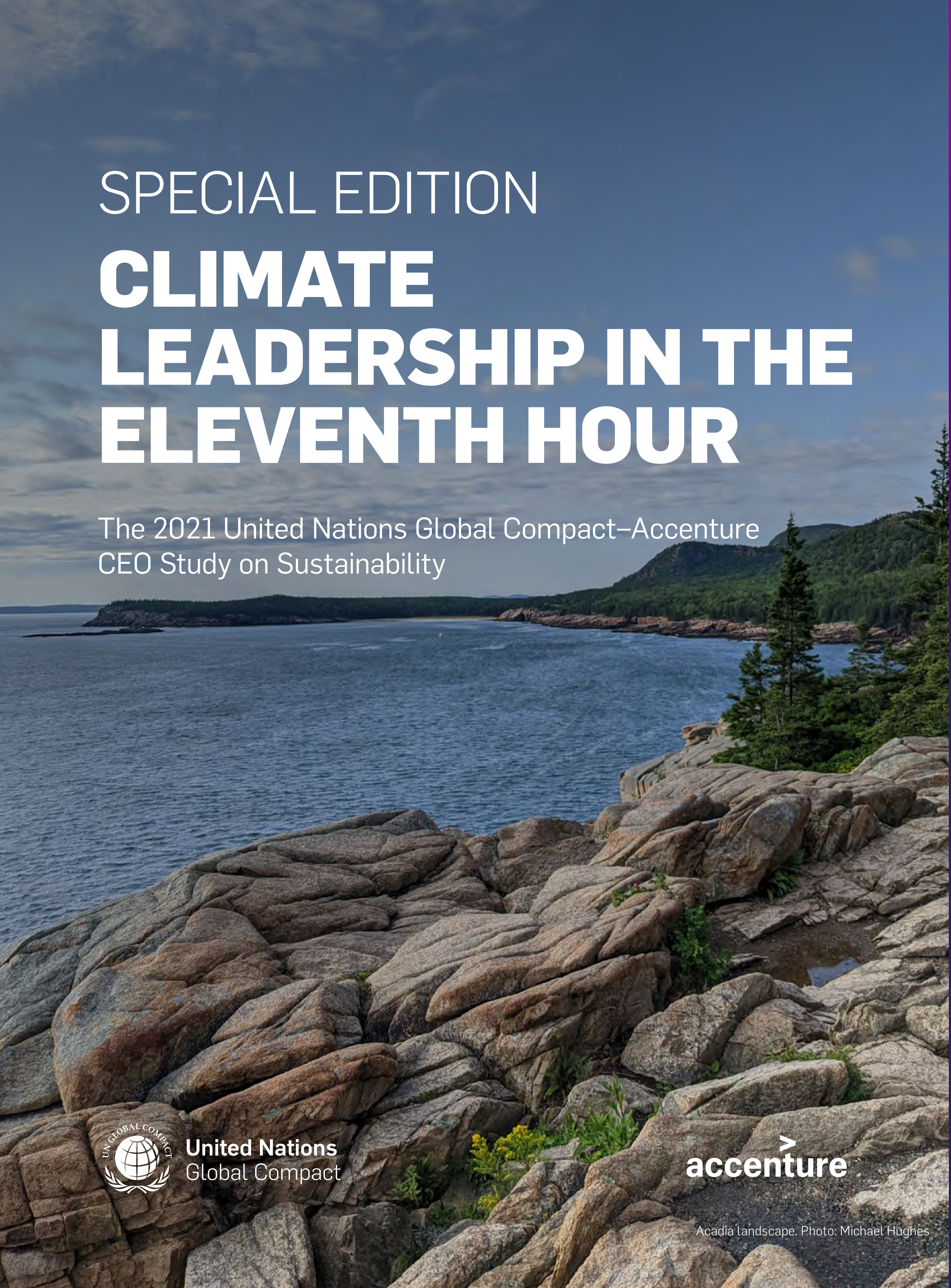
SPECIAL EDITION

# CLIMATE LEADERSHIP IN THE ELEVENTH HOUR

The 2021 United Nations Global Compact–Accenture CEO Study on Sustainability



United Nations Global Compact

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Acadia landscape. Photo: Michael Hughes

THE 2021 UNITED NATIONS GLOBAL COMPACT–ACCENTURE CEO STUDY ON SUSTAINABILITY

# CLIMATE LEADERSHIP IN THE ELEVENTH HOUR

Special Edition

In this Special Edition of the CEO Study, the world's largest program of CEO research on sustainability, 1,232 CEOs across 113 countries and 21 industries deliver their authentic, unfiltered perspectives on the private sector's contribution to climate action.

CEOs call for urgent action from Governments and policymakers as the impacts of climate change increasingly disrupt the global economy and livelihoods of the most vulnerable communities; expand collaboration on adaptation and resilience solutions; accelerated progress on technology and innovation; the need to ensure a just and equitable transition; and critical steps needed at COP26 in Glasgow to unlock the potential of the private sector.

November 2021

# CONTENTS

# INTRODUCTION

This year marks the third United Nations Global Compact-Accenture CEO Study Special Edition. As the latest milestone in over a decade of research, the 2021 CEO Study Special Edition draws on insights from over 1,232 CEOs across 21 industries and 113 countries, including over 110 in-depth interviews.

As we approach 2030 with roughly 2,000 working days to achieve the Global Goals, we are on the precipice of catastrophe. Our 2019 CEO Study found that business leaders were severely off track to deliver on their climate goals. Today, the picture is even bleaker. Business leaders are facing an intense landscape, as climate-related disasters occur with startlingly high frequency and intensity. The pressure to act on sustainability from all stakeholders is greater than it has ever been. Global supply chains are fracturing, and inequality continues to rise. Couple this with the fallout from the COVID-19 pandemic, and many businesses are ill-prepared for the coming reality.

In the largest and most powerful global self-assessment ever voiced from CEOs on sustainability, this year's study finds that CEOs widely believe that business is unprepared to navigate the challenges of climate change. These same CEOs give an equally stark call to action for their industries to step up, align themselves with the Paris Agreement, and respond with decisive action to avert global catastrophe. In this report, we share the feedback from CEOs on both their assessment of the challenge, but also their suggestions for what needs to be done at all levels to meet the goals of the Paris Agreement.

The CEO Study follows two principal strands of research. First, we conducted a quantitative assessment of 1,122 CEOs through an online survey that was translated in nine languages. Second, we conducted more than 110 in-depth one-to-one interviews with CEOs, chairpersons and presidents of UN Global Compact companies around the world to understand the wider strategic context — from challenges and opportunities of the COVID-19 pandemic to adaptation and resilience-building actions to climate finance priorities — for business.

What gives us hope is that some leading CEOs are showing the way forward and making real progress. They are developing innovative business models enabled by technology, aligning their climate targets to science-based pathways, and driving partnerships with their communities, value chain partners, and the public sector.

Yet, this is not nearly enough.

In compiling this CEO Study, we are once again indebted to the UN Global Compact teams led by Heidi Huusko, Anna Kruip and Sean Cruse. We also recognize the leadership of the Accenture team, in particular: UN programs lead Michael Hughes; study lead Apurv Gupta; and authors Grant Lurie, Noah Spector, Daisy Vanags and Fergal Keaney. We also thank Matthew Robinson, Justin Keeble, Mauricio Bermudez, Barbara Wynne and Sundeep Singh for their insights, as well as the many other UNGC and Accenture colleagues who are too numerous to mention, but who contributed to this report.

On behalf of the United Nations Global Compact and Accenture, we would like to express our sincere thanks to the CEOs and chairpersons, business leaders and other stakeholders who participated in the study. The project team has endeavored to understand and interpret their many ideas, reflections and case study examples in conducting the study and delivering this report.

**Sanda Ojiambo**
CEO & Executive Director
UN Global Compact

**Peter Lacy**
Chief Responsibility Officer and
Global Sustainability Services Lead
Accenture



Glasgow cityscape. Photo: Getty/Jack McMeekin

# ONE-TO-ONE INTERVIEWS

We would like to thank the more than 1,200 CEOs, chairpersons and presidents for their insights in shaping this study with particular gratitude to the individuals who participated in one-to-one interviews. While the views expressed do not necessarily represent the totality of opinions received from all contributors, their participation and guidance have been critical.

Mauricí Lucena, Chairman and CEO, Aena

Michael Rousseau, President and CEO, Air Canada

Henri Poupart-Lafarge, CEO and Chairman of the Board, Alstom

Luis Maroto, President & CEO, Amadeus IT Group S.A.

Jean Jereissati, CEO, Ambev

Peter Zaffino, President and Chief Executive Officer, American International Group

Mark Cutifani, Chief Executive, Anglo American Plc

Praveen Singhavi, President, APRIL Group

Peter Oosterveer, Chief Executive Officer, Arcadis N.V.

Clara Arpa, CEO, ARPA

Atsushi Katsuki, President & CEO, Representative Director, Asahi Group Holdings, Ltd.

Bernard Tan, Managing Director, Asia Pulp & Paper (APP) Sinar Mas

Kenji Yasukawa, Ph.D., President & CEO, Astellas Pharma Inc.

Thomas Buberl, Chief Executive Officer (CEO), AXA Group

Lorenzo Simonelli, Chairman, President, and Chief Executive Officer, Baker Hughes

Fausto Ribeiro, CEO, Banco do Brasil

Carlos Torres Vila, Chairman, BBVA

Mirko Bibic, President and CEO, BCE & Bell Canada

Bertrand Schmitt, CEO, BDR Thermea Group

Michel Vounatsos, Chief Executive Officer, Biogen Inc.

Roberto Simões, CEO, Braskem

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Cyrille Vigneron, President and CEO, Cartier International

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Dominic Blakemore, Group Chief Executive Officer, Compass Group PLC

Sue Y. Nabi, Chief Executive Officer, Coty

Ola Källenius, Chairman of the Board of Management, Daimler AG and Mercedes-Benz AG

Mahendra Singhi, Managing Director and CEO, Dalmia Cement (Bharat) Limited

Kim Fausing, CEO, Danfoss

Carsten Egeriis, Chief Executive Officer, Danske Bank

Francesca Fondse, CEO, De Angelus Estates and Angelus Africa SD Projects

Christian Sewing, CEO, Deutsche Bank AG

Satyo Fatwan, Managing Partner, Dunamis Organization Services

Toni Hambali, Chief Executive Officer, Dynapack Asia

Miguel Stilwell d'Andrade, CEO, EDP and EDP Renewables

Francesco Starace, Chief Executive Officer and General Manager, Enel Group

Claudio Descalzi, Chief Executive Officer, Eni

Börje Ekholm, President and CEO, Ericsson

Marjorie Yang, Chairman & CEO, Esquel Group

Mairead Lavery, President and Chief Executive Officer, Export Development Canada

Margaret Michaels, Founder, Ezra Joel Group Corporation

M V Iyer, Board Member and Director of Business Development, GAIL (India) Limited

Héctor Hernández-Pons Torres, Chairman of the Board and Chief Executive Officer, Grupo Herdez

Andreas Shiamishis, Chief Executive Officer, Hellenic Petroleum SA

Philipp Gmür, CEO, Helvetia Group

Toshiaki Higashihara, Executive Chairman & CEO, Hitachi, Ltd.

Ignacio S. Galán, Chairman & CEO, Iberdrola

Aloke Lohia, Group Chief Executive Officer, Indorama Ventures Public Company Ltd.

Alex Gorsky, Chairman and CEO, Johnson & Johnson

George Oliver, Chairman & CEO, Johnson Controls

Jeremy Cohen, President and CEO, Knoll Printing & Packaging, Inc.

Mohammed Kodrey, CEO, Kodrey Overseas Agents

Shoei Yamana, President and CEO, Konica Minolta

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Susan Lloyd-Hurwitz,
CEO & Managing Director,
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President & Group CEO, Mitsubishi UFJ Financial Group, Inc.

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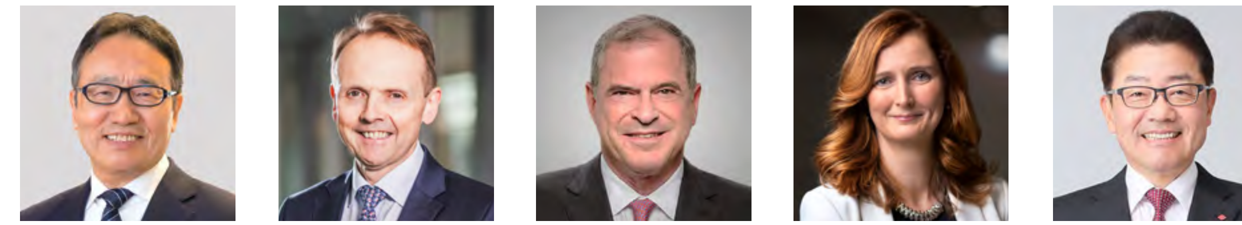
CEO and Member of the Executive Board, SAP SE

Ryuichi Isaka, President & Representative Director,
Seven & i Holdings Co., Ltd.

Eric Rondolat,
CEO,
Signify

Denis Machuel,
Ex-CEO,
Sodexo



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Chief Executive,
SSE

James M. Loree,
Chief Executive Officer,
Stanley Black & Decker

Annica Bresky,
President and CEO,
Stora Enso

Keiichi Iwata,
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Sumitomo Chemical Company, Ltd.

Takeshi Niinami,
Chief Executive Officer,
Suntory Holdings Ltd.

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CEO & Managing Director,
Tata Steel Ltd.

Sigve Brekke,
President & Chief Executive Officer
Telenor Group

Manon van Beek,
CEO,
TenneT TSO B.V.

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The Adecco Group

David Briggs,
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Toshiki Kawai,
Representative Director, President & CEO, Tokyo Electron Ltd.

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TSB Bank

Suni P. Harford,
Group Executive Board Sponsor for Sustainability and Impact,
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Aayush Tekriwal,
Managing Director,
Van Aroma

Anna Borg,
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Roy Bagattini,
Group Chief Executive Officer,
Woolworths Holdings Ltd.

BREAKING POINT

# CLIMATE CHANGE IS HERE AND NOW

Mountain landscape with glacier. Photo: UN/Mark Garten

## CEOS SAY CLIMATE CHANGE IS A CRISIS TODAY, RATHER THAN A FUTURE CRISIS IN 2030 OR 2050

In the words of Hironori Kamezawa, President & Group CEO of Mitsubishi UFJ Financial Group, Inc., "it seems that the future has arrived all at once."

Extreme climate-related weather events are wreaking havoc on the global economy, and CEOs are feeling the pressure to act now. Suni P. Harford, Group Executive Board Sponsor for Sustainability and Impact at UBS, says, "the climate risks are tangible and people can understand them. Anybody who has lived through extreme weather recently is aware and is thinking about how it will affect their operations."

Nearly half of CEOs globally (49%) report that they are grappling with supply-chain interruptions due to extreme weather events. As Thomas Buberl, Chief Executive Officer of AXA Group, notes, "large events like Katrina still occur in a relatively uniform frequency, but what we've seen is that smaller events such as wildfires and rainstorms have massively increased in frequency. This has become a reality, and everybody can feel climate change in their daily lives these days."

Shifting weather patterns are interfering with core business operations. Notably, half of CEOs in the food and beverage industry (50%) are concerned about their ability to access natural resources for business operations due to extreme weather, highlighting the threat of a changing climate on global food supply. According to Héctor Hernández-Pons Torres, Chairman of the Board and Chief Executive Officer of Grupo Herdez, "shifting weather patterns and longer seasons are disrupting crop production and impacting the supply chain in the food industry."

The frequency and global distribution of these disruptions continue to increase, and CEOs say they are unprepared to protect the stability of their operations with current levels of investment. Globally, just one in four CEOs (25%) have intermediate-to-advanced early-warning systems to prepare for climate-risk events; 28% of CEOs conduct intermediate-to-advanced scenario analyses to identify physical and transition risks of climate change on their business and industry; and only 29% of CEOs have intermediate-to-advanced levels of insurance for climate-related risks.

These actions provide insight into climate hazards and resulting social vulnerabilities. Frameworks developed by organizations like the Financial Stability Board (FSB) and its Task Force on Climate-Related Financial Disclosures (TCFD) can enable companies to prepare for the impacts of different climate scenarios on their businesses and mitigate the financial implications for operations and the workforce.

CEOs of small and medium-sized enterprises, especially in Asia, are at particularly high risk. For instance, only 16% of businesses in that region have intermediate-to-advanced early-warning systems; 13% conduct scenario analyses; and 19% have insurance for climate-related risks.[1] Losses from natural disasters in 2020 totaled USD 210 billion. Yet in Asia, USD 67 billion of losses were recorded, of which only USD 3 billion were insured.[2]

1. Based on the definition provided by the OECD, small and medium-sized enterprises (SMEs) are non-subsidiary, independent firms that employ fewer than 250 employees (OECD). 2. Munich RE (2021) Record Hurricane Season and Major Wildfires – The Natural Disaster Figures for 2020.



**"We are working for our country and public. As you know, Japan is prone to natural disasters, and we are working to help people deal with such disasters. Half of our business in this area is reactive. We think about how to handle disasters in our social and natural environment. The other half is proactive. We predict what may happen and take actions based on those predictions."**

Hiroaki Shinya,
Representative Director and President,
Nippon Koei Co., Ltd.

**"The climate change challenges we face will be exponentially deteriorating. We need to break down barriers and try to face these challenges as one. Business and government must work together to build a sustainable society."**

Ms. Marjorie Yang,
Chairman & CEO, Esquel Group

**"In the past year, we have seen more evidence of the impact of climate change through extreme weather events. It's a reminder that we must redouble our efforts."**

Eric Rondolat,
CEO, Signify

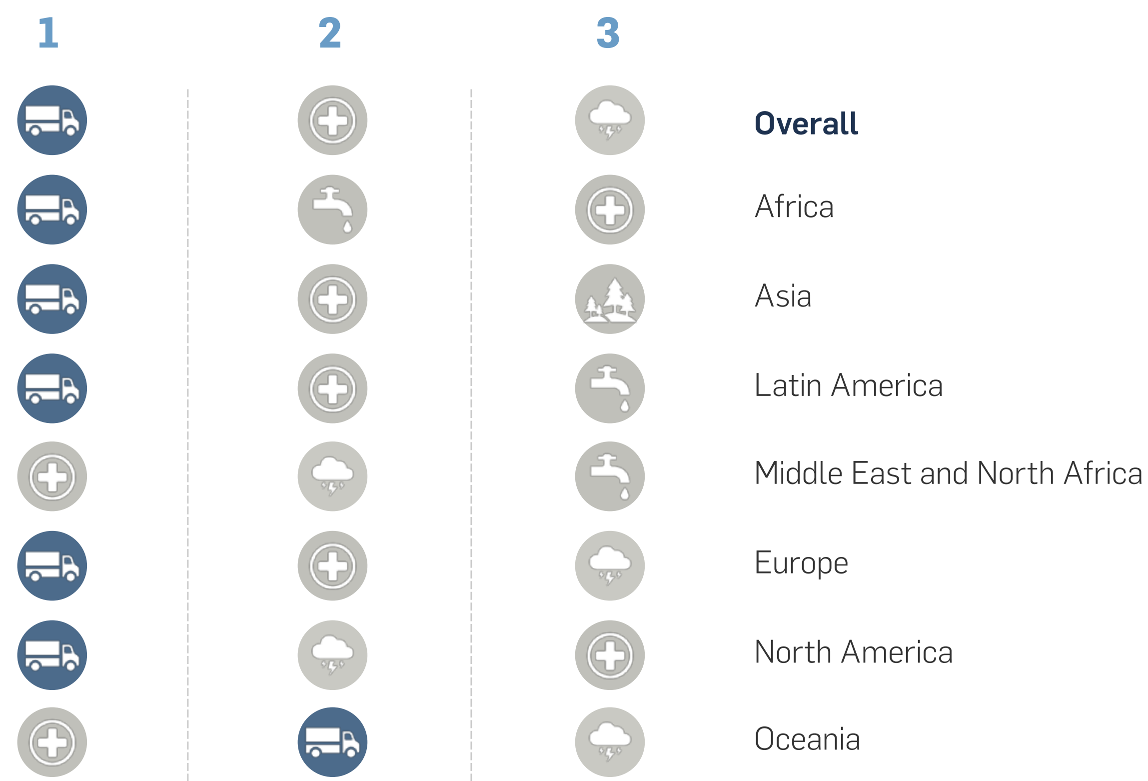


Tall trees growing in forest. Photo: Adobe/Chapman/EyeEm

**FIGURE 1: SUPPLY CHAIN INTERRUPTIONS DUE TO EXTREME WEATHER EVENTS POSE THE GREATEST PHYSICAL RISK DUE TO CLIMATE CHANGE.**

Which of the following do you see as major risks to your business or industry due to the physical impacts of climate change?

