business leadership and action, on which business can fulfill its full potential and societal responsibility, driving the transformations that will enable 9+ billion people live well, within planetary boundaries. The leadership that we need to drive these transformations will be based on three core elements of this updated vision.

SHARED VISION
The public now understands that leadership on sustainable development is just as likely to come from companies as it is from civil society or governments. This places new levels of both responsibility and expectation on companies to address the social and environmental challenges societies are facing. When business shares a common agenda, it can reach up and down entire value chains – and when that agenda is forward-looking, ambitious and optimistic, it can drive transformation through entire systems. Vision 2050 provides business with this shared vision. It defines the world we are seeking to create and lays out the mindsets, transitions and actions that will make it a reality. Business leads by unequivocally recognizing the urgent need for change, upholding the facts underpinning this urgency, and by being open and realistic about the necessary transformations that lie ahead.

SYSTEMS THINKING
Ten years ago the original Vision 2050 stated that business as usual was no longer an option. It foresaw a period of disruption and turbulence that would lay the groundwork for deep systems-wide transformations. The last 10 years have shown how hard it is for individual leaders and companies to drive systems-wide change on their own. Understanding how systems transform, the pressures that influence change and the factors that enable and accelerate it, is absolutely crucial if we are to successfully disrupt business as usual and pursue the transformations laid out in Vision 2050.

Systems thinking will be at the heart of progress toward our vision. It will open business leaders' eyes to the macrotrends, disruptions and innovations that shape the world they operate in; to risks to future resilience and profits; and to their dependence on the stability and success of other industries and institutions, communities and ecosystems.

Systems thinking will drive business leaders to be both bold and humble – confident that we can disrupt and transform systems to deliver a more sustainable world, clear-eyed about the collaborations that progress will depend on.

MINDSET SHIFTS
The mindset shifts we have laid out in this update to Vision 2050 are both an inescapable outcome of holding our shared vision, and essential to its achievement. Our current systems will not deliver a world in which 9+ billion people can live well, within planetary boundaries. Global market forces have failed to deliver sustainable development. Our economies are both more resilient than we expected, and yet nowhere near resilient enough to future potential shocks, which continue to grow in likelihood and severity. And our businesses and societies will not reach their full potential until they shift away from thinking about harm-reduction and instead aspire to the continuous building of capacity for all life to grow, evolve and thrive.

These mindset shifts – reinvention, resilience and regeneration – will not only make the pursuit of the transitions in our pathways inevitable, they will reinforce the importance of systems perspectives and our shared vision. They will provide business with the reasons it needs to mitigate transition risks, factor in transition costs, and safeguard its ability to generate long-term value, and therefore its future success. They are the key to running companies well, well into the future.

Embracing these three core elements of the vision will naturally lead to new levels of leadership. It will be aligned around a shared vision. It will be disruptive, rejecting business as usual but understanding the need to work within current systems as we seek to transform them to deliver fundamentally different outcomes. And it will be passionately committed to action, accountable for the progress that is necessary if 9+ billion people are to live well, within planetary boundaries, by 2050.

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ABOUT WBCSD

WBCSD is a global, CEO-led organization of over 200 leading businesses working together to accelerate the transition to a sustainable world. We help make our member companies more successful and sustainable by focusing on the maximum positive impact for shareholders, the environment and societies.

Our member companies come from all business sectors and all major economies, representing a combined revenue of more than USD $8.5 trillion and 19 million employees. Our global network of almost 70 national business councils gives our members unparalleled reach across the globe. Since 1995, WBCSD has been uniquely positioned to work with member companies along and across value chains to deliver impactful business solutions to the most challenging sustainability issues.

Together, we are the leading voice of business for sustainability: united by our vision of a world in which more than 9 billion people are all living well, within planetary boundaries, by 2050.

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