The Business Manifesto for Climate Recovery
Since 1995, WBCSD has worked with our members to deliver pragmatic solutions for sustainable action and to advocate for policy levers to support their implementation.

Our Business Manifesto for Climate Recovery continues this work with a focus on the most urgent actions needed now from both global business leaders and policy makers to halt temperature rises and begin the process of climate recovery.
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Introduction

As the recent IPCC report makes clear, we have reached overwhelming scientific consensus on the damaging impact of two centuries of uncontrolled emissions of greenhouse gases from human activities. We are seeing unprecedented changes in temperatures, climate and weather patterns and unless we act to change the emissions trajectory and keep temperature rises to no more than +1.5°C above pre-industrial levels the result will be widespread damage to human health, prosperity and wellbeing.

The 26th annual United Nations Climate Change Conference (COP) will be a pivotal moment for global leaders to recognize the urgency of the climate crisis and bring forward plans to demonstrate their commitment to the Paris Agreement goal to limit global warming to well below 2°C, preferably to 1.5°C, compared to pre-industrial levels. We have clear science-led pathways towards that outcome requiring a cut in emissions of 45% from 2010 levels by 2030, and reaching net-zero emissions by 2050.

So far, progress is off-track with estimated aggregate emissions in current government plans rising by 16% by 2030 and while COPs have steadily become more inclusive, they exclude – by design – many stakeholders who are fundamental to the transformation that is needed. These include businesses that account for the majority of greenhouse gas (GHG) emissions and the private finance sector that leverages public policy and public funding with scaled-up investment flows.

COP26 has seen the creation of new campaigns such as the “Race to Zero” and the “Glasgow Financial Alliance for Net Zero” that have unleashed welcome private sector support for government aims, but there is, as yet, no mechanism for taking forward these hard-won commitments to future COPs.

Recognizing the power of private-public collaboration is at the heart of the World Business Council for Sustainable Development (WBCSD). For over a quarter of a century, WBCSD has worked with our members to deliver pragmatic solutions for sustainable action and to advocate for policy levers to support their implementation.

Our Business Manifesto for Climate Recovery continues this work with a focus on the most urgent actions needed now from both global business leaders and policy makers to halt temperature rises and begin the process of climate recovery.

Our 12 priority actions include proposals that:

- **Reduce** emissions in the largest emission pools – power and heat generation, industry, agriculture and land use, transport and buildings;
- **Remove** emissions especially from the heavy-emitting industries as part of science-informed pathways; and
- **Report** progress of emission reductions across supply chains to financial markets and stakeholders.

WBCSD’s priority actions are underpinned by five core guidelines.

First, we work to integrate adaptation and resilience building into all climate action. The science shows that the physical world in which we live will change and that the worst impacts will be felt by those who are least able to bear the cost and disruption. The Paris Agreement committed its signatories to strengthening the global response to climate change by increasing the ability of all governments to adapt and build resilience. WBCSD sees an active role for the private sector to support the international adaptation effort especially in identifying risks and increasing funding to help businesses and communities prepare and respond to the physical changes.
Second, we need boundaries for climate action based on the present economic and political reality rather than losing time creating perfect theoretical solutions. WBCSD also believes that we should explore how to move beyond net zero (while acknowledging how challenging it has been to build consensus around this landing zone) and consider how to reach a state of negative emissions to deliver climate recovery.

Third, we realize that, as well as climate breakdown, the world is facing a crisis of nature that threatens the lives and livelihoods of millions of people, and growing inequality driven by these natural causes that is adding to the existing inequality of opportunity and prosperity seen across major global economies today. WBCSD believes we should focus on regenerative business models that combine climate action with benefits for nature and reduced inequality, that enhance human health and improve livelihoods, and our work across the climate, nature and inequality imperatives is closely aligned.

Fourth, the scale of the low-carbon transition is often expressed only in technical and financial terms, ignoring the fact that there are potentially large negative impacts (as well as opportunities) for people everywhere as the world pivots to a global low-carbon economy. WBCSD believes that we must therefore ensure a “just transition” for those affected, and work to embrace the protection of human rights, create stable jobs and social safety nets, invest in resilient infrastructure and focus on the empowerment of women and girls.