**TOP 3 RISKS BY REGION**



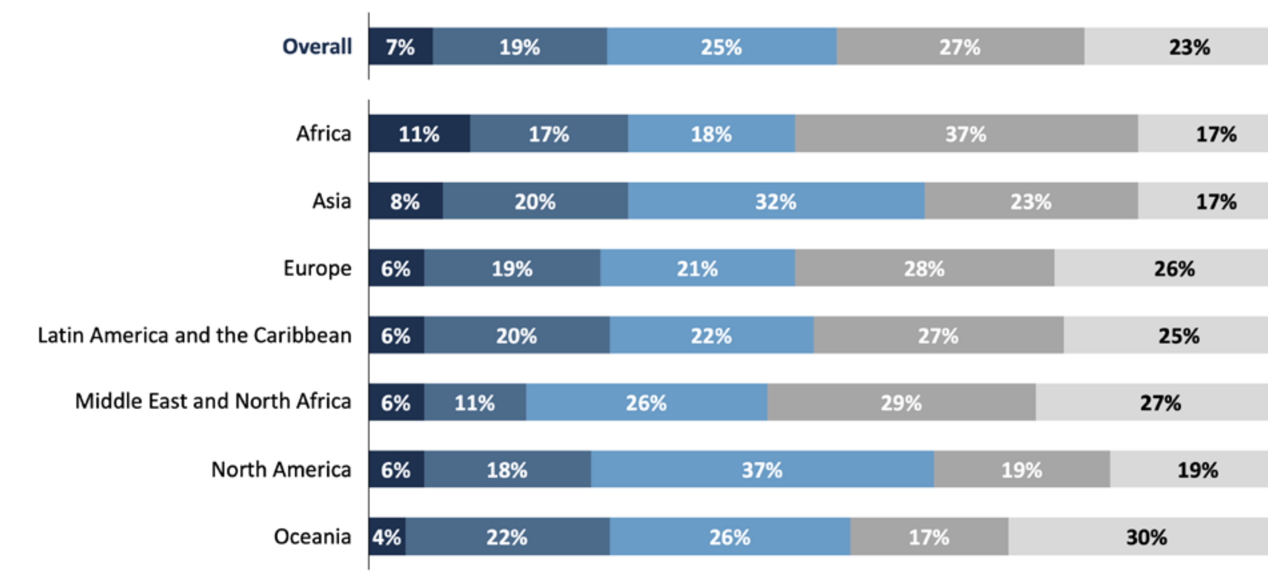

**KEY**

- Supply chain interruptions due to extreme weather events
- Negative health impacts across the workforce
- Operating challenges due to physical impacts on assets (e.g., heat waves, storm surges)
- Loss of biodiversity and related ecosystem services
- Availability and affordability of insurance in risk-prone areas
- Mass workforce migration or reallocation from existing areas of operations
- Inability to access natural resources for business operations
- Dramatic changes to water supply
- Widening social inequalities across the workforce

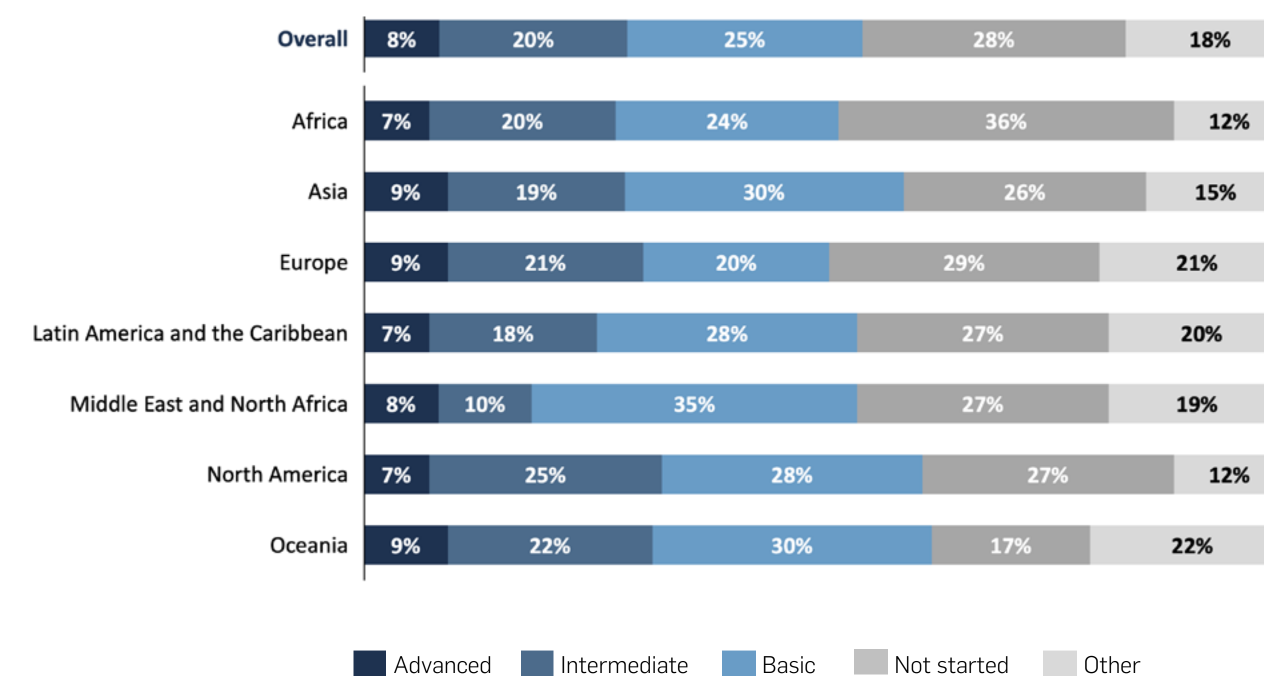
**FIGURE 2: BUSINESS LEADERS ARE NOT EQUIPPED TO MANAGE THE FREQUENCY OF CLIMATE-INDUCED NATURAL DISASTERS**

How mature do you believe your company is across the following climate resilience and adaptation actions?

**EARLY WARNING SYSTEMS FOR PREPAREDNESS TO CLIMATE-RISK EVENTS**




**SCENARIO ANALYSIS TO IDENTIFY PHYSICAL AND TRANSITION RISKS**




"Other" indicates respondents who answered "do not know" or "not applicable." Percentages may not add to 100% due to rounding.

## THE COVID-19 PANDEMIC HAS UNDERSCORED THE IMPORTANCE OF SUSTAINABILITY, BUT ADDED COMPLEXITY TO A CONCERTED CLIMATE RESPONSE, SAY CEOS

Nearly, three in four CEOs globally (72%) agree that sustainability remains an immediate priority as they deal with the fallout of the COVID-19 pandemic. Francesca Fondse, CEO of De Angelus Estates and Angelus Africa SD Projects, remarks, "the pandemic has accelerated our sustainability progress by giving us the space to learn how to work digitally and to explore new sustainable innovations."

Moreover, nearly four in five CEOs (79%) say that the pandemic has highlighted the need to transition to more sustainable business models. George Oliver, Chairman & CEO of Johnson Controls, notes, "I would have predicted that a crisis like COVID would have slammed the brakes on anything other than conventional bottom-line thinking — and the fact that it did the exact opposite is extraordinary. It has accelerated the trajectory of sustainability."

In addition, the pandemic has highlighted the importance of multi-sectoral partnerships, rapid R&D, and coordinated deployment of critical solutions to address global challenges. Kim Fausing, CEO of Danfoss, says, "through the development of COVID-19 vaccines, we have seen how fast we can work when needed. We can use that as inspiration for climate action."

For half of CEOs globally (50%), the COVID-19 pandemic has increased their reliance on strategic, multi-sectoral partnerships — a shift most notably observed among CEOs of companies with more than USD 250 million in annual revenues (58%). In the words of Francesco Starace, Chief Executive Officer and General Manager of the Enel Group, "the pandemic reinforced that change is possible when governance is coordinated and reinforced at a global level. Strong multilateralism is critical during a global crisis, and these lessons must be applied to climate action."

Over half (57%) of CEOs are prioritizing climate action in their recovery from the COVID-19 pandemic, but only 18% of CEOs feel Governments and policymakers have given them the clarity needed to recover from the pandemic in line with a 1.5°C Pathway.

> **"The experiences of the pandemic are promising a brighter future for climate action and sustainability as the conviction to tackle global issues has strengthened."**
>
> Maurici Lucena,
> Chairman and CEO, Aena

> **"As the pressure to act on climate change became critical, the coronavirus pandemic occurred and further drove commitment from those who had been reluctant to act on sustainability. This produced a consensus among nations that this needs to be a collaborative effort."**
>
> Takeshi Niinami,
> CEO, Suntory Holdings Ltd.

With unprecedented levels of economic recovery spending, the opportunity for greater collaboration and investment allocation has never been greater. In 2020, Governments and central banks used fiscal and monetary policies to provide more than USD 19 trillion of funding.[4] To recover better from the pandemic, CEOs are calling upon Governments to speed the distribution of money to enable the private sector to invest in recovery and resilience for systemic socio-economic transformation and scale a just transition aligned with a 1.5°C warming trajectory.

Getting business and Government on the same page is critical to capitalizing on this moment of renewed conviction and to address climate action. As Sue Y. Nabi, Chief Executive Officer of Coty, explains, "given the intricacies of the green transition, it is now critical that actors take a collective approach in setting common climate goals, and share the knowledge needed to deliver against them. We need to foster an environment where national actors and businesses collaborate to tackle this great challenge."

3. Benson et al (2021) COVID pollution: impact of COVID-19 pandemic on global plastic waste footprint. 4. Accenture (2021) Fueling Recovery.

Case Study

### PTT GLOBAL CHEMICAL (PTTGC)

**Sustainable Production and Consumption to Tackle the Coronavirus Pandemic**

PTT Global Chemical Plc. or GC, a Thai petrochemical company, has developed YOUturn Platform to manage post-consumer plastics and create upcycled products. Its goal is to reduce discarded single-use plastics that goes into landfills and provide low-carbon production materials.

In collaboration with cross-sector organizations, the end-to-end waste management initiative enables users to find local YOUturn drop points to recycle plastic waste. A digital system is being deployed to process collection data, offering material traceability for recycled plastic resins for brand owners.

Since 2017, GC has recycled 880,000 kilograms of post-consumer plastics, equivalent to 2.15 million kilograms of $CO_2$ emissions reduction, saving over 238,500 big trees. Recently, the ongoing coronavirus pandemic has increased the consumption of single-use personal protective equipment (PPE) dramatically, with nearly 3.4 billion face masks and face shields discarded daily.[3] This waste does not biodegrade and the debris from landfills pollutes natural habitats. In response to this, YOUturn Platform and partners have launched a PET bottle collecting campaign and upcycled 4,000 sets of reusable PPE to distribute in Thailand.

GC's YOUturn Platform is proving core to its business model with greater reliance on recycled materials, reusable PPE and decoupling growth from virgin plastics.

## THE STABILITY OF INTERNATIONAL COOPERATION WILL BE CRITICAL TO MANAGE THE ESCALATING CLIMATE CRISIS, SAY CEOS

Nearly half of CEOs globally (46%) are confronting uncertainty in their industry stemming from national trade wars; 37% are facing uncertainty from an increasing number of populist movements; and 40% say they are facing uncertainty from threats to globalization and the movement of goods and services. According to Hilde Merete Aasheim, President & CEO of Norsk Hydro ASA, "regionalism, protectionism, and trade barriers put the decarbonization agenda at risk."

CEOs from developing economies are feeling geopolitical instability the most. Nearly half of CEOs in Latin America (47%) are particularly concerned about the rising number of populist movements across countries, while 48% of CEOs in Africa and 49% of CEOs in Asia cite threats to globalization as a barrier to sustainability for their industries. Margaret Michaels, Founder of Ezra Joel Group Corporation, explains, "unlocking sustainable development in Africa requires collaboration between the public and private sectors to address regional instability and insecurity."

CEOs are concerned about the readiness of a truly global climate response, which even in this eleventh hour of crisis remains disjointed, and at times contradictory, across industries and sectors. In the words of Carlos Torres Vila, Chairman of BBVA, "global collective action needs to improve. The response to the coronavirus pandemic has weakened confidence in the state of international cooperation."

**FIGURE 3: CEOS FROM AROUND THE WORLD DO NOT BELIEVE GOVERNMENTS HAVE GIVEN THEM THE CLARITY TO RECOVER IN LINE WITH A 1.5˚C WARMING TRAJECTORY**

As CEO, to what extent do you agree Governments and policymakers have given business the clarity needed to recover better in line with a 1.5˚C warming trajectory?

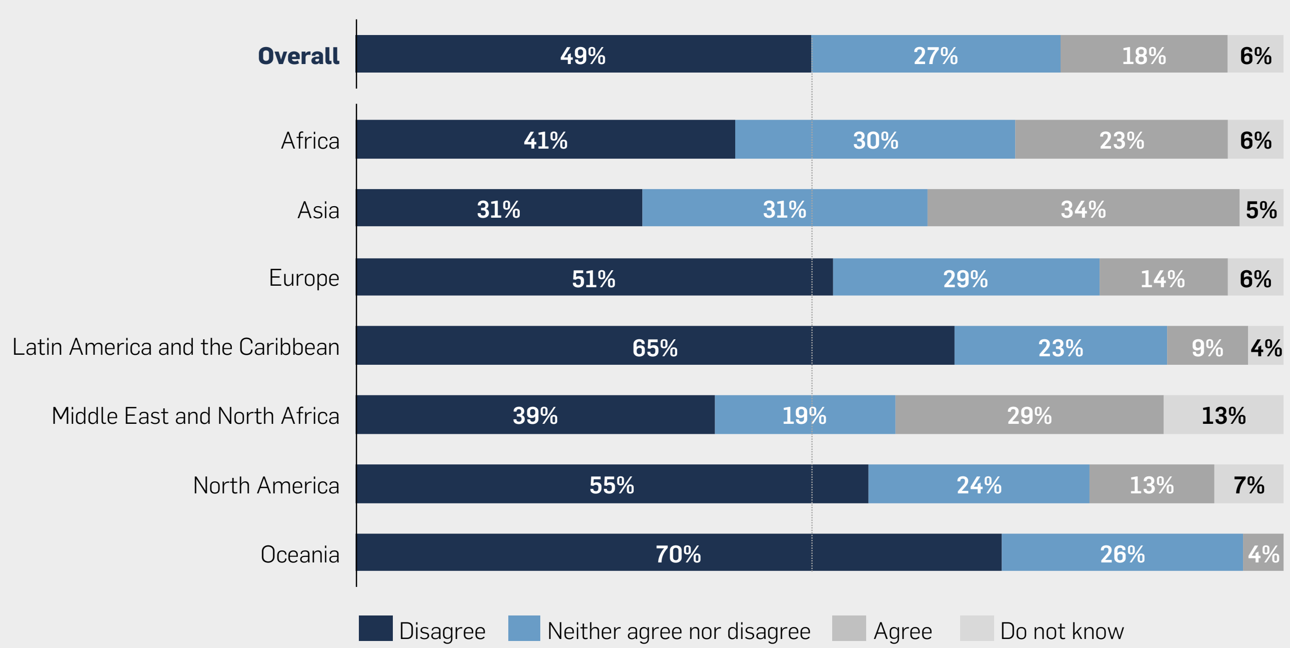
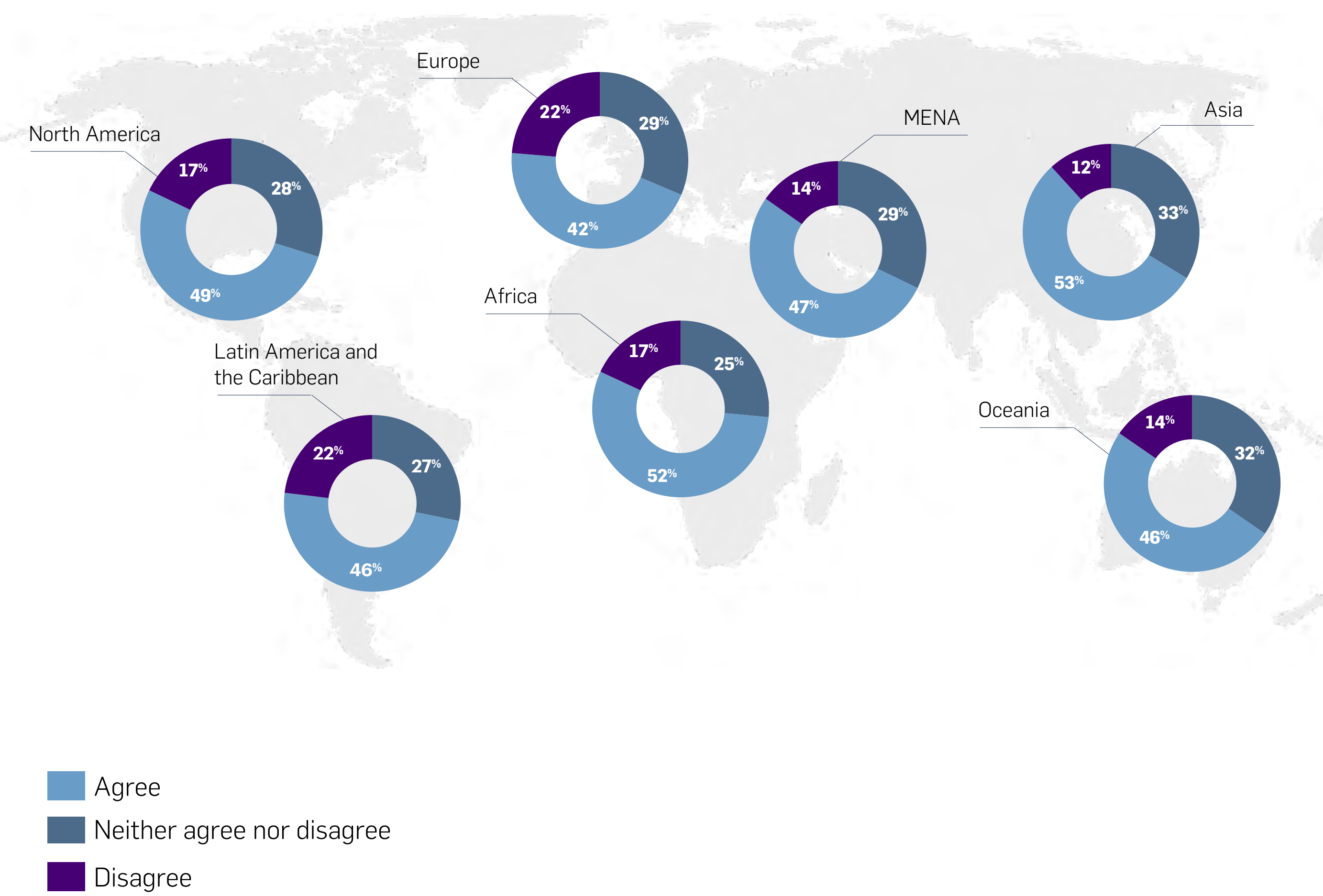





**FIGURE 4: GLOBAL INSTABILITY IS IMPEDING SUSTAINABILITY**

To what extent do you agree the following issues are barriers to sustainability in your industry?