Finally, WBCSD recognizes the role of a more circular economy to address multiple challenges. A more circular economy helps to reduce emissions and biodiversity loss and gives us the ability to live well within our planetary boundaries. WBCSD’s leading members are integrating circularity into their core business strategies and when developing climate action. We need to further embed the principles of circularity, particularly for materials and the built environment.

The WBCSD Manifesto represents our collective view of the most important actions that business leaders and policy makers should prioritize now to halt damaging global heating and begin the process of climate recovery. It should not be seen as a check-list for the global WBCSD membership for whom some actions will be more important than others and who face varying challenges in different global jurisdictions and business sectors.

However, there is one collective action that unites all of our members. We want to see business action recognized in the global climate action agenda. Despite widespread use of the Greenhouse Gas Protocol (GHG Protocol) for reporting emissions and the existence of voluntary emissions data pooling, there is no common mechanism to assess business progress and delivery against their targets, ambitions and aims that would align with the process of setting and delivering national plans or Nationally Determined Contributions (NDCs) and business emissions are not included in NDCs calculations. This means that we currently lose the potential for ambitious corporate plans to drive further progress with other stakeholders and business progress is not recognized by regulators, policy makers and consumers; leaving businesses open to unjust accusations of greenwashing.

We therefore end our manifesto with a call for the development of a new global framework of Corporate Determined Contributions (CDCs) based on corporate ambition, targets and progress in emissions reduction. We propose that this framework is reviewed annually at the UN Climate Change Conference (COP) so that business action is transparent, open to challenge and recognized in the global fight for climate recovery.
The Manifesto Action Summary

The WBCSD Business Manifesto for Climate Recovery is built around 12 priority actions that we collectively believe represent the highest priority for global business leaders and policy makers if we are to halt damaging temperature rises and begin the process of climate recovery.

The actions are structured around a framework to reduce emissions from the largest carbon pools (power and heat generation, industry, agriculture and land use, transport and buildings), remove emissions especially from the heavy-emitting industries as part of science-informed pathways; and report emissions especially in supply chains and to investors and stakeholders. We also believe that priority action 12 is a key enabling item that will allow business action to be highlighted and turbocharged.

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<th>Priority Actions</th>
<th>Reduce</th>
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<td>#1 Mainstream Methane Reduction</td>
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<td>#2 Make Coal History</td>
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<td>#3 Power-up Green Global Grids</td>
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<td>#4 Deploy Decarbonized Hydrogen</td>
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<td>#6 Cut Emissions in the Built Environment</td>
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<td>#7 Capture and Remove the Carbon</td>
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<td>#8 Fast-track Natural Climate Solutions</td>
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<td>#9 Invest in Nature-Positive Land Use</td>
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<td>#10 Curb Supply-Chain Emissions</td>
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<td>#11 Focus on True Value Creation</td>
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<td>#12 Account for Business Action</td>
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Overview of Manifesto Priority Actions

The 12 priority actions of the WBCSD manifesto represent our collective view of the most important actions that business leaders and policy makers should prioritize now to halt damaging global heating and begin the process of climate recovery.

1. Mainstream Methane Reduction
   - Set shared global government and corporate methane emission reduction targets of 40% by 2030 and 75% by 2050. Include methane baselines, progress and targets in corporate and NDC reporting, strengthen policy and regulatory structures and increase funding for methane monitoring, reduction and removal.

2. Make Coal History
   - Phase out coal-powered electricity generation no later than 2030 for OECD countries (2040 for non-OECD). Commit to no new coal plants, end coal export financing, activate coal-free corporate supply chains and develop clear public/private plans to ensure a just transition supported with global financial mobilization.

3. Power-up Green Global Grids
   - Invest in green energy grids able to support the decarbonization of energy needed to reach net zero while meeting growing demand for reliable and affordable power, and the widespread and rapid electrification of energy.

4. Deploy Decarbonized Hydrogen
   - Accelerate the decarbonization of existing hydrogen and rapidly deploy new hydrogen sources with the lowest possible verified carbon intensity to target 20% of final energy demand by 2050 especially in heavy-emitting industry sectors. Collaborate to reduce cost and infrastructure barriers and create market signals.
Drive coordinated action between businesses in the electric vehicle (EV) value chain, policymakers and investors to accelerate the deployment of technology and infrastructure supporting increased EV sales that could deliver a cut in road transport emissions of 30% by 2030.

Target a 50% reduction in CO₂ emissions from the built environment system, by 2030 and net-zero emissions by 2050, by implementing bold national and local roadmaps and policies. Create radical collaboration across all stakeholders to focus on the whole life-cycle impact of building and infrastructure activities.

Increase the use of engineered carbon removal technologies, combined with permanent storage, focusing on residual emissions from heavy emitting sectors. Implement clear taxonomy and reporting frameworks, develop coherent policy guidance, target investment and develop robust market trading mechanisms.

Target a 50% reduction in CO₂ emissions from the built environment system, by 2030 and net-zero emissions by 2050, by implementing bold national and local roadmaps and policies. Create radical collaboration across all stakeholders to focus on the whole life-cycle impact of building and infrastructure activities.

Accelerate action towards net-zero supply chains through business collaboration to accurately measure, manage and decarbonize Scope 3 emissions and to create verifiable product-level emissions data.

Accelerate the adoption of high-quality reporting frameworks for corporate climate risks. Integrate climate and financial data in reporting, valuation frameworks and stakeholder analysis to help drive a shift in capital allocation towards true value creation.

Consolidate data from existing corporate GHG reporting into aggregated Corporate Determined Contributions (CDCs) and use the annual UN Climate Change Conference (COP) to assess business progress against targets.
Summary for Policy Makers

We have summarized below policy requirements that will accelerate progress for our priority actions. These can be applied at global and national levels and may also be relevant for local policy makers.

<table>
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<th>Priority Actions</th>
<th>Policy requirements</th>
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| Mainstream Methane Reduction | • Well-designed regulation of methane emissions.  
• Explore border adjustment fees for imports of high methane products.  
• National/regional reporting frameworks for emissions from venting, flaring and leakage and standard definitions.  
• Government funding to accelerate the launch of the International Methane Emissions Observatory (IMEO) and assist methane monitoring in developing countries.  
• Explore policies supporting low-methane diets and phasing out subsidies from agricultural practices. |
| Make Coal History | • Global shared goals for coal elimination.  
• Clear end points to cease coal export finance and support for new generation capacity overseas.  
• Clear transition plans to ensure a just transition for workers and consumers.  
• Collaboration with domestic energy-intensive businesses on cost reduction for low-carbon solutions.  
• Collaboration with development banks and global financial institutions to create funding pools for coal phaseout and grid transition. |
| Power-up Green Global Grids | • Clear transition plans to ensure a just transition for low-carbon energy.  
• Stable long-term policy frameworks and investment plans to provide investment certainty.  
• Robust regulatory frameworks and establishment of cross-border regulatory and market trading mechanisms for regional grid development and stability.  
• Collaboration between national and development banks and supra-national financial institutions for funding to target market reform and grid investment. |
| Deploy Decarbonized Hydrogen | • Hydrogen embedded into country decarbonization strategies.  
• Carbon pricing applied to decarbonized hydrogen and renewable subsidy schemes to incentivize hydrogen with lowest-possible verified carbon intensity.  
• Support for emerging domestic hydrogen markets until projects become economically feasible.  
• Multilateral agreements to implement international hydrogen trading and infrastructure. |