### NATIONAL TRADE WARS AND ENSUING BUSINESS UNCERTAINTY




Percentages may not add to 100%, as charts do not reflect those respondents who selected "do not know."

## THE PRIVATE SECTOR STANDS READY AS INVESTORS AND CAPITAL MARKETS INCREASINGLY ALIGN TO ADVANCE CLIMATE ACTION

Driven by greater recognition of the systemic risk of climate change, investors have nearly doubled in importance as a critical stakeholder in driving sustainability on the CEO agenda. Today, nearly nearly one in three CEOs (31%) cite investors as among the most influential stakeholders to manage future sustainability efforts. This is up from nearly one in five CEOs (18%) in 2016, ranking them from eighth in 2016 up to third across all stakeholders. According to Susan Lloyd-Hurwitz, CEO and Managing Director of Mirvac, "ESG expectations from investors have changed rapidly in the last few years and will continue to increase exponentially."

Investors are flexing their influence by conditioning access to capital on sustainability performance and requiring more thorough disclosures. According to Pekka Lundmark, President and CEO of Nokia, "sustainability is becoming increasingly important among our investors, who are placing stronger requirements to access capital." Yet, as these demands grow in intensity, CEOs see a need for standardized disclosure requirements to better evaluate sustainability performance. Douglas L. Peterson, President and CEO of S&P Global, notes, "investors and companies are demanding more information on ESG themes across global capital markets. As demand for strong ESG performance continues to increase, we need greater standardization of disclosure requirements."

Investors are also incentivizing and driving sustainability action by offering Environmental, Social and Governance (ESG)-linked loans; for example, based on ESG performance. Roy Bagattini, Group Chief Executive Officer of Woolworths Holdings Limited, remarks, "linking our sustainability goals to funding arrangements has made us more competitive in capital markets."

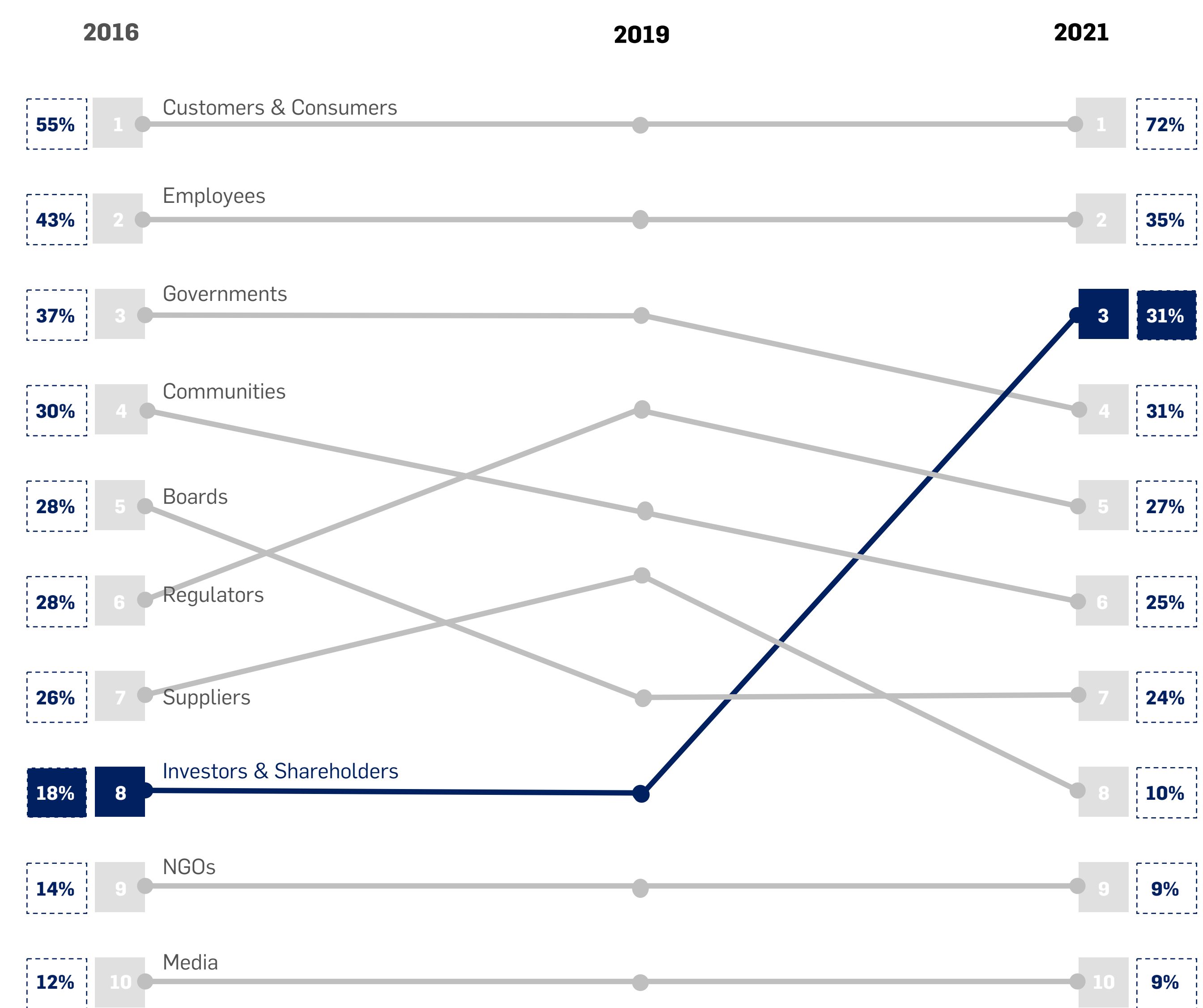
The rise in investor influence is most stark among prominently high-emitting industries: 46% of CEOs in the oil and gas industry and 42% in the basic resources industry cite investors as a key influence on sustainability management. High investor pressure to prioritize sustainability is critical in these industries, which constitute a majority of the 100 companies responsible for nearly 70% of greenhouse gas (GHG) emissions.[5]

> **"Four years ago, most conversations I had with our shareholders were about financial performance. Now there are times when I meet with a shareholder and only speak about sustainability."**
>
> Peter Oosterveer,
> Chief Executive Officer, Arcadis N.V.

> **"Investor interest in climate change has not waned during the pandemic. Businesses face a risk of losing access to cheaper capital if they are not doing enough on climate action."**
>
> Susan Lloyd-Hurwitz,
> CEO & Managing Director, Mirvac

**FIGURE 5: INVESTOR INFLUENCE ON SUSTAINABILITY HAS GROWN SIGNIFICANTLY SINCE THE SUSTAINABLE DEVELOPMENT GOALS AND THE PARIS AGREEMENT**

Which stakeholder group do you believe will have the greatest impact on the way you manage sustainability over the next five years?





5. CDP (2017): Carbon Majors Report 2017.

## CLIMATE DISRUPTION IS ACCELERATING THE TRANSITION TO MORE SUSTAINABLE BUSINESS MODELS FOR CEOS ACROSS INDUSTRIES AND REGIONS

CEOs say they are galvanized to transform their businesses in response to increasingly severe climate-related events. "If we can change operational models overnight, why can't we do the same for sustainability? The truth is we can, we just need greater urgency," says Gimena Peña Malcampo, CEO of Pier2 Marketing.

Globally, 81% of CEOs are already developing new products and services leveraging electrification, sustainable materials and circular design. One in four CEOs globally (24%) are prioritizing short-term investments in new sustainable product development. In addition, 69% of CEOs globally are investing in resilient and sustainable manufacturing and design. Notably, 86% of CEOs in the automobiles and parts industry — one of the largest manufacturing industries globally — are investing in sustainable manufacturing. Marco Tronchetti Provera, Executive Vice Chairman and CEO of Pirelli & C. SpA, says, "we have to operate in line not only with the requirements of today, but with the requirements of tomorrow — all our new products have to be sustainable for the next decades."

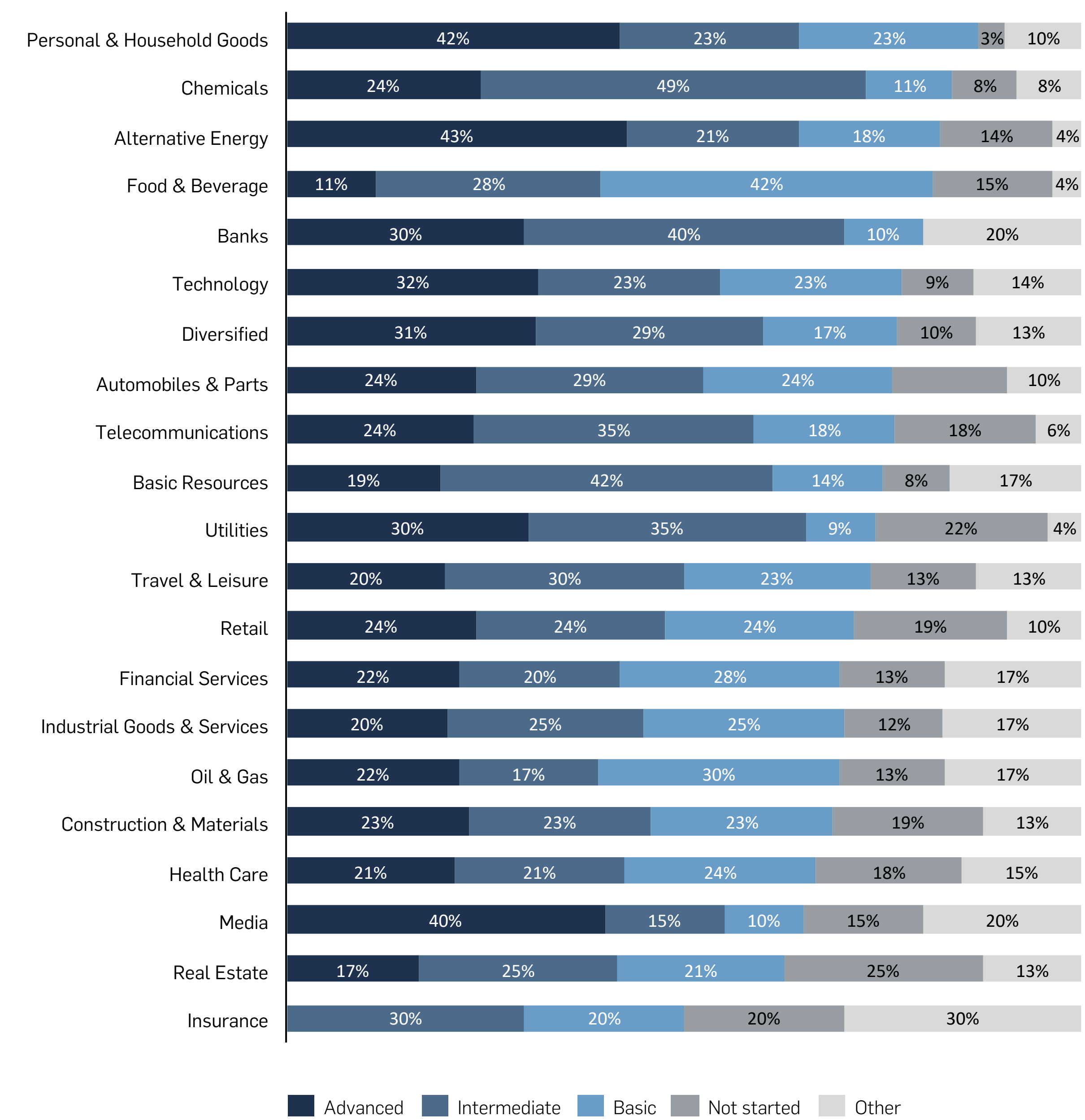
CEOs are embracing circular product life cycles to shift their business models for a net-zero economy. Globally, nearly three in four CEOs (74%) have begun deploying new and circular business models. Frans van Houten, CEO of Royal Philips, explains, "with the increasing scarcity of critical raw materials, growing waste mountains and a growing global population, the transition towards circular and sustainable economic models is the only way forward."

### Race To Zero Campaign

Race To Zero is a global campaign to rally leadership and support from businesses, cities, regions and investors for a healthy, resilient, zero-carbon recovery that prevents future threats, creates decent jobs and unlocks inclusive, sustainable growth.[6] Globally, 39% of CEOs say they have committed to the Race To Zero or will commit by COP26. Moreover, 48% of CEOs from the largest companies (greater than USD 1 billion in annual revenue) say the same.

**FIGURE 6: MATURITY OF CIRCULAR BUSINESS MODELS, BY INDUSTRY**

How mature is your company in deploying new and circular business models today?




"Other" indicates respondents who answered "do not know" or "not applicable." Percentages may not add to 100% due to rounding.

6. Race To Zero (2021) Race To Zero Campaign.

COP26

# A WAKE-UP CALL FOR GLOBAL CLIMATE ACTION

Beekeeping concept. Photo: Adobe /Sushaaa

## CORPORATE CLIMATE TARGETS REMAIN MISALIGNED TO THE LEVEL OF AMBITION OUTLINED BY THE PARIS AGREEMENT

Despite an increasing number of public climate targets, the vast majority of CEOs are not aligning their commitments with climate science. According to our research, 57% of CEOs believe they are making sufficient efforts to limit the global rise in temperature to 1.5°C above pre-industrial levels. Yet, only 2% of these CEOs have validated their targets with the Science Based Targets initiative (SBTi) in line with a 1.5°C warming trajectory.

Executives who are setting science-based targets are, in turn, helping their companies achieve significant emission reduction objectives: between 2015 and 2019, SBTi companies collectively reduced their annual emissions by 25%.[7]

These strong results are prompting unprecedented membership growth. Between November 2019 and October 2021, 529 new organizations validated their targets with the SBTi. This is more than triple the average rate from 2015 to 2019.[8] Sigve Brekke, President and Chief Executive Officer of Telenor Group, whose company's targets were approved by the SBTi in May 2021, explains, "clear commitments and targets are essential to further progress in the climate arena. With these, everyone can be measured not only against themselves, but against others."

### The Science Based Targets initiative

The SBTi drives ambitious climate action in the private sector by enabling companies to set greenhouse gas emissions reduction targets aligned with what climate science shows is required to prevent catastrophic climate change. Founded in 2015, the SBTi is a partnership between CDP, the UN Global Compact, World Resources Institute and the World Wide Fund for Nature. The SBTi call to action is one of the We Mean Business Coalition commitments.[9]

## CEOS FEEL THEIR INDUSTRIES ARE NEGLECTING BIODIVERSITY RISKS, UNDERMINING THEIR OWN CLIMATE AMBITIONS AND THREATENING CATACLYSMIC ECOSYSTEM COLLAPSE

The Earth's biological ecosystems, key actions in the global carbon cycle and meteorological systems provide an estimated value of USD 33 trillion in goods and services per year, equivalent to the combined GDP of the United States and China.[10] Leading executives are keenly aware of the potential impact of biodiversity loss on their businesses. As Pekka Lundmark, President and CEO of Nokia, remarks, "climate change and harmful effects on biodiversity are existential threats to the whole world and the future of mankind."

Ecosystem preservation is a critical component of climate mitigation and business protection. Yet, globally, CEOs have largely discounted the potential disruption of biodiversity loss on their businesses. Globally, just one in five CEOs (21%) see loss of biodiversity and related ecosystem services as a risk to their business. Furthermore, only 26% of CEOs from Latin America and the Caribbean — a region that has experienced 94% biodiversity loss since 1970 — rank biodiversity loss as a top risk to their business.[11]

Keiichi Iwata, Representative Director & President of Sumitomo Chemical Company, Limited — whose company developed the Sumitomo Chemical Commitments to the Conservation of Biodiversity as part of its core strategy — remarks, "biodiversity is a more extensive, difficult, and far-reaching issue than climate change. Biodiversity and business growth must go hand-in-hand."

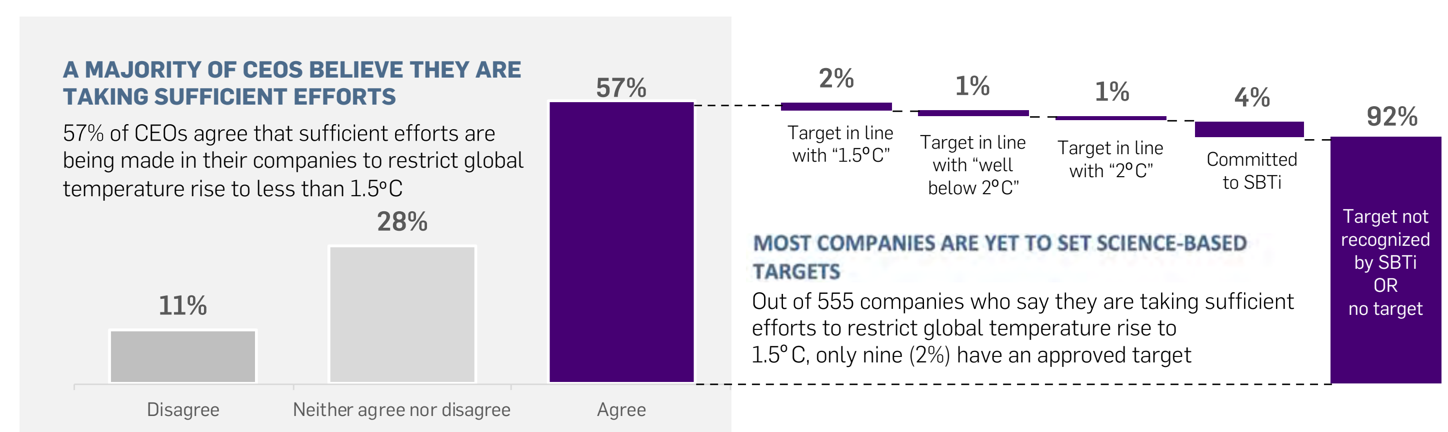
Forward-thinking CEOs are considering the importance of biodiversity protection as a critical component of the climate agenda ahead of COP26. "Biodiversity is at the top of our agenda and we are continuously trying to reduce the footprint of our mining activity. We must collaborate as an industry to make sure that we continue to address biodiversity in a responsible way," says Hilde Merete Aasheim, President & CEO of Norsk Hydro ASA.