| Catalyze Coordination for Net-Zero Transport | • Vehicle fuel efficiency targets, EV sales targets and incentive schemes for fleet up-scaling.  
• Coordinated infrastructure planning defining market and technology, investments and public and private infrastructure deployment.  
• Flexible energy market participation, smart grid technology investments and policies that promote shared and accessible charging infrastructure. |
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<th>Section</th>
<th>Actions</th>
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| Cut Emissions in the Built Environment       | • Whole-life carbon building decarbonization targets, and tangible policies and measures in national decarbonization and resilience roadmaps, linked to NDCs.  
• Increase renovation rates of existing building stock and implement building energy codes to reduce carbon and enhance building resilience.  
• Public funding and procurement for buildings and infrastructure aligned to net-zero, resilience and workforce upskilling. |
| Capture and Remove the Carbon                | • Investment in carbon removal clusters to support hard-to-abate industrial activities.  
• Policy frameworks for oil and gas extraction to include enabling mechanisms for carbon storage.  
• Integrated engineered technological carbon removals in policy frameworks.  
• Policies for private sector and civil society to include carbon removal solutions in their net-zero targets. |
| Fast-track Natural Climate Solutions         | • Alignment of net-zero company certification under one commonly accepted international standards body.  
• Country commitments on nature and Natural Climate Solutions (NCS) into actionable policy plans and binding regulation.  
• Voluntary and compliance markets to ensure aligned standards, accounting and inventories.  
• Resolution of Article 6 to build international carbon markets. |
| Invest in Nature-Positive Land Use           | • Embedded nature and climate objectives decision-making and disclosure.  
• Reformed subsidies and incentives to reward nature-positive and net-zero actions, and finance a “just transition”.  
• Long-term economic recovery plans with embedded nature recovery principles and climate action.  
• Climate policy alignment with the Convention on Biological Diversity with ambitious and mutually beneficial targets. |
| Curb Supply-Chain Emissions                  | • Methodological standards and incentives for the calculation, exchange and display of environmental data.  
• Guidelines for the production of environmentally-responsible products.  
• Investment in research to achieve successful digitalization for a green economy. |
| Focus on True Value Creation                 | • Adoption of sustainability reporting requirements such as TCFD that are coherent and compatible across jurisdictions with greater convergence of ESG standards.  
• Regulatory guidance strengthened to considered climate change in investors and company directors’ mandates, responsibilities and duties.  
• Regular stress-testing of the corporate and financial sector to climate risks. |
| Account for Business Action                  | Business and policy makers should collaborate to introduce a new Corporate Determined Contributions (CDCs) mechanism that is structured to be:  
• A simple reporting portal for all disclosed corporate GHG data that is then published annually.  
• Adopted by a current UN structure such as the Marrakesh Partnership for Global Climate Action to avoid needless duplication.  
• Open-source and highly accessible allowing stakeholders to query and analyze data.  
• Able to be expanded, as with the guidelines for NDCs, to include reporting against progress for other ambitions targets and aims which help advance the low-carbon transition. |
Set shared global government and corporate methane emission reduction targets of 40% by 2030 and 75% by 2050. Include methane baselines, progress and targets in corporate and NDC reporting, strengthen policy and regulatory structures and increase funding for methane monitoring, reduction and removal.

The latest IPCC report highlights methane as the fastest-growing, highly potent greenhouse gas accounting for 40% of annual GHG emissions, primarily from energy production, agriculture (ruminants and rice) and waste. The report makes clear the need for urgent action now, but we have no overall global reduction targets, regulatory regimes are fragmented, and the gas features in only 13 of the 192 Nationally Determined Contributions (NDCs) submitted as part of the Paris Agreement.

Voluntary action to date has been focused in the energy sector where there has been meaningful progress especially as part of the Oil and Gas Methane Partnership developed by UNEP, the EU Commission, the Environmental Defense Fund and industry partners. But there are multiple overlapping other initiatives with variable targets and a limited focus on solutions in the agriculture and waste sectors.

In 2021, a new intergovernmental Global Methane Pledge has provided a welcome catalyst to focus on methane at COP26. However, the overall target could be more ambitious to be better aligned with the main IPCC 1.5°C pathways and the pledges extended to include the business sector who are responsible for most greenhouse gas emissions. There is an opportunity to align all of these existing public and private initiatives, highlight and address remaining gaps and further accelerate early action supported by a coherent policy and a regulatory landscape to drive the rapid changes needed.

### Figure 1: Methane emissions per sector (Mt)

<table>
<thead>
<tr>
<th>Sector</th>
<th>Methane Emissions</th>
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<tbody>
<tr>
<td>Wetlands</td>
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</tr>
<tr>
<td>Other</td>
<td>39</td>
</tr>
<tr>
<td>Agriculture</td>
<td>145</td>
</tr>
<tr>
<td>Energy</td>
<td>134</td>
</tr>
<tr>
<td>Waste</td>
<td>68</td>
</tr>
<tr>
<td>Biomass burning</td>
<td>16</td>
</tr>
</tbody>
</table>

Business Action
The current ambition of multiple high-quality voluntary methane action groups needs to be accelerated to make methane action mainstream in the following ways:

- Set shared targets across multiple voluntary action groups of at least 40% by 2030 and 75% by 2050 from a 2020 baseline.
- Include reporting of Scope 1, 2 and 3 methane emissions under the Greenhouse Gas Protocol in all corporate disclosures in tandem with the deployment of improved measurement to ensure accuracy.
- Grow demand-side tools such as: the certification of methane emissions performance and the sale of differentiated gas products by 2025 in the oil and gas sector; the development of labeling for low-methane meat, milk and rice; commitments from utilities and other large buyers to purchase and distribute low-methane products for end-customers.
- Fast-track market deployment of low-methane solutions and methane removal technologies.
- Seek capital market commitments to include methane emissions profiles into ESG assessments and to focus funding on low-methane emission investments.

Policy Requirements
The urgency of this issue should drive a rapid expansion of regulatory operating and reporting frameworks both at national government level but also within the annual COP process. Governments need to:

- Introduce or strengthen well-designed, direct regulation of methane emissions from new and existing nature-sources.
- Explore border adjustment fees for imports of high-methane products to ensure an equitable transition for all industries and communities.
- Where not yet existing, introduce national/regional mandatory reporting frameworks for emissions from venting, flaring and leakage – and support the development of standard definitions for low-methane fossil fuels and agricultural products.
- Expand government funding and support to accelerate the launch of the new International Methane Emissions Observatory (IMEO) and to assist developing countries with methane monitoring.
- Introduce policies supporting low-methane diets and phasing out policy support and subsidies from high-methane agricultural practices.

Methane is the fastest growing, most potent greenhouse gas totaling 40% of annual GHG emissions
Phase out coal-powered electricity generation no later than 2030 for OECD countries (2040 for non-OECD). Commit to no new coal plants, end coal export financing, activate coal-free corporate supply chains and develop clear public/private plans to ensure a just transition supported with global financial mobilization.

Burning coal for power and heat has been the single largest contributor to global heating. Coal is also the cause of many other negative outcomes such as acid rain and deadly air pollution.

Global unabated coal use must fall by around 80% this decade if warming is to be limited to less than 1.5°C. But most coal-fired power plants worldwide have no phase-out date and legacy plants remain open in many countries while others continue to build new coal-powered capacity. In 2020, there was a net increase in global coal generation capacity of 12.5 gigawatts (GW) and some countries are still making substantial financing commitments to export coal capacity.

The phasing out of coal is a politically and socially difficult transition as many communities rely on coal production and a national coal economy can provide employment, tax revenues and exports income. We must also recognize that eliminating coal where it serves a crucial purpose in industrial processes is more challenging without rapid cost reduction in alternatives, such as hydrogen, and this must factor into national coal phase-out plans.

There has been progress since the introduction of the Powering Past Coal Alliance (PPCA) by the UK and Canadian governments in 2017. In developed countries, nearly 60% of operating coal plants will be retired by 2030 and there are clear pathways to phasing out thermal coal power generation, including rapid switch to gas, biomass and renewables. However, we currently lack enough technical or cost-effective solutions to address the one-third of coal combustion used for non-power purposes, primarily industrial heat and processes.

Figure 2: Forecast for coal additions and retirements in a net-zero scenario

Business Action
WBCSD has joined the PPCA as a Corporate Activation Partner and will help to develop measuring and reporting tools for coal-free certification. We will continue to convene business action and pledges on hydrogen as a substitute for coal in industrial processes and work with our members to make clear commitments to coal phase-out.

Businesses can also make clear commitments to:
• Set ambitious coal phase-out targets in their own operations and make an explicit commitment to avoid coal-fired power supplies as part of a switch to renewable energy.
• Develop coal-free supply chains to provide further incentives for coal phase-out in the energy system.
• Cooperate with other businesses and governments to rapidly reduce the cost and increase volumes of low-carbon substitute solutions for coal-based heat and industrial processes in energy-intensive sectors.
• Being fully involved in planning for and carrying out a just transition to ensure workers, communities and other stakeholders do not unfairly carry the cost of this transition.