### The Science Based Targets Network

The SBTN is a collaboration of leading global non-profits and mission-driven organizations working together to equip companies as well as cities with the guidance to set science-based targets for all of Earth's systems. This will help companies and cities define a clear pathway to ensure they are doing enough across their value chains to address their impacts and dependencies on nature.[12]

**FIGURE 7: MORE BUSINESS LEADERS NEED TO VERIFY THAT THEIR CLIMATE TARGETS DON'T EXCEED THE 1.5°C WARMING TRAJECTORY**

To what extent do you, as CEO, agree with the following statements on climate action?




Sufficient efforts are being made in my company to restrict global temperature rise to less than 1.5°C.

Percentages may not add to 100%, as charts do not reflect respondents who selected "do not know."

7. Science-Based Target Initiative (2020): Annual Progress Report. 8. Ibid. 9. Science Based Target Initiative (2020) Annual Progress Report. 10. IUCN (2017) Tomorrow's Production Systems Will Be Closer to Nature.

11. World Wildlife (2021) A Warning Sign: Where Biodiversity Loss is Happening Around the World. 12. The Science Based Targets Network (2021).

Case Study

## PERNOD RICARD

### Preserving biodiversity through regenerative agriculture

Pernod Ricard, the French beverages company and one of the world's largest wine and spirits producer, is supporting the transition to regenerative agriculture techniques in its supply chains globally with key initiatives in France, Sweden, India and New Zealand. Regenerative agriculture is a holistic approach that focuses on the entire farming ecosystem — the terroir, the soil, the wildlife, the plants and the community — to help mitigate climate change, enhance biodiversity, restore soil health, and improve livelihoods.

Globally, the company is currently mapping and risk assessing 350 terroirs where its key ingredients are grown. The data will inform their impact on environmental and social risks associated with farming. By 2025, Pernod Ricard aims to develop regenerative agriculture pilot projects across eight wine regions, and to ensure all its key ingredients are certified according to sustainability standards by 2030.

> **"Nature is reaching a tipping point and we believe every company has a role to play in preserving biodiversity."**
>
> Alexandre Ricard,
> Chairman and Chief Executive Officer of
> Pernod Ricard



## BUSINESS LEADERS FROM HIGH-EMITTING SECTORS NEED TO ACT BOLDER AND FASTER TO ADDRESS THE IMPACTS OF CLIMATE CHANGE

Climate action cannot succeed without the support of business leaders from high-emitting industries — such as construction and materials, as well as basic resources. The leaders of these industries are not pulling their weight.[13]

Business leaders from high-emitting sectors are not advancing their climate action at the requisite speed. To date, just 38% of CEOs from the most high-emitting sectors say they have already set, or plan to set, a net-zero emissions target validated by the SBTi within the next year.[14]

Beyond target-setting, high-emitting businesses are insufficiently mature to meaningfully advance mitigation efforts. Globally, just 11% of these CEOs say they are advanced in transitioning out of carbon-intensive assets and operations.

Only 12% are at an advanced stage of divesting from existing fossil fuel investments; and only 7% of CEOs from high-emitting industries have set an internal price on GHG emissions, in order to adequately decarbonize their business models.[15]

13. Note from authors: High-emitting sectors include automobiles and parts, food and beverage, chemicals, construction and materials, utilities, basic resources, and oil and gas. These sectors map to the Science Based Target Initiative's high-impact industries: https://sciencebasedtargets.org/sbtiprogress-report-2020. 14. The Science Based Target Initiative is currently unable to validate targets for companies in the oil and gas sector. It is developing a new methodology for oil and gas companies, due to be launched in 2021 (Science Based Target Initiative). 15. Certain companies are subject to carbon pricing mechanisms set by the market based on the region where they operate.

## CEOS SAY THE LEVEL OF COLLABORATION BETWEEN COMPETITORS ON CLIMATE ACTION IS NOT ENOUGH, BUT THEY ARE OPEN TO WORKING TOGETHER

The climate challenge is far too complex for any one company to solve alone. Any meaningful response requires strong partnerships within and across value chains to scale solutions. As Peter Zaffino, President and Chief Executive Officer of American International Group, notes, "partnerships are critical to scale sustainability action. We need companies to share best practices with one another to spur the requisite global action."

While individual businesses must own their transformations, entire industries and value chains must work collaboratively to enable both company-level and industry-level transformation. Dr. (HC) Martha Tilaar, Founder and Chairwoman of Martha Tilaar Group, remarks, "as responsible leaders, we work directly with our competitors and our community to share knowledge on how to grow our business to have a positive impact for all. We hope that this collaboration will create a just, prosperous and peaceful society." Globally, fewer than half of CEOs (49%) say they are engaging in cross-sectoral consortiums or initiatives on GHG reduction. Notably, however, 77% of CEOs report higher levels of participation on cross-sectoral GHG-reduction initiatives in the utilities industry.

Case Study

## TENNET HOLDING B.V. AND NATIONAL GRID

### Building a European Powerhouse for Renewable Energy in the North Sea

TenneT Holding B.V., the transmission systems operator in the Netherlands and Germany, and National Grid, the British utility company, are exploring the feasibility of connecting Dutch and British wind farms to the energy systems of both countries via subsea electricity cables called interconnectors. Known as Wind Connector Project, it's the first vision to link offshore wind farms in the North Sea to Britain and the Netherlands.

Wind power in the North Sea, located between the United Kingdom and Norway, presents an opportunity to create a meshed offshore grid (MOG), a system that connects offshore energy production sites to share electricity. MOGs allow energy transmitters to share infrastructure and increase the reliability and availability of offshore wind.

For the North Sea, this opportunity could increase supply of renewable energy to the United Kingdom, Germany, Netherlands, Norway, and Denmark. Policymakers play a critical role to ensure this success. According to John Pettigrew, CEO of National Grid, "a meshed offshore grid in the North Sea could provide 100GW of wind power to the UK and Northern Europe. One of the barriers is incentivizing the anticipatory investment needed to build the network. We need policy makers to support this initiative to realize its potential."

Manon van Beek, CEO of TenneT TSO B.V., "to accelerate to a climate-neutral future, we will need to use the energy potential of the North Sea. We can only do that by working with regulators and Governments to enable wind farm connections across multiple countries."

BLUEPRINT FOR BUSINESS

# TURNING THE DIALS ON CLIMATE MITIGATION, ADAPTATION, AND RESILIENCE

Agricultural scientist working in farm. Photo: Accenture

## THE CLIMATE CRISIS IS OUTPACING THE SPEED AT WHICH BUSINESS LEADERS ARE SHIFTING TO NET-ZERO MODELS

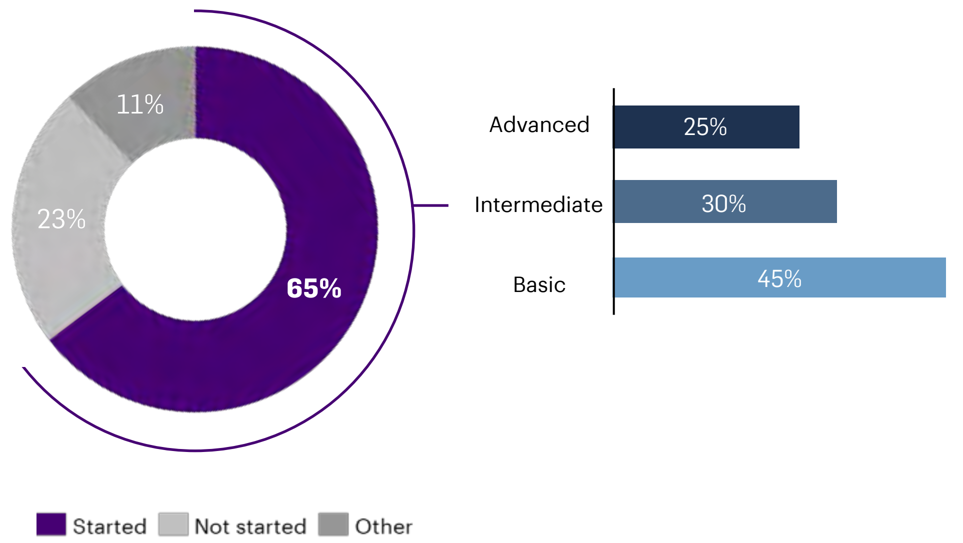
The message from leading executives is clear. CEOs who are not shifting to net-zero business models are putting their companies at risk. While 65% of CEOs globally say they have already started advancing net-zero business models and solutions, almost half of these CEOs (45%) describe their efforts in this area as only "basic."

Companies with annual revenues in excess of USD 1 billion are further along the journey. That is, 78% of CEOs of the largest companies in the world say they have begun advancing net-zero business models and solutions, compared to 61% of CEOs of the smallest companies (less than USD 25 million in annual revenue).

The shift to net-zero business models also remains largely basic for companies in the highest-emitting sectors. That is, 73% of these CEOs say they are advancing net-zero business models and solutions, yet 46% of these companies are at a basic level of maturity. Miguel Stilwell d'Andrade, CEO of EDP and EDP Renewables, underscores the importance of ensuring all CEOs target net-zero in their businesses. "When we talk about net-zero, it's global net-zero. All the different regions and countries of the world need to move to net-zero together."

**FIGURE 8: MAJORITY BUSINESS LEADERS HAVE BASIC MATURITY IN TRANSITIONING TO NET-ZERO BUSINESS MODELS**

How mature is your company on advancing net-zero business models and solutions?






## CEOS STRUGGLE TO MANAGE SCOPE 3 GHG EMISSIONS DUE TO OPAQUE VALUE CHAINS AND TRACEABILITY CHALLENGES

Globally, CEOs are struggling to manage their scope 3 GHG emissions: while 55% of CEOs have begun measuring and reporting their scope 3 GHG emissions, only 16% of all CEOs do so at an advanced level. Debbie Crosbie, CEO of TSB Bank, says, "our biggest challenge in transitioning to a zero-carbon economy is that the majority of our scope 3 emissions come from the houses we lend mortgages against."

CEOs say limited ESG data across the value chain is a key barrier to progressing emissions management. Over half of CEOs globally (63%) say that difficulty in measuring ESG data across the value chain is a barrier to sustainability in their industry. As Derek Hydon, President of Ma Cher (USA) Inc., relates, "transparency is the single biggest challenge in supply chain development."

This challenge is more pronounced for CEOs of companies with greater than USD 1 billion in annual revenue: 48% of whom say that extending their broader sustainability strategy throughout the supply chain is a top barrier, compared to only 33% of CEOs of companies with less than USD 25 million in annual revenue. Ignacio S. Galán, Chairman & CEO of Iberdrola, explains, "utilities, and companies overall, need to expand their sustainability practices to their supply chain and providers, and we already are making great progress on that front. It's not that easy to have full traceability of the carbon footprint of our providers, but ultimately we're responsible for it."

16. BCG, WEF (2021) Net Zero Challenge: The Supply Chain Opportunity.

Case Study

## CISCO

### Reducing Scope 3 GHG Emissions with Partners Across the Supply Chain

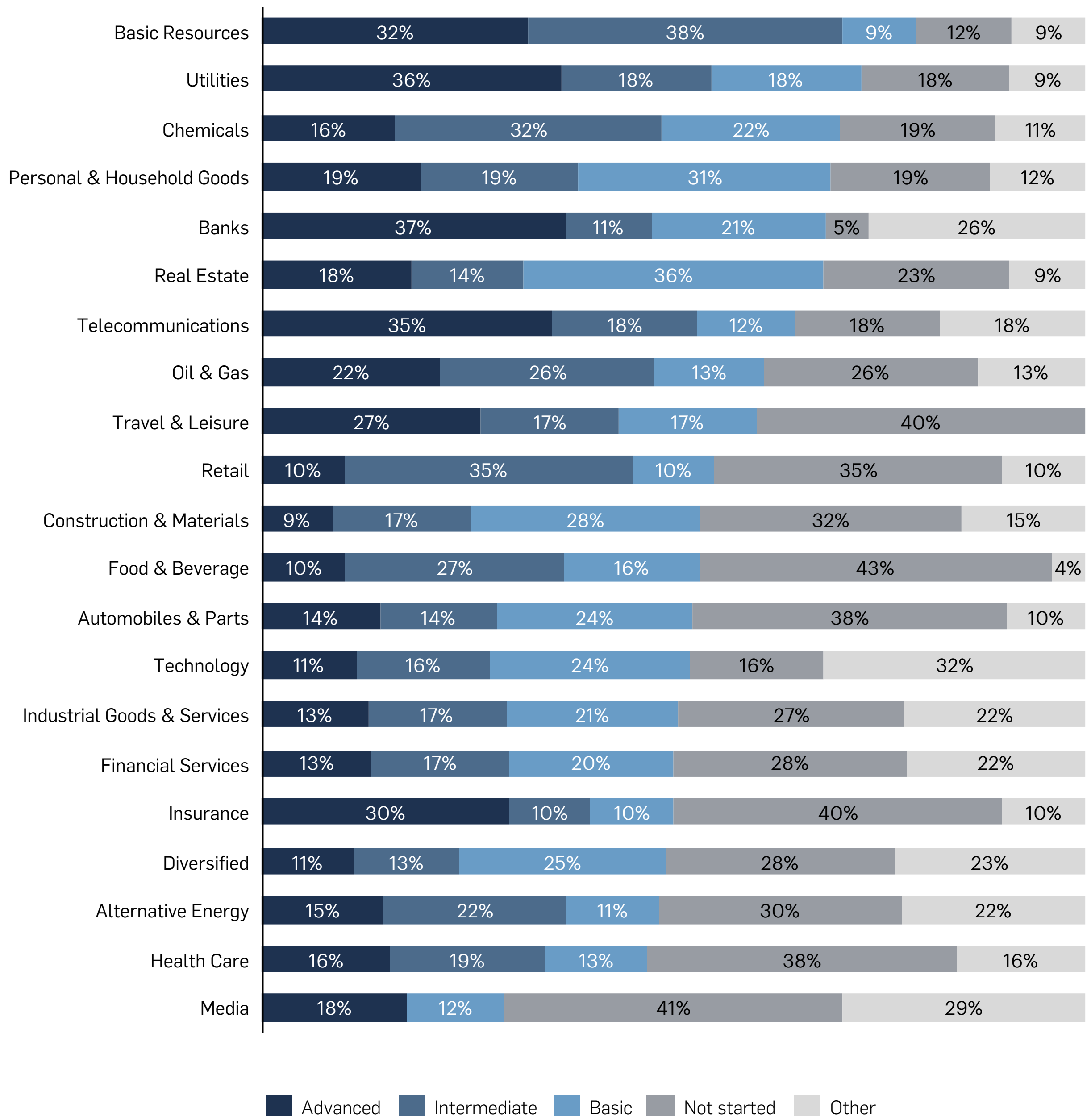
Cisco, the American networking company, is working across its global supply chain to reduce its scope 3 GHG emissions — indirect emissions that are produced by a company's value chain — by 30% by 2030 (FY19 base year). It will continue to build on strategies such as: utilizing more ocean shipments that are cheaper and produce less GHG emissions than air freight; redesigning product packaging to use more sustainable materials; and implementing energy management techniques with manufacturing partners.

Supply chain emissions often account for a significant majority of scope 3 emissions. For example, electronics companies can expect scope 3 emissions to account for 77% of overall emissions and for fast-moving consumer goods (FMCG) companies this figure is 90%.[16] To track supply chain-related emissions, Cisco incentivizes suppliers to report GHG data through the CDP Supply Chain Program on an annual basis and has for over 10 years. It drives accountability through supplier scorecards and other sourcing processes.

> **"There is a lot we can do to reduce our scope 3 emissions, and we have committed to this across our value chain. This includes increasing product take-back and reuse, reducing the need for emissions associated with new manufacturing, and continuously looking to lower power consumption across our ecosystem."**
>
> Chuck Robbins,
> Chair and CEO of Cisco

**FIGURE 9: BUSINESS MATURITY ON MEASURING AND REPORTING SCOPE 3 GHG EMISSIONS, BY INDUSTRY**

How mature do you believe your company is across the following climate mitigation actions? Measuring and reporting scope 3 GHG emissions




## CEOS ARE REIMAGINING THEIR OPERATIONS AND WORKFORCE TO BUILD RESILIENCE AGAINST CLIMATE-RELATED EVENTS

CEOs are diversifying their product and workforce footprints to improve resilience and minimize the risk of climate-related events. Sixty-four percent of CEOs globally are diversifying their material inputs in products and operations and 63% have begun geographically diversifying their workforce and operations. However, companies have more room to develop, as only 12% and 22% have achieved advanced levels of maturity on both fronts, respectively.

Geographic diversification, in many instances, means shifting to more local models of production and consumption.

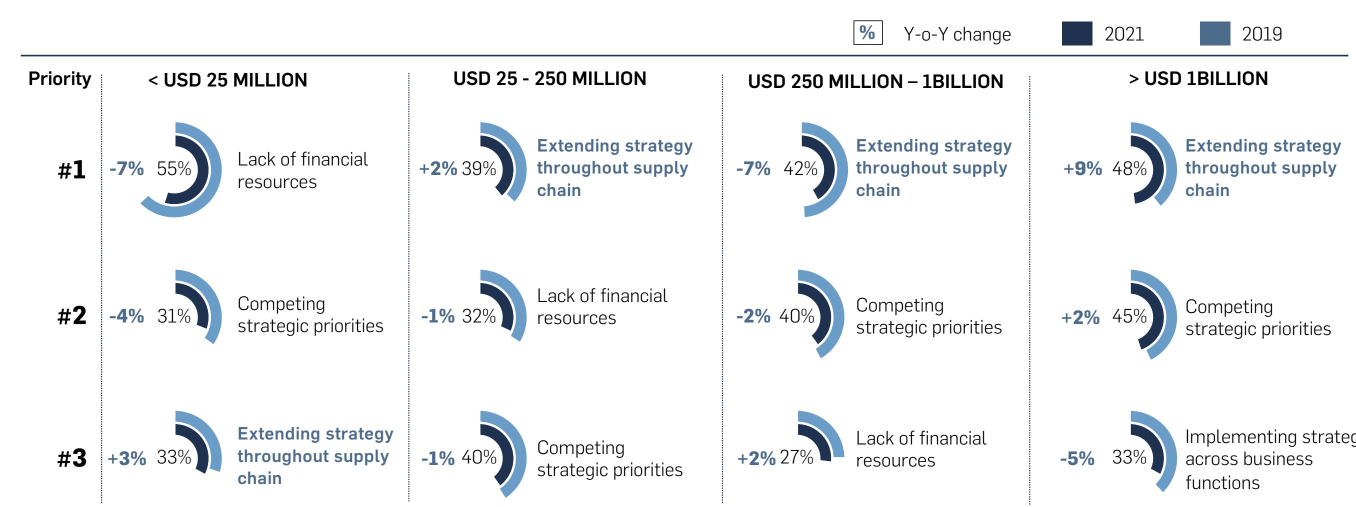
Kim Fausing, CEO of Danfoss, outlines how this strategy generates both sustainability and business value: "Localized sourcing and manufacturing enable a more sustainable future by reducing transportation costs, creating jobs, and preserving flexibility throughout the supply chain."

CEOs are also embracing circular product development to further diversify their material inputs and build resilience. Royal KPN N.V., for instance, found that its circularity program advanced both its sustainability agenda and allowed the company to protect its business from supply shocks. Joost Farwerck, CEO & Chairman of the Board of Management, says, "our circularity programme is partially a hedge against material scarcity and geopolitical risks to our supply chain. By collecting old equipment from our customers, we can reduce our dependency on foreign raw materials."

**FIGURE 10: EXTENDING SUSTAINABILITY STRATEGY ACROSS THE SUPPLY CHAIN IS THE TOP BARRIER FOR COMPANIES AFTER CROSSING USD 25 MILLION IN ANNUAL REVENUE**

Which barriers keep you from implementing an integrated and strategic company-wide approach to sustainability issues?

**REVENUE BREAKDOWN: TOP 3 PRIORITIES**




 "Other" indicates respondents who answered "do not know" or "not applicable." Percentages may not add to 100% due to rounding.

## Climate Resilience and Human Health

Extreme weather events not only imperil the flow of supply chains in vulnerable regions, but also pose a direct threat to the safety as well as the physical and mental health of the workforce. "We firmly believe that the health of the planet is interconnected with the health of people, businesses and the economy," says Sherman Kwek, Group CEO of City Developments Limited.

Our research finds that CEOs are particularly concerned. 42% of CEOs globally see negative health impacts across the workforce as a major climate-related risk to their business and industry, making it the second most selected risk in our survey. Alex Gorsky, Chairman and CEO of Johnson & Johnson, notes, "the COVID-19 pandemic laid bare some of the most significant issues faced not only by our business, but by the entire world: health inequities, weaknesses in global health security, and the need for greater resilience in global supply chains." Notably, negative health impacts are the most selected climate-related risk among CEOs in the Middle East and North Africa (54%). This is a region that climate models predict will become drier in the future, with a 20% decrease in freshwater availability by 2100.[17]

Companies can protect their workforces by providing health coverage to workers throughout the value chain. Additionally, businesses can create contingency plans for climate-related shocks and identify product opportunities and priorities to pair environmental and health benefits.[18]

## CEOS FEEL THEY HAVE ONLY JUST BEGUN ADVANCING NATURE-BASED SOLUTIONS TO BUILD MORE RESILIENT COMPANIES

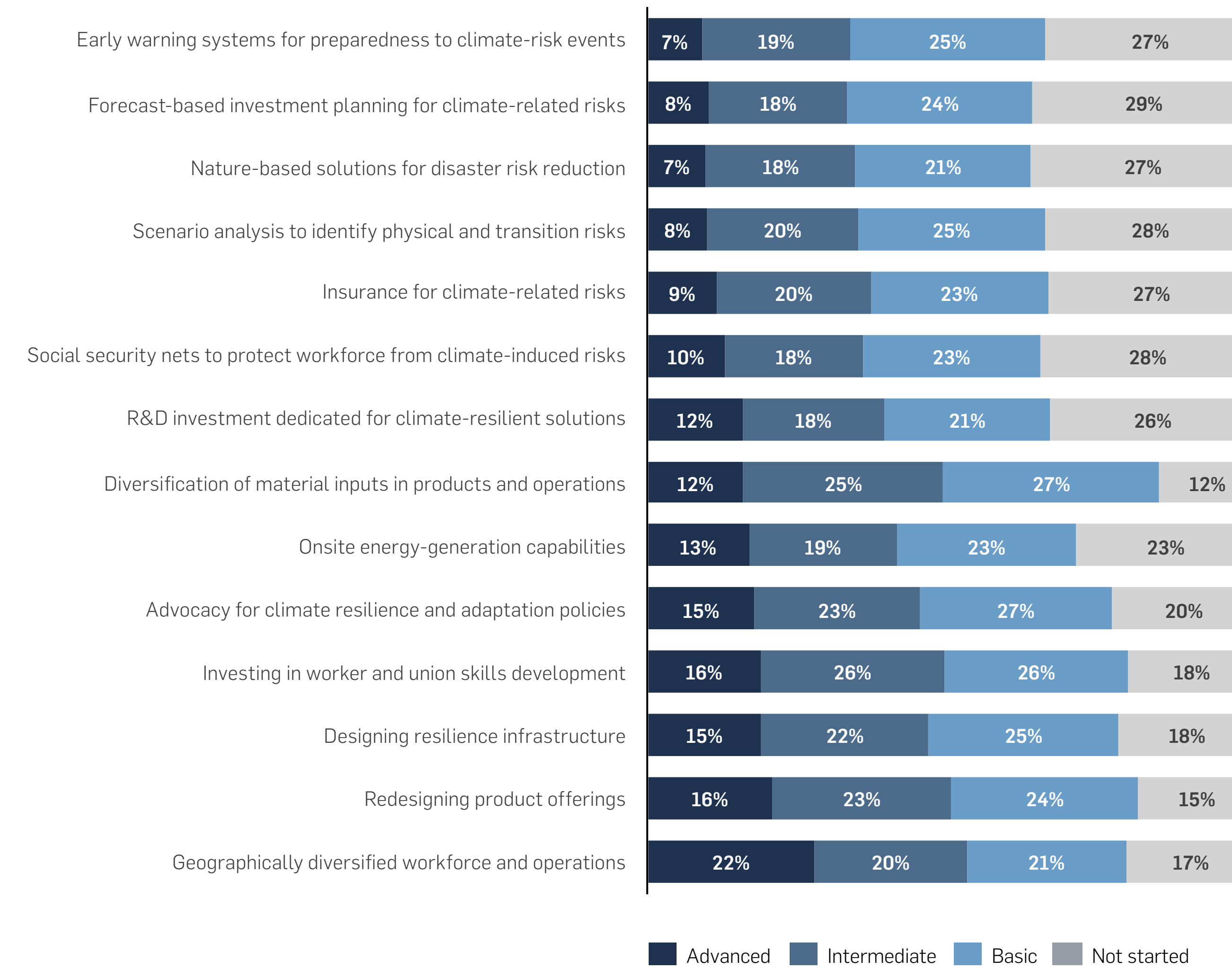
The United Nations Environment Programme (UNEP) reports that nature-based solutions are low-cost options that reduce climate risks, restore and protect biodiversity, and bring benefits for communities and economies.[19] While 46% of CEOs globally have begun exploring nature-based solutions, only 7% are utilizing them at an advanced level. The dual impact of nature-based solutions as a mitigation tactic and as a lever to build resilience against climate change poses an invaluable investment opportunity, say CEOs. As Alan Jope, CEO of Unilever, acknowledges, "we cannot solve the climate issue or global inequality without nature-based solutions."

Few leading companies are maximizing the potential of biodiversity protection to advance net-zero business models. For instance, the Brazilian cosmetics company, Natura — one of the four brands within the global beauty group Natura &Co — operates an "Ekos" range with formulas made with pure bioactive compounds from the Amazon rainforest. The model currently preserves two million hectares of land in the Amazon, an area equivalent to half of the Netherlands, and aims to preserve three million hectares by 2030. The company intends to expand its reach from 33 to 40 supplier communities and increase revenue streams with the use of 55 bioingredients, up from 38 today.

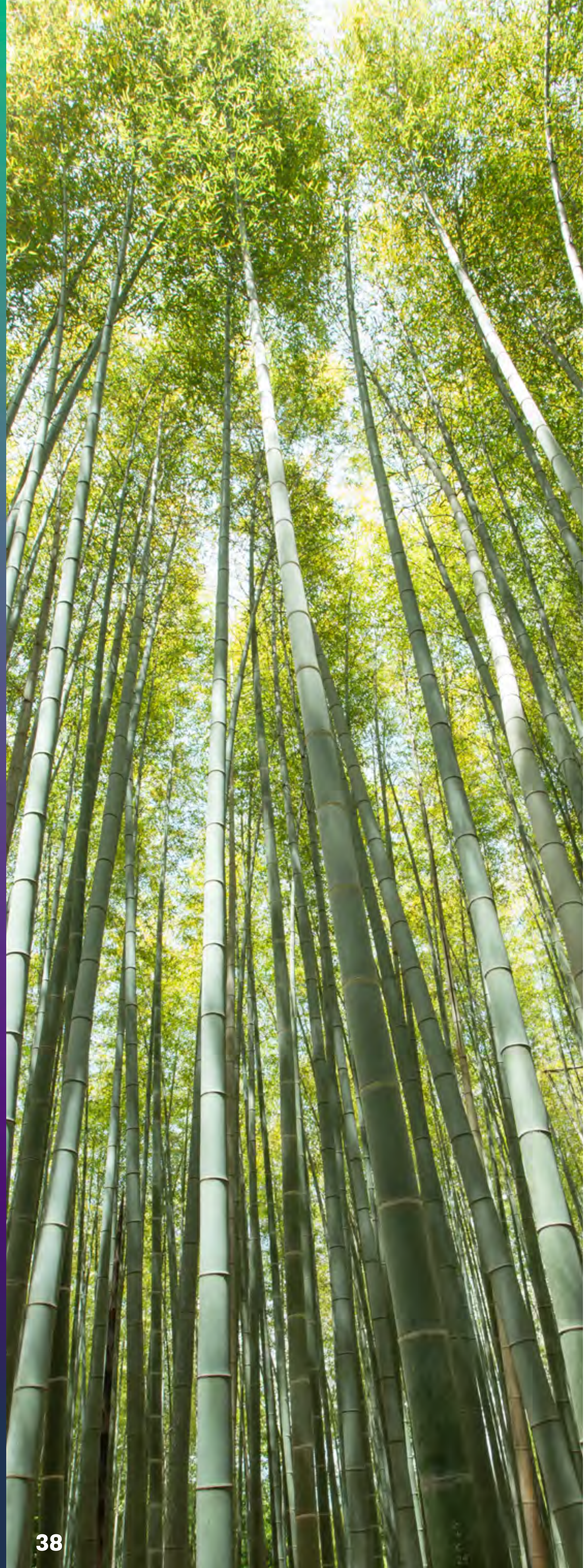
17. UNHCR (2021) Climate Change and Displacement in MENA.
18. United Nations Global Compact (2021) Business Narrative and Call for Health Resilient Climate Action. 19. UNEP (2021): Adaptation Gap Report 2020.

**FIGURE 11: GLOBAL MATURITY OF ADAPTATION AND RESILIENCE ACTIONS**

How mature do you believe your company is across the following climate adaptation and resilience actions?




Percentages may not add to 100%, as charts do not reflect those respondents who selected "do not know."



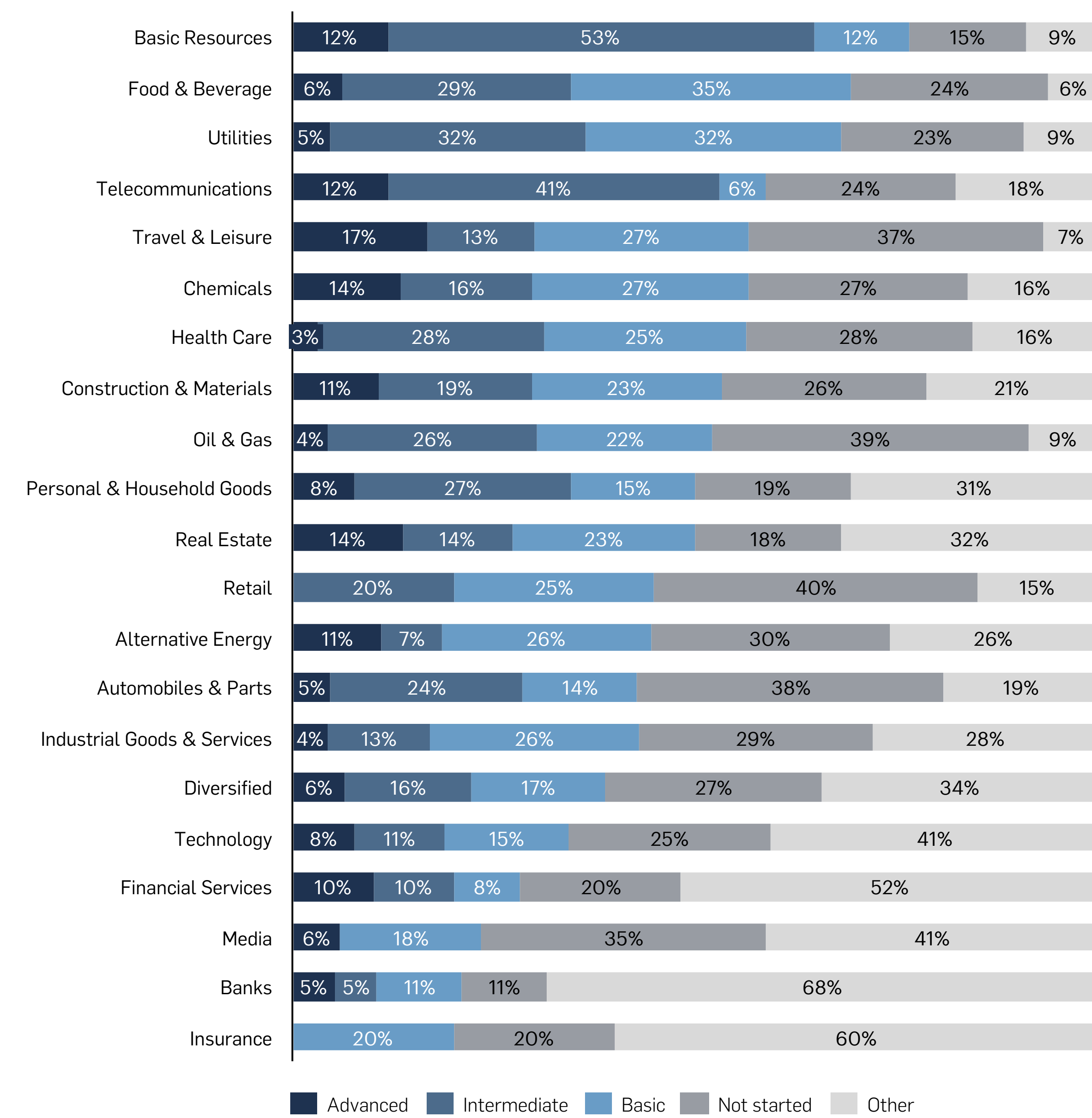
Forest of bamboo in Arashiyama, Kyoto, Japan. Photo: Adobe/Akeeris

According to Roberto Marques, Executive Chairman of the Board of Directors and Group CEO of Natura &Co, “biodiversity and forest regeneration are interconnected with the climate crisis. They deserve greater attention, and we need the private sector, Government, and civil society to align on an intentional set of goals.”

Similarly, LVMH, a French luxury group, is accelerating biodiversity preservation and restoration across 75 brands under the Group. It is strengthening its impact measurement techniques on biodiversity, discontinuing the use of raw materials from areas at high risk of deforestation, and using regenerative agriculture techniques to farm cotton, wool and grapes. According to Antoine Arnault, Image & Environment, LVMH, Member of the LVMH board, CEO of Berluti, “all of our products depend on nature; there is no champagne without grapes, or perfumes without flowers. Protecting nature and becoming a circular business is a critical priority for us.” LVMH has also launched a five-year partnership with UNESCO’s Man and the Biosphere program, working in the Amazon regions of Bolivia, Ecuador, Brazil and Peru to fight deforestation and promote biodiversity through reforestation and rehabilitation of degraded lands. Through these measures, LVMH aims to achieve a positive net contribution to biodiversity, certify 100% of raw materials to standards that guarantee the preservation of ecosystems, and rehabilitate 5 million hectares of land by 2030.

**FIGURE 12: BUSINESS MATURITY ON ADVANCING NATURE-BASED SOLUTIONS, BY INDUSTRY**

How mature do you believe your company is across the following climate resilience and adaptation actions? Nature-based solutions for disaster risk reduction




“Other” indicates respondents who answered “do not know” or “not applicable.”

## CEOS SAY THEY HAVE YET TO IMPLEMENT MEASURES TO MITIGATE WORKFORCE DISRUPTION AND ENSURE A JUST TRANSITION

Satyo Fatwan, Managing Partner of Dunamis Organization Services, remarks, “understand that success today but death tomorrow is useless — it’s about making sure that your company or community you serve will survive over the long term.”

While leading CEOs are cognizant of the inevitable workforce transformation, many are not as focused on the risks. Less than one in five CEOs globally consider widening social inequalities across the workforce (19%) to be a top risk due to the physical impacts of climate change. Only 16% consider reduced opportunities for workers, unions and local communities to be a top risk.

The transition to a net-zero economy risks alienating and displacing people dependent on high-emitting industries. According to the International Labour Organization (ILO), climate change and environmental degradation could jeopardize nearly 1.2 billion jobs, constituting 40% of the global labor force.[20] Alistair Phillips-Davies, Chief Executive of SSE, emphasizes the stakes: “It’s incredibly important that any dividend emerging from the green transition is shared throughout society. We can’t forget about people’s jobs and welfare.”

CEOs are not responding to this impending risk with urgency. Only half of CEOs globally (50%) have implemented social security nets to protect their workforces from significant climate-related risks. In addition, less than half of CEOs globally (47%) are investing in green jobs to deliver on the 2030 Agenda and the Paris Agreement. Leading CEOs recognize how important these investments are, as Anna Borg, President and CEO of Vattenfall, notes, “we cannot stop the world from progressing the sustainability transition. We need to ensure we reskill to prepare for the jobs of the future.”

Most critically given their level of transformation, 51% of companies in high-emitting industries are investing in green jobs. Businesses must support a just transition, and build social protection, by investing in green, decent jobs and by reskilling and upskilling workers and communities most impacted by the shift to a low-carbon economy. Clara Arpa, CEO of ARPA, remarks, “upskilling the workforce is critically important to prepare for the level of change we are experiencing. If workers do not have the proper skills today, they may be left out of the labor market as soon as next year.”

CEOs are not the sole custodians of workforce stability, but they recognize their role in preserving a just transition. “Our employees are our most important asset. As we seek to grow sustainably, we must make sure that our employees have the skills and training they need to grow with us,” says Ken Crichton, President Director of PT Archi Indonesia Tbk.

While business leaders work to upskill and reskill their workforces, CEOs note that Governments must create an environment for workers to retrain. At the same time, workers must act on these opportunities. As Alain Dehaze, Chief Executive Officer of the Adecco Group, notes, “the world is facing a reskilling emergency, made more urgent by the pandemic. We need a tripartite solution: Individuals must ‘learn to learn’ to remain competitive in the labor market; employers must invest in employability and up/reskill their workforce; while it is incumbent on Governments to ensure a fluid, friction-free labor market.”



20. International Labor Organization (2021) UN Secretary-General Calls for Accelerated Action on Jobs and Social Protection.

Woman farming. Photo: World Bank

TECHNOLOGY

# WILL DELIVER THE NEXT FRONTIER OF CLIMATE ACTION

Windmills at sunrise. Photo: World Bank/Jutta Benzenberg

## CEOS BELIEVE TECHNOLOGY IS THE FOREMOST ENABLER OF NEW BUSINESS MODELS AND WILL UNLOCK THE FUTURE OF INDUSTRY DECARBONIZATION

Technology is fundamentally transforming business models and it's also introducing entirely new industries to efforts to accelerate global decarbonization. As Christian Klein, CEO and Member of the Executive Board of SAP SE, explains, "technology can help address some of the most profound environmental, economic, and social challenges of our time at scale. It enables us to convert our biggest challenges into our greatest opportunities and make sustainability profitable and profitability sustainable." Advances in technologies from artificial intelligence (AI) to internet-of-things (IoT) to cloud management are collectively forcing CEOs to raise the ceiling on their climate ambitions.