Policy Requirements
The urgent requirement for coal phase-out needs to also reflect the political and economic difficulties of the transition, especially at a time of high alternative fuel prices. Governments therefore need to:
• Set a global shared goal for coal elimination by strengthening the Powering Past Coal Alliance and ensuring NDCs make explicit a coal phase-out timetable with accelerated closure for OECD countries and a commitment to no new coal plants.
• Agree clear end-points for the cessation of coal export finance and financial support for new generation capacity overseas.
• Develop clear transition plans to ensure the transition is fair for workers and other stakeholders.
• Work with domestic energy-intensive businesses to target funding and collaborate on cost reduction for low-carbon solutions.
• Collaborate with the development banks and supra-national financial institutions to create funding pools able to support the decommissioning of coal power plants, provide financial support for utility companies during the transition, and increase grid investment to support new generation and distribution.
Invest in green energy grids able to support the decarbonization of energy needed to reach net zero while meeting growing demand for reliable and affordable power, and the widespread and rapid electrification of energy.

The generation and distribution of power represents the largest pool of GHG emissions and energy consumption is intricately linked with economic growth. Balancing the competing demands of decarbonization and universal energy access while ensuring a just transition and funding an estimated USD $5 trillion annual energy investment by 2030 for a fully net-zero compliant pathway is at the heart of planning for a low-carbon energy system.

Key pressures in the energy transition include: the phase-out of the most polluting fossil fuels and deployment of decarbonizing technologies like Carbon Capture, Usage and Storage (CCUS); the rapidly accelerating use of renewable energy with intermittent generation, and substantial cost reductions required to scale-up battery storage technologies to compete with other balancing technologies. Demand-side challenges will come from the massive scale-up required in the volume of clean power in cities, transport systems and industry, along with the growth of consumer-based flexibility solutions like smart meters or vehicle-to-grid charging.

There will be no “one size fits all” energy solution for every economy but a fundamental shared challenge for all countries will be to create smart, flexible, resilient and affordable energy grids as the key enabling infrastructure for the massive energy transition needed to reach net zero.

**Figure 3: Capacity additions of renewables and batteries under net-zero**

Source: BloombergNEF New Energy Outlook 2021 Green Scenario; excludes capacity for H₂ production.
New long-distance transmission systems, shared infrastructure and cross-border trading arrangements will need to evolve. Present technical challenges and political factors such as a lack of infrastructure investment and weak regulation will also need to be overcome. Sharing of knowledge and cooperation between governments, companies and investors will be essential to maximize action and minimize cost.

New programs such as the joint India/UK Green Grids Initiative to be launched at COP26 are extremely welcome developments. They will elevate the importance of grid planning and accelerate action, cooperation and investment among governments, technical experts and international financial institutions. However, the involvement of the private sector is crucial to ensure that technical knowledge is shared, solutions meet the market demands and that private investment is leveraged to finance the transition.

**Business Action**

The integration challenge underlying green grid development must include the corporate sector to maximize cooperation and knowledge sharing. Business should:

- Seek ways to collaborate with policy makers, regulators, customers and supply chains and also other companies in the same business sectors to share knowledge and experience.
- Work with governments to develop long-term policy frameworks that match the investment duration required for grid assets.
- Create public-private innovation programs to identify and fund rapid innovation and cost reduction opportunities.

**Policy Requirements**

- Develop clear transition plans to ensure a just transition in the delivery of low-carbon energy.
- Create stable long-term policy frameworks and investment plans to provide investment certainty.
- Ensure regulatory frameworks are robust and provide clear market signals for investors and cooperate to establish cross-border regulatory and market trading mechanisms for regional grid development and stability.
- Collaborate with the development banks and supra-national financial institutions for funding to target market reform and strong utilities.

There will be no “one size fits all” energy solution for every economy but a fundamental shared challenge for all countries will be to create smart, resilient, flexible energy grids.
Accelerate the decarbonization of existing hydrogen and rapidly deploy new hydrogen sources with the lowest possible verified carbon intensity to target 20% of final energy demand by 2050 especially in heavy-emitting industry sectors. Collaborate to reduce cost and infrastructure barriers and create market signals.