Leaders acknowledge that while technology is not a silver bullet in isolation, it is a powerful enabler of enhanced climate action. Manon van Beek, CEO of TenneT TSO B.V., says, "innovation is more than just developing technology; it's about combining the right technologies, at the right time, at the right place." Jean Jereissati, CEO of Ambev, adds, "technology is a lever to solve problems, not an outcome in of itself. To address problems, we need to pair technology with collaboration, proper business models, and financial markets."

## INNOVATIVE RESEARCH AND DEVELOPMENT INITIATIVES ARE PROMISING NEXT-LEVEL SUSTAINABILITY PROGRESS SAY CEOS

Today, over three-fourth of CEOs globally (77%) are promoting sustainability-focused research and development — from product design to material selection. "The future promises autonomous-driving, smart houses and smart cities. To make this future possible, we will continue to proactively invest in innovation and the underlying technology infrastructure," says Toshiki Kawai, Representative Director, President & CEO, Tokyo Electron Limited.

Leading businesses are also virtually representing assets using digital twin technology to reimagine opportunities to embed sustainability early in product design. Globally, 44% of CEOs say that digital twin technology will make a significant impact on sustainability in their industry over the next five years; notably, 65% of CEOs in the real estate industry agree with that assessment. David Briggs, CEO of the VELUX Group, observes how digital twins are already supporting sustainability in his industry. "Digitalization is here, now it's a question of adoption. Every building should have a digital twin to help us understand how we replace, reutilize, and recycle components throughout the life cycle of a building."



## CEOS NOTE THAT WITHOUT EFFECTIVE DATA MANAGEMENT, THERE IS NO SUCCESSFUL CLIMATE AGENDA

Data is at the core of any effective climate response. As Deutsche Bank AG CEO, Christian Sewing, points out, "it is important that we get into impact measurement in the near future. Data is a game-changer in this context. To measure impact and manage risk, we need to have access to good data." CEOs say they are building ESG data-management capabilities. Globally, 81% of CEOs globally are leveraging technology to collect and manage organization-wide ESG data; yet only one-quarter of these CEOs (25%) are managing their data at an advanced level.

CEOs also highlight the potential of real-time track-and-trace and blockchain technologies to collect quality sustainability data. Globally, 71% of CEOs say that real-time track-and-trace of materials or goods will have a significant impact on sustainability in their industry over the next five years. 60% of CEOs say the same about blockchain track-and-trace supply chain solutions. As Annica Bresky, President and CEO of Stora Enso, explains, "digital track and trace technology will be critical to overcoming transparency challenges throughout the value chain. Increasing access to carbon footprint data will enable us to make fact-based choices on materials and products."



Data center interior server room. Photo: Adobe/Cybrain

Case Study

## JOHNSON CONTROLS

### Digital Twin Technology for Sustainable Buildings

Johnson Controls, a global leader in smart and sustainable building technologies, is applying digital twin technology — a virtual model to determine a physical object's performance – to improve energy efficiency of the built environment.

Globally, about 40 percent of $CO_2$ emissions are generated by the building sector, so innovations that reduce this impact will play a vital role in mitigating climate change.[21] Through Johnson Controls' OpenBlue platform and solutions, digital twin technology can drive 50% or more improvement in energy efficiency and carbon emission reduction. For instance, Johnson Controls has partnered with Dubai Electricity and Water Authority and Microsoft on the implementation of Al Shera'a, the smartest net zero-energy government building in the world. Through digital twin technologies, AI, and smart building management solutions, Al-Shera'a is expected to utilise up to 50% less water than comparable buildings and the total energy used in the building annually is expected to be equal to or less than the energy produced on-site. Digital Twin uses artificial intelligence on the digital model to optimize and predict efficiencies that can enhance the overall efficiency of the built environment. Furthermore, digital twin technology has the potential to unlock $1.3 trillion in economic value and 7.5Gt carbon dioxide equivalent emissions reductions by 2030.[22]

According to George Oliver, Chairman and CEO of Johnson Controls, "We can reinvest and enhance sustainability while generating economic returns. By upgrading equipment and deploying OpenBlue as a digital platform, we can utilize data to improve how a building operates, improve health and safety protocols, and create incredible efficiency."



## TO FULFILL THE PROMISE OF TECHNOLOGY, CEOS SAY THEY MUST OVERCOME AFFORDABILITY AND KNOWLEDGE CONSTRAINTS

Capturing the full potential of technology to solve the climate challenge requires lowering cost barriers. More than half of CEOs globally (54%) cite the affordability of available technologies as a critical barrier to their sustainability efforts in their industry. As Dr. Anish Shah, Managing Director and CEO of Mahindra & Mahindra Ltd., notes, "two areas will define global sustainability progress for people, businesses, and the planet: technology flow and capital flows."

These challenges are particularly pronounced in the Global South, where nearly two-in-three CEOs (65%) are restricted by the price of sustainability-enhancing technology, compared to 45% of CEOs in the Global North. Aloke Lohia, Group Chief Executive Officer of Indorama Ventures Public Company Limited, states, "few plastic industry players are confident in recycling investments because the technology is not fully developed and it is unclear who will own the cost."

In addition, technology-knowledge gaps prevent CEOs from realizing sustainability gains. More than half of CEOs globally (53%) report that they struggle to understand which technologies can enhance their sustainability performance. CEOs of smaller companies are disproportionately held back by knowledge limitations: 58% of CEOs of companies with less than USD 25 million in annual revenue struggle to understand which technologies to deploy to enhance their sustainability efforts — compared to 43% of CEOs of companies with greater than USD 1 billion in annual revenue.

21. UNEP (2020): 2020 Global Status Report for Buildings and Construction. 22. Accenture (2021): Accelerating Sustainability with Virtual Twins.

**FIGURE 13: TECHNOLOGY PROMISES TO SIGNIFICANTLY ACCELERATE THE FUTURE OF SUSTAINABLE VALUE CHAINS WITHIN THE NEXT 5 YEARS**

Which technology solutions will have a significant impact on sustainability in your industry within the next 5 years?

| | < USD 25 million | USD 25 - 250 million | USD 25 million - 1 billion | > USD 1 billion |
|---|---|---|---|---|
| Analytics on processes, equipment and products | 77% | 82% | 78% | 87% |
| Customer sentiment analysis on sustainability preferences | 77% | 83% | 82% | 84% |
| Artificial Intelligence (AI) demand forecasting | 74% | 74% | 79% | 78% |
| Electric vehicles for transportation and distribution | 73% | 67% | 77% | 77% |
| Autonomous and remote operations | 74% | 67% | 69% | 76% |
| Predictive models to schedule maintenance and repairs | 69% | 79% | 74% | 75% |
| Real-time track-and-trace of materials or goods | 71% | 67% | 63% | 77% |
| Tracking systems to manage product use after sale | 65% | 63% | 51% | 64% |
| Blockchain track-and-trace supply chain solution | 59% | 64% | 55% | 64% |
| Take-back and returns management systems | 60% | 53% | 52% | 53% |
| 3D printing for product design and equipment repair | 51% | 48% | 40% | 45% |
| Virtual representation of assets through digital twin | 46% | 38% | 41% | 46% |

SPECIAL FOCUS

# CREATING A NEW CLIMATE ECONOMY WITH THE GLOBAL SOUTH

South Korean cityscape. Photo: United Nations/Kilbae Park

## THE COP26 NEGOTIATIONS NEED TO ENHANCE SUPPORT FOR DEVELOPING ECONOMIES IN ORDER TO STRENGTHEN CLIMATE ACTION, SAY CEOS

At present, emerging markets and developing economies are most vulnerable to climate impacts and account for two-thirds of global GHG emissions.[23] Business leaders, particularly in the Global South, say they need support from G20 nations to tackle financing needs and unlock larger flows of private finance to climate solutions.[24]

According to the OECD, climate finance provided by developed economies to developing economies is USD 20 billion short of the USD 100 billion goal put forth in 2015.[25] Adding further complexity, just meeting the USD 100 billion target will no longer suffice: UNEP estimates that adaptation costs alone will only continue to rise, reaching USD 140 billion – 300 billion per year in 2030 and USD 280 billion – 500 billion in 2050.[26] "Capital has to flow from developed markets to emerging markets to enable us to manage this joint challenge of climate change together," says Dr. Anish Shah, Managing Director and CEO of Mahindra & Mahindra Ltd.

## BUSINESS LEADERS IN THE GLOBAL SOUTH ARE FEELING THE BITING REALITY OF SCARCE CAPITAL AGAINST A MONUMENTAL CRISIS

The COVID-19 pandemic has compounded financial challenges for CEOs in the Global South, whose sustainability budgets have contracted in comparison to those in the Global North. Nearly two-in-five CEOs (38%) in the Global South say they have had to reduce their sustainability budgets due to the pandemic, compared to only 24% of CEOs in the Global North. In tandem, the pandemic has disproportionately impeded sustainability progress in the Global South: twice as many CEOs in the Global South (41%) say the COVID-19 pandemic has negatively impacted sustainability efforts, relative to those in the Global North (21%). T. Taubie Motlhabane, Chief Executive Officer of Cape Town International Convention Centre, remarks, "in the past year, organizations have had to divert their attention away from climate change and focus on what's right in front of them — the global health crisis. It's like patching holes on a sinking ship — you must prioritize where you act first."

Critically, these budget contractions have been more pronounced among SMEs in the Global South: 49% of CEOs leading SMEs in the Global South reduced their sustainability budgets, compared to only 14% of the largest companies in the same region. The widening disparity risks derailing progress on climate action and the just transition, because seven-in-ten jobs in emerging markets are generated by SMEs, according to the World Bank.[27]

23. Expert Group on Climate Finance (2020) Delivering on the $100 billion climate finance commitment and transforming climate finance.
24. Global North and South definitions are not geographical boundaries and are distinguished on the basis of Gross National Income per capita. High-income economies with $12,535 or more are referred to be in the "Global North". Upper-middle income, lower-middle income and, low-income economies within the range of $1,035 and $12,535 GNI per capita are referred to be in the "Global South" (World Bank). 25. OECD (2019) Statement from OECD Secretary-General Mathias Cormann on Climate Finance in 2019. 26. UNEP (2020) Adaptation Gap Report, 27. World Bank (2021) Small and Medium Enterprises (SMEs) Finance.



**FIGURE 14: THE COVID-19 PANDEMIC HAS SET BACK SUSTAINABILITY PROGRESS IN THE GLOBAL SOUTH**

To what extent, on average, do you feel the pandemic has delayed or accelerated your sustainability progress?

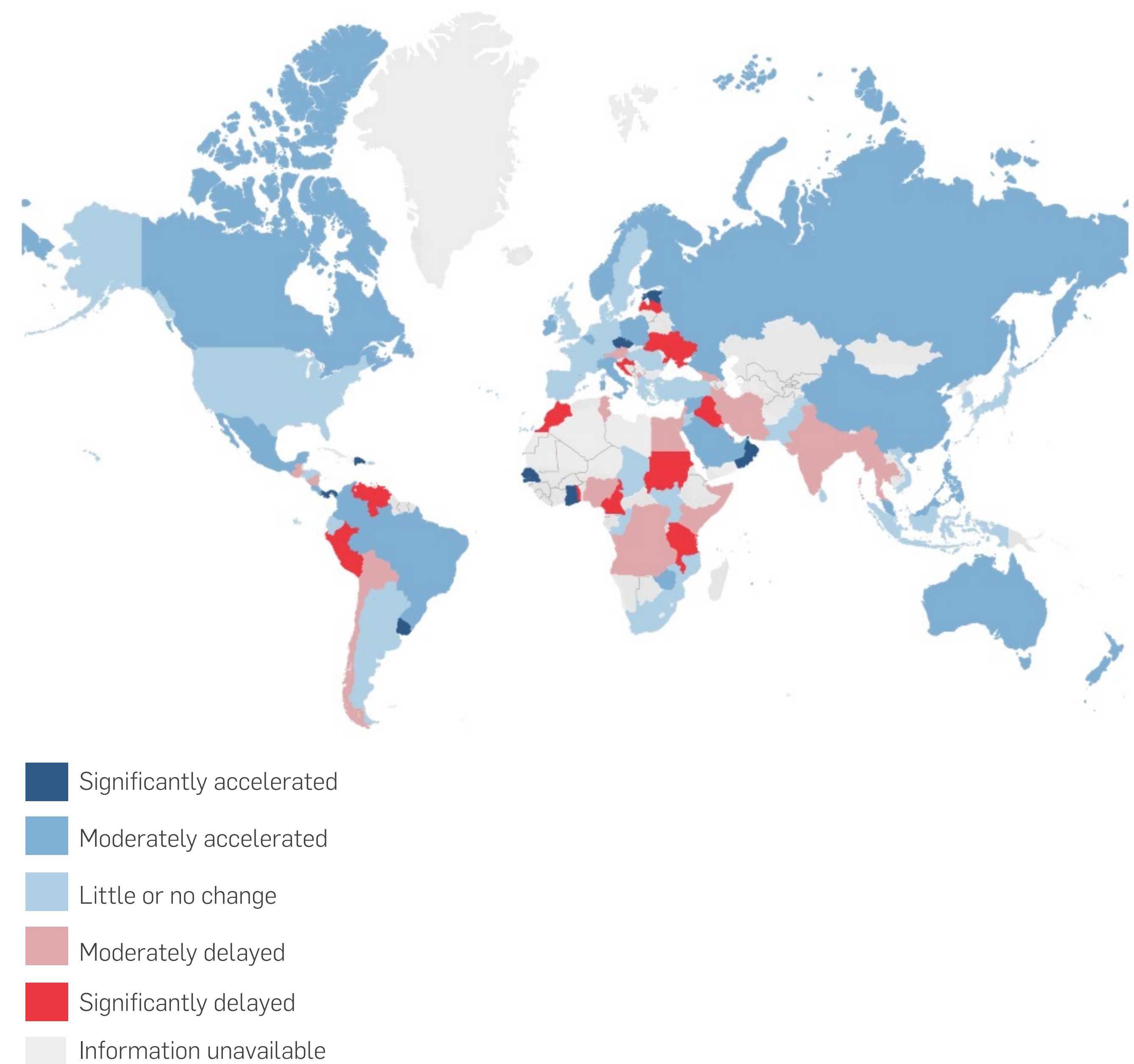
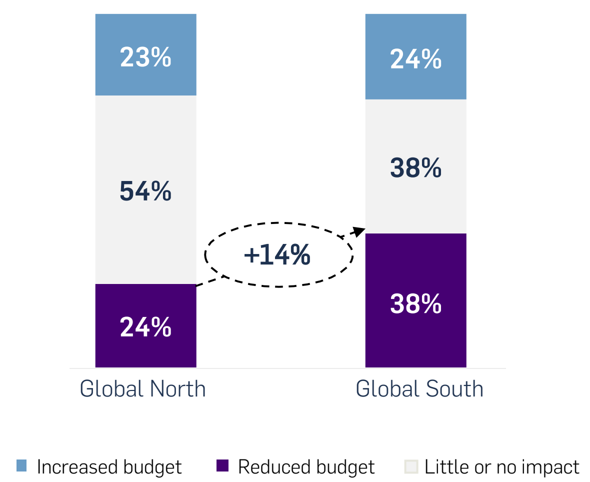


**FIGURE 15: THE COVID-19 PANDEMIC HAS SET BACK SUSTAINABILITY BUDGETS IN THE GLOBAL SOUTH**

To what extent do you feel the pandemic has increased or decreased your budget for sustainability?

% of CEOs who say their company has changed their budget for sustainability initiatives due to the pandemic




## CEOS SAY CAPITAL, KNOWLEDGE, AND TECHNOLOGY MUST FLOW TO THE GLOBAL SOUTH TO LOWER THE SUSTAINABILITY PREMIUM FOR LEAPFROG ACTIONS

Current levels of public and private funding are not meeting the requisite capital needed for a successful net-zero transition. Investments in developing economies to reduce emissions go further than in more advanced economies. That's because developing economies can generally adopt cleaner, more efficient technologies faster because they do not have to phase out or refit as many existing, polluting energy projects as do more advanced economies. For business leaders, financial limitations present challenges beyond capital allocation. They restrict a company's ability to access sustainable goods and services, and CEOs in the Global South are disproportionately feeling this pressure: 63% of CEOs in the Global South cite high costs associated with the sustainability premium as a pressing barrier to their sustainability agenda, compared to 53% of CEOs in the Global North.

CEOs from around the world are acutely attuned to both the gravity and urgency of closing the financing gap. For many CEOs, COP26 presents the ideal forum for business and Governments to rectify the growing financing gap between what is needed and what is currently provided.

 Percentages may not add to 100% due to rounding.

## DESPITE THESE CHALLENGES, CEOS IN THE GLOBAL SOUTH REMAIN COMMITTED TO PRIORITIZING CLIMATE ACTION AND REDUCING GHG EMISSIONS

While financially constrained, CEOs in the Global South are signalling a steady commitment to climate action as they navigate the COVID-19 pandemic. Over half of CEOs in the Global South (59%) are prioritizing climate action in their recovery from the pandemic and 55% are adopting more ambitious sustainability targets.

> **"The pandemic may slow some initiatives due to budget constraints in 2021, but that doesn't stop us from brainstorming, researching, and planning for new sustainability ventures."**
>
> Soraya Narfeldt,
> CEO of RA International

28. BBC (2018): Climate change: The massive $CO_2$ emitter you may not know about.

Case Study

## DALMIA CEMENT

### Leading the Industry to Cleaner Cement

Dalmia Cement, the Indian cement manufacturer, is transforming cement production through adoption of multiple levers including the use of alternative and biofuels in cement kilns and increasing renewable energy power generation to decrease fossil fuel intensity on cement manufacturing processes.

The company also uses industrial waste from steel, thermal power and aluminium production materials, significantly reducing limestone and energy consumption per ton of cement. As a result, Dalmia Cement's carbon footprint is 40% lower than its 1990 levels.

The company has also announced to set up a pilot project to capture its emissions before they enter the atmosphere. In partnership with UK-based technology company Carbon Clean Solutions, Dalmia Cement plans to set up the industry's largest carbon-capture facility at its Tamil Nadu plant in India. The initiative will capture 500,000 tons of carbon dioxide per year. The feasibility study of the project has been completed this year with support from ADB.

The cement industry accounts for 8% of global $CO_2$ emission, which makes it one of highest-emitting industries.[28] The development of a robust price on carbon across regions can significantly accelerate the research and development needed in the cement industry.

> **"The Paris Agreement has a provision for an international carbon market and technology transfer mechanism. This may result in accelerated deployment of many projects related to $CO_2$ savings and making of innovative low/zero carbon products."**
>
> Mahendra Singhi,
> Managing Director and CEO, Dalmia Cement

NEW MEASURES OF COMPETITIVE ADVANTAGE

# LEADERSHIP FOR THE ELEVENTH HOUR

A butterfly ramble. Photo: World Bank/Curt Carnemark

Shipping containers. Photo: World Bank/Dominic Sansoni

## AN EFFORT TO IDENTIFY LEADERSHIP BEHAVIORS ACROSS 9,000 OF THE WORLD'S LARGEST COMPANIES USING THE LATEST TECHNOLOGY INDICATORS

Using Accenture's Competitive Agility Index (CAI), we assessed the performance of more than 9,000 of the largest companies globally on indicators for growth, profitability and sustainability/trust.[29] Using each company's raw scores across these indicators respective to their industry peers, we isolated four distinct segments to identify various classifications of high-performance business and sustainability leadership.

We blended the respondents across the UN Global Compact-Accenture CEO Survey with the entire CAI database to identify 173 overlapping companies. These companies were classified into one of the four segments based on their performance across each of three pillars against their industry peers in the wider CAI dataset. Of these identified companies, 35% were classified as transformational, 39% as vulnerable, 12% as transactional, and 15% as notional.

Our analysis dissects how the companies in each classification have responded across the survey, and it identifies behaviors that leaders are taking. This approach generated insights on attributes of transformational companies and how they maintain leadership on both business and sustainability performance.

29. The CAI scores 9,030 companies across 20 sectors and 127 discrete industries using more than 4 million data points from publicly available data (historical and future projections) as well as innovative sustainability and trust measures powered by Arabesque S-Ray®. S-Ray combines over 200 environmental, social and governance (ESG) metrics with news signals from over 50,000 sources across 15 languages. It also rates companies on the normative principles of the United Nations Global Compact: Human Rights, Labor Rights, the Environment, and Anti-Corruption (GC Score).



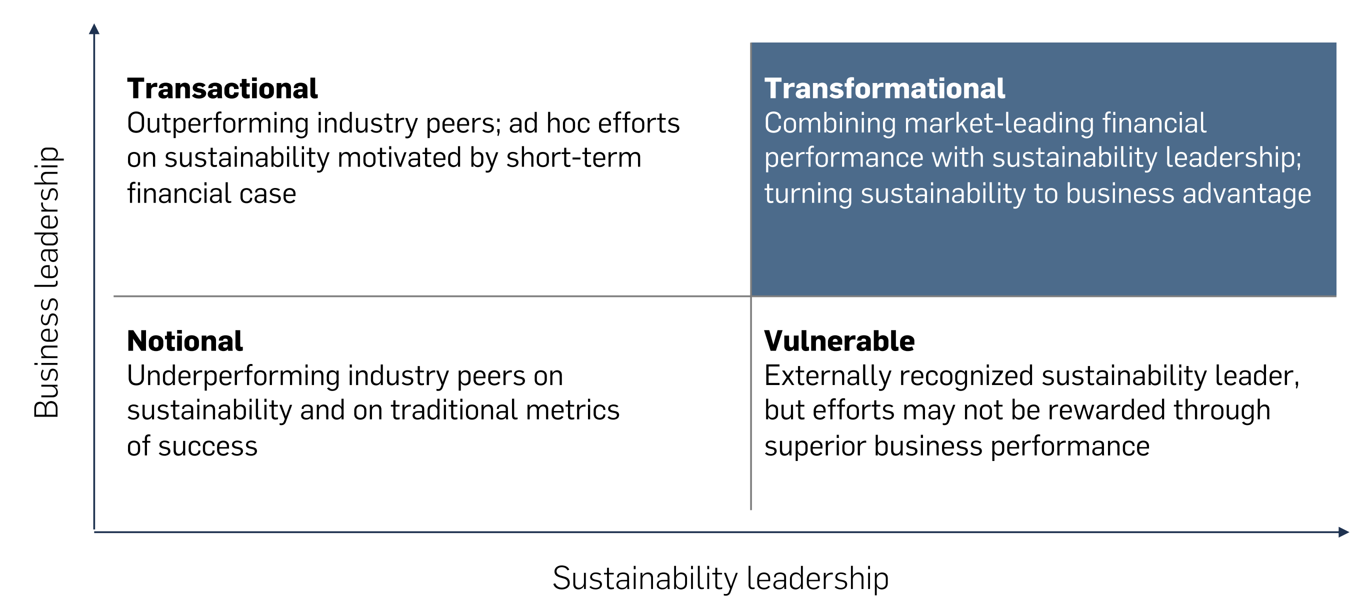
**Vulnerable:** Sustainability leaders that are underperforming their peers on traditional business metrics. Their leadership position in sustainability may be vulnerable without turning their leadership into a business advantage and greater value creation.

**Transformational:** Companies that are regarded as sustainability leaders that also outperform their industry peers on traditional business metrics. These companies may be finding ways to monetize sustainability and link action directly with a quantifiable business case, thereby turning sustainability into a competitive advantage through, potentially, transformational new approaches.

**Notional:** Companies that are regarded as neither high-performing businesses nor sustainability leaders, that underperform their industry peer group and are not regarded as a sustainability leader by any of the three leading indices. These companies may be struggling to devote resources to sustainability or may yet have constructed the business case for action and are making largely notional efforts.

**Transactional:** High-performing businesses that are not regarded as sustainability leaders. Their action on sustainability may be prompted by a short-term, quantifiable business case, but leaders may be unwilling to go beyond a transactional approach with immediate and discernible payback.

**FIGURE 16: TRANSFORMATIONAL LEADERS ARE COMBINING SUSTAINABILITY LEADERSHIP WITH SUPERIOR MARKET PERFORMANCE**



### TRANSFORMATIONAL LEADERS HAVE REMAINED UNDETERRED BY THE COVID-19 PANDEMIC AND HAVE INCREASED THEIR BUDGETS FOR SUSTAINABILITY

Our research finds that not a single leader in the transformational category reduced their budget for sustainability due to the COVID-19 pandemic. In fact, 41% of transformational-company CEOs increased their budgets for sustainability (by up to 25%, on average). In contrast, 14% of CEOs in the transactional category, 17% of CEOs in the vulnerable category, and 31% of CEOs in the notional category reduced their budgets for sustainability due to the pandemic.

### LEADING CEOS HAVE ALREADY BEGUN DIVERSIFYING THEIR OPERATIONS AND WORKFORCES TO MANAGE CLIMATE RISK

Thirty-three percent of CEOs of leading companies within the transformational category say they are at an advanced stage of maturity in diversifying material inputs required for products and operations — compared to 12% of CEOs in all other categories, and 9% of CEOs in the notional category.

Similarly, transformational-company CEOs are strong in geographic diversification of their workforces across operations — 55% of these CEOs are advanced here, relative to 32% of CEOs in all other categories.

### LEADERS ARE RAPIDLY ACCELERATING R&D INVESTMENT IN CLIMATE-RESILIENT SOLUTIONS TO FUTURE-PROOF THEIR BUSINESSES FROM THE WORST IMPACTS OF CLIMATE CHANGE

More CEOs of transformational companies are at an advanced level of maturity in boosting R&D investment dedicated for climate resilient solutions (31% vs. 12% all other categories); designing resilience infrastructure (41% vs. 20% all other categories); and adopting nature-based solutions for disaster-risk reduction (22% vs. 6% all other categories).

Despite their long-term benefits, such capital-intensive actions may not yield short-term financial gains, which are difficult to quantify by the transactional leaders.

### CEOS OF TRANSFORMATIONAL COMPANIES ARE HOLDING THEMSELVES TO HIGHER STANDARDS OF ACCOUNTABILITY ON CLIMATE ACTION

A greater number of transformational-company CEOs say they are at an advanced level of maturity in developing net-zero targets (49% vs. 32% all other categories); linking executive renumeration to greenhouse gas reduction targets (20% vs. 12% all other categories); and assessing and disclosing climate-related financial risks (43% vs. 16% all other categories).



### LEADING CEOS HARNESS THE POWER OF TECHNOLOGY ACROSS THEIR VALUE CHAINS TO MANAGE THE EFFECTS OF CLIMATE DISRUPTION

22% of transformational-company CEOs are prioritizing investment in digitizing their value chains with advanced technologies, while just 6% of notional-company CEOs and 0% of transactional-company CEOs say the same.

Leaders of transformational companies are at an advanced level of maturity in leveraging technology to collect and manage ESG data (35% vs. 23% all other categories). Yet, more transactional companies are at an advanced level of maturity on other dimensions, like transitioning to green IT and cloud architecture (33% vs. 25% all other categories).

Looking forward, transformational-company CEOs see the following technologies as those most likely to make the greatest impact and drive the future of sustainability in their industries: analytics for processes, equipment, and products (89%); real-time track-and-trace of materials and goods (85%); and artificial intelligence for demand forecasting (82%).

### TRANSFORMATIONAL COMPANIES ARE SHIFTING FROM FOSSIL FUELS, FASTER...

26% of CEOs of transformational companies say they are advanced in their journeys to divest from existing fossil fuel investments, while 0% of transactional-company CEOs say the same. Transformational-company CEOs are also leading the charge toward preparing their firms for a carbon-neutral future by making sure their capital is allocated accordingly.

### ... AND THEY'RE MANAGING SOCIAL IMPACTS ON THEIR PEOPLE FROM THE TRANSITION, BETTER.

Transformational leaders are supporting their people and their businesses by investing in green jobs (62% vs. 52% all other categories). In addition, more transformational leaders are at an advanced level of maturity in implementing social security nets to protect the workforces from climate-induced risks (24% vs. 11% all other categories) and investing in worker skills and union development (26% vs. 22% all other categories).

Sacks of grain. Photo: World Bank/Curt Carnemark

**FIGURE 17: KEY BEHAVIORS ENABLING STRONG SUSTAINABILITY AND MARKET PERFORMANCE**

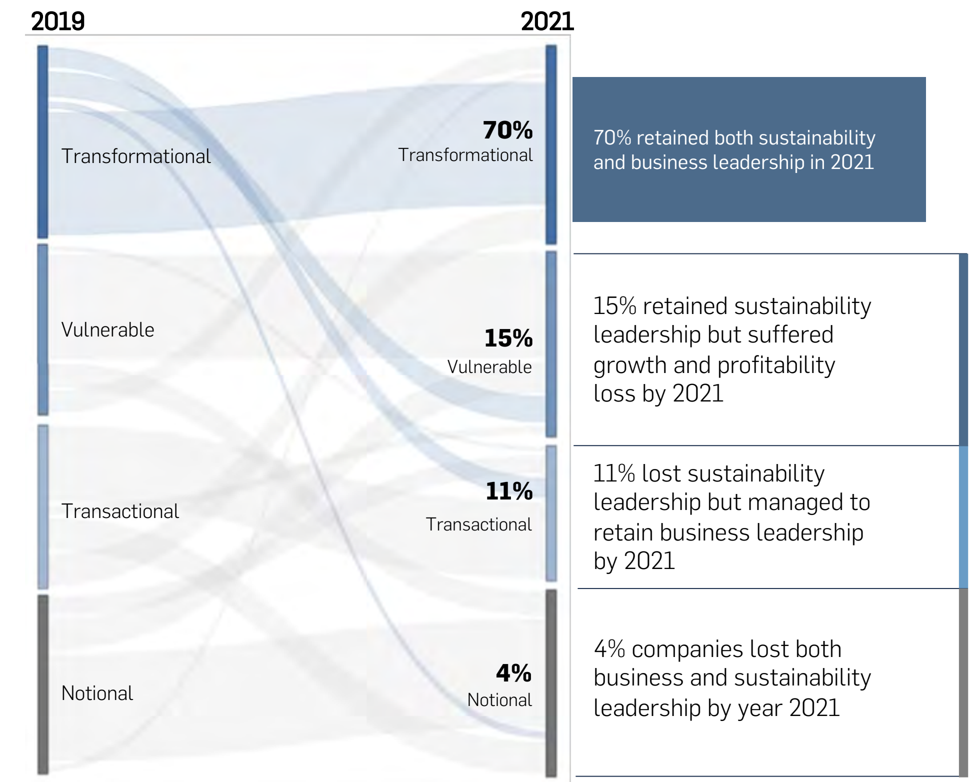
| BEHAVIOR | QUOTE | % OF RESPONDENTS | | |
|---|---|---|---|---|
| | | Transformational | Transactional | Global |
| The pandemic has increased your budget for sustainability | "The pandemic poses an opportunity for CEOs to prioritize sustainability with more urgency." Peter Zaffino, President and Chief Executive Officer, American International Group | 41% | 29% | 22% |
| Diversification of material inputs in products and operations | "Integrating sustainability across your operations can initially be challenging, but continued discipline will uncover its benefits. For example, investment in our logistics and manufacturing capabilities has increased our energy efficiency, which supports our long-term sustainability commitments." Praveen Singhavi, President, APRIL Group | 34% | 20% | 15% |
| R&D investment dedicated for climate resilient solutions | "Leading by example, we encourage and challenge our competitors to make investments in building more resilience in our communities. One organization can only do so much, but organizing a collective effort takes advantage of the benefits of scale." Roy Bagattini, Group Chief Executive Officer, Woolworths Holdings Ltd. | 33% | 11% | 15% |
| Digitizing the entire value chain with advanced technologies | "Digital technology will be our main concern in all company activities, including supply chain improvement. We need to combine the wisdom of our ancestors with the state-of-art technology in conducting in-depth research based on the biodiversity of Indonesia's natural resources – this will shape our actions in the future." Dr. (HC) Martha Tilaar, Founder and Chairwoman, Martha Tilaar Group | 24% | 0% | 12% |
| Divesting from existing fossil fuel investments | "It is an important issue for human beings to create a new energy system without relying on fossil fuels and not to waste energy." Shinichi Odo, Representative Director Chairman of the Board, NGK SPARK PLUG CO., Ltd. | 26% | 19% | 11% |
| Assessing and disclosing climate-related financial risk | "Climate change and ESG considerations have become critical to managing risk and seizing opportunities in today's global markets." Rob Fauber, President and Chief Executive Officer, Moody's | 43% | 8% | 16% |
| My company is investing in green jobs to deliver on the 2030 Agenda and the Paris Agreement | "We are dealing with a massive skills gap. It's estimated the UK energy industry alone will need 400,000 jobs between now and 2050 to support the green transition." John Pettigrew, CEO, National Grid | 62% | 67% | 47% |



**FIGURE 18: TRANSFORMATIONAL LEADERSHIP IS NOT ONLY HARD TO ACHIEVE, BUT CHALLENGING TO SUSTAIN**

**RELATIVE SHIFT OF COMPANY CLASSIFICATION FROM 2019 TO 2021**

**LEADERSHIP ON SUSTAINABILITY AND BUSINESS IN 2021**




**Becoming a business and sustainability leader is much easier than remaining one**

# 30%

of CEOs of transformational companies lost their industry leadership in 2021. To better understand why, we drilled down deeper to uncover the behaviors of transformational leaders that maintained their top position over a three-year horizon.

**CEOs of transformational companies sustain their leadership by prioritizing sustainability upskilling**

# 50%

of CEOs that retained their sustainability leadership lead companies that are advanced on upskilling or recruiting talent with expertise in sustainability. This compares favorably with 27% of CEOs who said the same at companies that subsequently dropped from the transformational category (and 30% of all other CEOs).

THE ROAD TO 2030

# WHAT BUSINESS NEEDS FROM POLICYMAKERS


Human rights and alliance civilizations room. Photo: UN/Jean-Marc Ferré

> **“At COP26, it will be important for the G20 to commit to a 1.5°C trajectory — while investors and shareholders are realigning to long-term commitments, Governments must take the lead in parallel.”**
>
> Alistair Phillips-Davies, Chief Executive of SSE

> **“In Indonesia, businesses want to set net-zero carbon targets, but the Government has not released guidelines or rules to provoke action. The Government has an opportunity to influence action through fiscal and tax policies.”**
>
> Surya Paloh, Chairman and Founder of Media Group

> **“There is a gap between norms and rules from politicians. Leaving sustainability policies as recommendations instead of obligations will not cause the level of change that we need.”**
>
> Clara Arpa, CEO of ARPA

> **“To realize the promise of true multi-stakeholder climate action, Governments must move beyond aspiration and put enabling policies in place to catalyze and support real societal change — from consumer behavior to industrial transformation.”**
>
> Börje Ekholm, President & CEO of Ericsson

> **“From COP26 we would like to see more clarity from Governments and proliferation of measurable targets, if the pressure is there and the money is there, we are capable of doing unbelievable things.”**
>
> Bertrand Schmitt, CEO, BDR Thermea Group



## ALIGN NATIONALLY DETERMINED CONTRIBUTIONS (NDCS) TO A 1.5°C WARMING TRAJECTORY

Globally, CEOs are looking to Governments and policymakers to align their NDCs to a 1.5°C warming trajectory to better understand climate ambitions for their own companies. Sixty-two percent of CEOs — and 66% of CEOs of the world’s largest companies — say they support reducing global warming from a 2°C rise to a 1.5°C rise above pre-industrial levels, in line with UN Intergovernmental Panel on Climate Change recommendations.

CEOs are looking to harness “ambition loops,” a positive feedback cycle in which private sector action and Government policies can reinforce one another. For instance, the recent Executive Order on Climate-Related Financial Risk by the United States Government introduced a requirement for major federal suppliers to set a science-based target.[30]

As the world continues to battle the coronavirus pandemic while the climate reality intensifies, stronger NDCs can help business align their own business models — which are currently under dramatic change — to align with a 1.5°C Pathway. Yet, just 18% of CEOs today feel Governments and policymakers have given them the clarity needed to recover better from the COVID-19 pandemic in line with a 1.5°C warming trajectory.

According to the latest NDC synthesis report by the United Nations Framework Convention on Climate Change (UNFCCC), current plans will lead to warming of 2.7°C above pre-industrial levels.

30. SBTi (2021): Biden Administration Encourages the Requirement of Science-Based Targets for Federal Suppliers.



Chasing coral. Photo: UNEP

"The most important focus areas for COP26 should be implementing a carbon price mechanism to incentivize innovation."

Roberto Simões, CEO of Braskem

"I believe in carbon pricing as a lever and the market will adjust to a carbon price."

Mairead Lavery, President and Chief Executive Officer of Export Development Canada

"A well-functioning, global $CO_2$ emission trading system is the best way to drive this transformation as fast as possible. It not only prices cost, but also sparks and accelerates innovation."

Anna Borg, President and CEO of Vattenfall

"To accelerate decarbonization efforts, we need to price carbon globally. As an industry, we are on board, we are not dragging our feet, and we believe this is a global imperative. Give us a level playing field so we can accelerate innovation."

Dimitri Papalexopoulos, Chairman of the Group Executive Committee of TITAN Cement Company



## ENHANCE GLOBAL COOPERATION ON CARBON PRICING MECHANISMS ALIGNED WITH THE PARIS AGREEMENT

Globally, 36% of CEOs — and 47% of CEOs of the largest companies — are calling for policymakers to ratify Article 6 of the Paris Agreement at the COP26 negotiations; the article pertaining to international cooperation, carbon markets and carbon credit mechanisms to help industries transition to net-zero. Moreover, 39% of CEOs of the world's highest-emitting industries are calling on policymakers to ratify Article 6.

For CEOs, aligning carbon-pricing instruments will create a more stable, predictable environment to incentivize emissions reduction solutions. At the same time, business leaders call for a fair and global market for carbon to ensure accountability. Finalizing the rules for international market mechanisms under Article 6 of the Paris Agreement will provide the necessary support to minimize carbon leakage and create a more level playing field across industries.[31]

## MEET AND EXCEED THE USD 100 BILLION COMMITMENT IN CLIMATE FINANCING FOR THE GLOBAL SOUTH

Businesses around the world do not have equitable access to capital to accelerate ambitious climate action: 31% of CEOs in the Global South say their inability to access capital is a major risk preventing their business from shifting to a low-carbon economy, in comparison to just 16% of CEOs in the Global North.

31. This corroborates the findings of the IPCC Working Group 1 report on the physical science basis of the sixth assessment that the UN Secretary-General termed "Code Red for Humanity," calling on the private sector to support a minimum international carbon price.

According to the Organization for Economic Cooperation and Development (OECD), climate finance provided by developed countries to developing countries is USD 20 billion short of the USD 100 billion goal set out in 2015.[32] Additionally, greater climate financing is required for targeting adaptation and resilience actions. In 2019, USD 20 billion went to adaptation and resilience activities, while UNEP estimates that adaptation costs in developing countries are USD 70 billion. This USD 50 billion financing gap amounts to a vast chasm that increases risk and exposure to the worst consequences of climate change.

Despite these climate-financing shortages, USD 5.9 trillion went to fossil-fuel subsidies in 2020.[33] Moreover, Governments need to prioritize a faster and just transition from a gray to a green economy by aligning policies and recovery plans with the latest climate science.[34]

A recent letter signed by over 600 CEOs, calls on Governments to align public finance, COVID-19 recovery spending and fiscal policies with a 1.5°C trajectory, while ensuring adequate support for adaptation and resilience measures.[35] Furthermore, CEOs add that reducing the cost of capital and de-risking long-term climate investments can stimulate R&D and innovation in net-zero solutions.

32. OECD (2021) Climate Finance for Developing Countries. 33. IMF (2021) Still Not Getting Energy Prices Right: A Global and Country Update of Fossil Fuel Subsidies. 34. United Nations Global Compact (2020): A Statement from Companies in the Science Based Targets Initiative. 35. We Mean Business Coalition (2021): COP26: Business Calls on G20 to Keep 1.5°C Within Reach.

"At COP26, the developing world and developed world need to come to a common understanding on the way forward. Capital flows from the developed world to the developing world, and thus policies, must be understood uniformly across the world."

T.V. Narendran, CEO & Managing Director of Tata Steel Ltd.

"At COP26, we must focus on plans to provide greater climate investments to the Global South to expand access to clean water and energy so as to achieve a more equitable and sustainable future for all."

Sherman Kwek, Group CEO of City Developments Ltd.

"The developing nations will only embrace decarbonization if the developed world covers the cost that would have for their development, which it should do as a top priority."

Carlos Torres Vila, Chairman of BBVA

"Developed countries must share their action plan for delivering $100 billion every year to fulfil their commitment to spur innovation in developing countries."

Mahendra Singhi, Managing Director and CEO of Dalmia Cement (Bharat) Ltd.

"Today there is no standard in what biodiversity actually is, or how it is measured, or how it is tracked. We really want to make sure that we create such a standard that is scientifically based."

Annica Bresky, President and CEO of Stora Enso

"Successful negotiations will create an agreement for nature to halt and reverse natural loss by 2030."

Roberto Marques, Executive Chairman of the Board of Directors and Group CEO of Natura &Co

"The link between climate and biodiversity is undisputable and we need a clear way of measuring the impact of our efforts. The private sector has the means to tackle this problem, we just need guidance from policy makers on what to do."

Antoine Arnault, Image & Environment, LVMH, Member of the LVMH board, CEO of Berluti

"Impacts on biodiversity are fully dependent on the location and ecosystem balance in areas of operations. It is becoming urgent to design standardized methodologies to assess impacts and mitigation measures."

Ignacio S. Galán, Chairman & CEO of Iberdrola



## ESTABLISH COMMON STANDARDS FOR BIODIVERSITY PROTECTION AND PATHWAYS FOR NATURE-BASED SOLUTIONS

Business leaders are also calling for comprehensive frameworks and reporting standards on biodiversity to better evaluate the impact of their operations. Globally, fewer than one in five CEOs (21%) recognize the loss of biodiversity and related ecosystem services — such as ocean acidification, pollination collapse and marine species redistribution — as a risk to their business or industry.

Compared to emission-reduction frameworks and performance standards, biodiversity-impact evaluation remains nascent. Yet, more than USD 44 trillion of economic value — more than half of global GDP — is moderately or highly dependent on nature, underscoring the gravity of the challenge.[36]

Investments in nature-based solutions are not feasible for the private sector alone.[37] Governments must encourage innovative mechanisms to attract companies to scale up nature-based solutions as multilateral development banks and countries increase adaptation financing.

36. World Economic Forum (2020): Nature Risk Rising. 37. UNEP (2020): Adaptation Gap Report 2020.

## INCREASE BUSINESS ENGAGEMENT IN CLIMATE POLICY FORMATION FOR COLLABORATIVE CLIMATE ACTION

Governments and policymakers need to engage the private sector more proactively on climate solutions, from the quick wins to the long-term engagements. Only 30% of CEOs globally say they believe Governments have a good understanding of business opinion on climate policy.

Collaboration between Government and business in areas such as procurement systems and planning and developing green infrastructure can deliver accelerated innovation and transition. For instance, in Europe, Government and business partnership in the North Sea could develop renewable energy sharing capabilities across multiple countries for the first time.

CEOs want to share their expertise, innovation and climate solutions at scale through policy to halve emissions by 2030 and achieve net-zero by 2050 in line with the Paris Agreement.

"Global cooperation is needed to handle electricity production and services effectively. Many areas have good energy production efficiency, the question is how bodies such as the G20 will facilitate international collaboration."

Ken Miyauchi, Representative Director & Chairman of SoftBank Corp.

"The sustainability challenge, and particularly climate change, is global by definition and it needs to be addressed as such. Different standards across countries only raise complexity. We need increased public-private cooperation and Government support to achieve greater standardization and commonality."

Luis Maroto, President & CEO, Amadeus IT Group, S.A.

"The pandemic has highlighted the importance of Governments creating meaningful partnerships with corporations to solve problems quickly."

James M. Loree, Chief Executive Officer of Stanley Black & Decker

"There is a unique opportunity to enhance public-private partnerships in the global financial industry. Together, we must work towards improving the quality and robustness of climate-related disclosures, better enhancing the measurement and management of climate-related financial risks, identifying opportunities to invest in low-carbon and climate-resilient investments, and scaling up private financial flows into sustainable infrastructure across emerging economies."

Rob Fauber, President and Chief Executive Officer of Moody's

"We need more industry collaboration — these challenges will impact all businesses and there needs to be more public-private partnerships."

Cyrille Vigneron, President and CEO of Cartier International

# CEO PERSPECTIVES

"Out of COP26, we need to shift from announcements to action."

Philipp Gmür, CEO, Helvetia Group

"We need to stop this culture of reaching targets at the expense of the well-being of people and the planet — we need to fight that. It takes a cultural shift. You can change a law overnight, but it's difficult to change behaviour. Innovation is creating value. Innovation is helping talents emerge. The glass is half full, and getting fuller, as long as we enable those green sprouts to become big trees."

Michel Vounatsos, Chief Executive Officer, Biogen Inc.

"Responsible leadership is recognizing the need to transform, recognizing how to connect all the dots to partners and communities, and recognizing how we help each other get there."

Mark Cutifani, Chief Executive, Anglo American Plc

"Responsible leadership is anticipating what we inevitably need to do and embracing global perspectives to get there."

Henri Poupart-Lafarge, CEO and Chairman of the Board, Alstom

"A responsible leader paves the way for growth that is both profitable and responsible, putting people first and being more environmentally sustainable."

Denis Machuel, ex-CEO, Sodexo

"Responsible leaders go the extra mile to achieve their mission, despite resistance that may dilute their efforts."

Francesca Fondse, CEO, De Angelus Estates and Angelus Africa SD Projects

"Responsible leadership means acting courageously and pioneering innovation in order to drive positive ethical and environmental change."

Sue Nabi, Chief Executive Officer, Coty

"Climate change and the energy transition are only the beginning of the discussion. You have to take broader social and governance aspects into account as well, because society is looking to the business community to take a leadership role on these issues."

Lorenzo Simonelli, Chairman, President, and Chief Executive Officer, Baker Hughes



"We owe everything we have to our community and never plan to leave. Creating jobs that pay a living wage is our most important role."

Sawsan Wazzan Jabri MSc., LD., Co-Owner, General Manager, Chief Dietitian, Nutrition and Diet Center Lebanon

"Companies recognize their footprint on society and want to do something about it. I believe more companies are recognizing that making money is imperative but doing good is also important."

Michael Rousseau, President and CEO, Air Canada

"As a citizen of the world, we want to pass on a better world to the next generation. We cannot do this alone, now is the time for all to collaborate and join us in 'Together To Net Zero.'"

Kongkrapan Intarajang, CEO, PTT Global Chemical Plc.

"The sustainability transition cannot come at the expense of people. We must preserve individual welfare in our movement to a greener planet."

Florent Menegaux, CEO, Michelin

"Our sustainability policy, vision and the Asahi Group Environmental Vision 2050 all call for responsible leadership and we abide by these principles."

Atsushi Katsuki, President and CEO, Representative Director, Asahi Group Holdings, Ltd.

"To obtain empathy, we must think beyond the interests of one company or country and ask ourselves, is this cause important for the Earth? We need to make this grand cause clear to all and involve people in an inclusive way."

Mr. Toshiaki Higashihara, Executive Chairman & CEO, Hitachi, Ltd.

"The most important intangible asset is the power of human resources. No matter how manufacturers combine techniques and technologies, it cannot change the world. The world will change only when people turn technology into value and make an impact."

Shoei Yamana, President and CEO, Konica Minolta

"For an integrated ESG approach, a company must first and foremost have a robust 'G' to underpin and support long-term and impactful 'E' and 'S' activities."

Christos Megalou, Chief Executive Officer, Piraeus Bank Group

"We seek to forge strong, symbiotic relationships with our community. The strength of our company depends on it."

Aayush Tekriwal, Managing Director, Van Aroma

"Society faces a dual challenge: how to make a transition to a low-carbon energy future to manage the risks of climate change, while also extending the benefits of energy to everyone on the planet."

Ben van Beurden, CEO, Royal Dutch Shell plc

"The gap between the rich and the poor is increasing, and I am wondering if our company can shift to a public interest humanitarian company, away from excessive capitalism. We must adjust to make this happen, such as by changing financial and accounting systems and laws, striving for a more sustainable society."

Masaaki KANAI, Chairman & Representative Director, Ryohin Keikaku Co., Ltd.

"A responsible leader has to make sustainability a habit, not just a business strategy."

M V Iyer, Board Member and Director of Business Development, GAIL (India) Ltd.

"One idea that is ingrained in our company is that when you see a problem, own it and solve it."

Margaret Michaels, Founder, Ezra Joel Group Corporation

"While COVID-19 had a significant impact on our business, we were able to recover quickly due to contingency plans we set up with the help of the Saudi government."

Mohammed Kodrey, CEO, Kodrey Overseas Agents

"Employees take great comfort in knowing that their company is fully committed to anti-corruption as a corporate principle. Ethical governance is an effective way to increase employee engagement."

Noke Kiroyan, Executive Chairman, PT Komunikasi Kinerja (Kiroyan Partners)

"It is important that developing countries are engaged in the process of implementing solutions to address climate change. These countries have development goals and feel the tension most acutely while supporting action to address climate change. Developed economies otherwise risk coming across as neocolonialist, imposing their will on developing nations."

Bernard Tan, Managing Director, Asia Pulp & Paper (APP) Sinar Mas

"While inclusion and equity and environmental sustainability are moral imperatives, they are also becoming commercial imperatives. For us to win, we need to have a leadership position and demonstrate progress."

Dominic Blakemore, Group Chief Executive Officer, Compass Group PLC

"Over the past five to six yea rs there has been an increased awareness that investment is less available to companies that do not have highly sustainable practices and social responsibility;
there is a financial incentive behind the movement."

Jeremy Cohen, President and CEO, Knoll Printing & Packaging, Inc.

"We will remain a world leader as one of the most sustainable utility companies. To maintain that position, we need to continue to work hard as the bar keeps getting higher every year. We need to be running to stay ahead. It is something that we are very much focused on. I think it is a competitive advantage for us."

Miguel Stilwell d'Andrade, CEO, EDP and EDP Renewables

"Sustainability as a topic area has continued to grow in importance from when I first started at Braskem. More than ever, stakeholders from around the world demand that companies like Braskem make sustainability a top priority."

Roberto Simões, CEO, Braskem

"When it comes to sustainability, there's no choice — every CEO has the fiscal responsibility of ensuring the survival of a company and making the best decisions."

Derek Hydon, President, Ma Cher (USA) Inc.

"The number one rule in the consumer goods industry is this: never lose the younger consumer. We are finding that younger, more educated, and affluent consumers are valuing sustainability on their list of priorities."

Mark Schneider, CEO, Nestlé SA

"More than any generation previously, millennials are expecting corporations to act on sustainability."

James M. Loree, Chief Executive Officer, Stanley Black & Decker

"We remain absolutely convinced that the business case for sustainability will continue to get stronger along four axes: growth, cost reduction, risk management, and talent attraction."

Alan Jope, CEO, Unilever

"I think it can be difficult for an enterprise to survive without profoundly embracing sustainability measures in the way it operates. We can't be part of a life science mission that aims at doing well for society and saving lives, and at the same time, continue to exacerbate a climate crisis driven, in part, by short-term economic or financial ambitions, while overlooking the long-term disaster this is generating for society, and the future generations around the world."

Michel Vounatsos, Chief Executive Officer, Biogen Inc.

"Sustainability is a critical differentiator for us as a business. It will help us recruit the top talent and attract capital from investors."

Mirko Bibic, President and CEO,
BCE & Bell Canada

"The pandemic has sparked a sustainability revolution — a transformation that our company has pursued in the last years and that we have even accelerated"

Claudio Descalzi,
CEO, Eni

"The banking sector has to both support growth and development with strong capital and liquidity, while at the same time, providing finance for the energy transition. We cannot do one without the other."

Carsten Egeriis, Chief Executive Officer,
Danske Bank

"We believe effective management of ESG as a strategic business imperative will enable us to generate business value over the long term."

Alex Gorsky, Chairman and CEO,
Johnson & Johnson

"Given increased customer, investor, regulator, media, and stakeholder appetite for responsible business practices, it has become important to not only have ambitious ESG strategies, but to ensure they are integrated with business strategy."

Debbie Crosbie, CEO, TSB Bank

"Young people are very attentive to the social and environmental aspects of what they buy and where they will work. Business leaders know that if they do not respond, they put the future of their companies at risk."

Fausto Ribeiro, CEO, Banco do Brasil

"Sustainability is absolutely a business imperative. ESG is a once in an investor's lifetime opportunity and we are all in at every level of our business."

Suni P. Harford, Group Executive Board Sponsor
for Sustainability and Impact, UBS

"Sustainability is at the heart of our strategy. I'm spending at least 20% of my time talking about sustainability and making sure that it's anchored in every KPI and every departmental performance review."

David Briggs, CEO, The VELUX Group

"We are engaged in our R&D with an eye toward the next 10 to 15 years. It is for delivering innovative treatment options based on the cutting-edge science to the diseases with high unmet medical needs for which there is no adequate treatment option unless we develop them. Definitely, sustainability is a core component of our business strategy."

Kenji Yasukawa, Ph.D., President & CEO,
Astellas Pharma Inc.



"Sustainability is a priority for most businesses. For us, it is our business and has been a number one priority for over a year."

Andreas Shiamishis, Chief Executive Officer,
Hellenic Petroleum SA

"We have been working to integrate solutions to environmental and social issues into our business strategy — this integration will only accelerate."

Hironori Kamezawa, President & Group CEO,
Mitsubishi UFJ Financial Group, Inc.

"For any business to operate smoothly, it needs a sustainable platform."

Dr. GD Singh, Founder & President, Unified Brainz
Virtuoso Limited, and Founder & Chairman,
Asian African Chamber

"I do see a lot more local brand owners that are starting to embrace the sustainability premium — I think they are starting to realize that it is a win-win for them as their customers become more aware of sustainability."

Toni Hambali, Chief Executive Officer,
Dynapack Asia

"This is the right time to improve our sustainability initiatives and strengthen our responsibility to our society and all stakeholders through more responsible business practices."

Vidjongtius, President Director,
PT Kalbe Farma Tbk

"The only strategy we need is a sustainable business strategy, not separate sustainability and business strategies. That boundary has been eliminated."

Ola Källenius, Chairman of the Board
of Management, Daimler AG and
Mercedes-Benz AG

"There is an early mover advantage for companies who adopt renewables and link sustainability with their business growth."

Subhash Kumar, Chairman, ONGC Group of
Companies & President, UN Global Compact
Network India

"Sustainability isn't limited to our company. There is an entire supply chain to consider. For each item we produce, there is a manufacturer, a materials supplier, a farmer and so on. We need to look at every part of the supply chain."

Ryuichi Isaka, President & Representative
Director, Seven & i Holdings

## ABOUT THE UNITED NATIONS GLOBAL COMPACT

As a special initiative of the UN Secretary-General, the United Nations Global Compact is a call to companies everywhere to align their operations and strategies with Ten Principles in the areas of human rights, labour, environment and anti-corruption. Our ambition is to accelerate and scale the global collective impact of business by upholding the Ten Principles and delivering the Sustainable Development Goals through accountable companies and ecosystems that enable change. With more than 13,000 companies and 3,000 non-business signatories based in over 160 countries, and 70 Local Networks, the UN Global Compact is the world's largest corporate sustainability initiative — one Global Compact uniting business for a better world.

For more information, follow @globalcompact on social media and visit our website at unglobalcompact.org.

## ABOUT ACCENTURE

Accenture is a global professional services company with leading capabilities in digital, cloud and security. Combining unmatched experience and specialized skills across more than 40 industries, we offer Strategy and Consulting, Interactive, Technology and Operations services — all powered by the world's largest network of Advanced Technology and Intelligent Operations centers. Our 624,000 people deliver on the promise of technology and human ingenuity every day, serving clients in more than 120 countries. We embrace the power of change to create value and shared success for our clients, people, shareholders, partners and communities.
Visit us at www.accenture.com.

## ABOUT THE CEO STUDY PROGRAM

The CEO Study program, developed by the UN Global Compact and Accenture, is an effort to enhance understanding and commitment between the United Nations and the private sector. The program is an extensive review of the advancing corporate sustainability movement, and the publications coalesce dominant views of CEOs, business leaders and UN executives to track developments in sustainability.

United Nations
Global Compact

accenture



## THE TEN PRINCIPLES OF THE UNITED NATIONS GLOBAL COMPACT

### HUMAN RIGHTS

1. Businesses should support and respect the protection of internationally proclaimed human rights; and
2. make sure that they are not complicit in human rights abuses.

### LABOUR

3. Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;
4. the elimination of all forms of forced and compulsory labour;
5. the effective abolition of child labour; and
6. the elimination of discrimination in respect of employment and occupation.

### ENVIRONMENT

7. Businesses should support a precautionary approach to environmental challenges;
8. undertake initiatives to promote greater environmental responsibility; and
9. encourage the development and diffusion of environmentally friendly technologies.

### ANTI-CORRUPTION

10. Businesses should work against corruption in all its forms, including extortion and bribery.

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