Global predictions of rapidly scaled-up demand for hydrogen to support the decarbonization of heavy emitting industry sectors, transportation and for energy storage, suggest demand could grow to 800 million tons annually or up to 20% of final energy demand by 2050 from around 100 million tons today.

There is significant momentum to develop a hydrogen economy: in 2020, ten countries or regions developed a “hydrogen strategy” (compared with three between 2018 and 2019) and many more countries in Latin America, Asia and Europe are currently drafting new hydrogen strategies.

However, delivering rapid decarbonization with hydrogen requires a taxonomy that provides clarity on carbon intensity levels. This needs to be supported by substantial investment to make low-carbon hydrogen cost-competitive with the existing unabated “grey” (from unabated steam methane reforming) or “black” (from unabated coal gasification) hydrogen. This means using “blue” hydrogen from natural gas with substantial CCS; “green” from electrolysis powered by renewable electricity, or “pink” from nuclear-powered electrolyzers and other low-carbon technologies.

There is also a need to design hydrogen policies and rules to meet decarbonization goals aligned with the Paris Agreement. This means identifying and accelerating the hydrogen business models that will enable the highest decarbonization possible at the lowest cost. Hydrogen should complement other decarbonization options to address hard-to-abate sectors and enable a country to optimally allocate resources to achieve its emissions reduction targets.

Figure 4: Announced clean hydrogen capacity through 2030

Cumulative production capacity (Mt p.a.)

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<thead>
<tr>
<th>Year</th>
<th>Low carbon – Announced(^a)</th>
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<th>Low carbon – Mature(^b)</th>
<th>Renewable – Mature(^b)</th>
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\(^a\) Includes projects at preliminary studies or at press announcement stage.
\(^b\) Includes projects that are at the feasibility study or front-end engineering and design stage or where a final investment (FID) has been taken, under construction, commissioned or operational.

Business Action
Businesses are collaborating across industry groups to form consortia such as Gigastack or NorthH2 that provide members with the opportunity to climb the “experience curve” and gain early-mover advantages. WBCSD has also led a collaboration with the Sustainable Markets Initiative to develop a clear taxonomy for reduced, low and ultra-low carbon intensity hydrogen (aligned with the EU taxonomy). WBCSD members have also made demand and supply commitments to create market signals and increase confidence in the growth of the low(er) carbon hydrogen economy.

Policy Requirements
Governments have an essential role to play in this transition and can accelerate progress by setting clear and consistent frameworks and incentives in the areas that follow. More detailed policy requirements can be found in the WBCSD “Policy recommendations to accelerate hydrogen deployment for a 1.5°C scenario” report:

- Embed hydrogen into country decarbonization strategies, setting clear priorities and targets for hydrogen production and consumption and ensuring that regulations and safety standards support hydrogen deployment.
- Use carbon pricing to improve the relative economic attractiveness of decarbonized hydrogen and extend renewable subsidy and support schemes to incentivize hydrogen usage with the lowest possible verified carbon intensity.
- Support emerging domestic hydrogen markets for both supply and demand until projects become economically attractive; rewarding projects according to their capacity to decarbonize as well as economic viability, scalability and long-term sustainability.
- Develop multilateral cooperation agreements to implement international hydrogen trading and accelerate the deployment of the needed infrastructure.

There is significant momentum to develop a hydrogen economy: in 2020 alone, ten countries or regions developed a “hydrogen strategy”
Drive coordinated action between businesses in the electric vehicle (EV) value chain, policymakers and investors to accelerate the deployment of technology and infrastructure supporting increased EV sales that could deliver a cut in road transport emissions of 30% by 2030.

Transport emits 24% of total CO₂ emissions, making road transport decarbonization a crucial priority to reach the goals of the Paris Agreement. Along with developing hydrogen and alternative fuel solutions for heavy and long-distance transport, the rapid electrification of road transport is essential to reducing road transport emissions. A 30% cut in emissions from approximately 5.6 gigatons (Gt) of CO₂ in 2020 to approximately 4.2Gt in 2030 while unlocking 600 GW of flexible capacity, allowing scaling-up of renewable energy and balancing of the grid.

A fast and inclusive transition to net-zero road transport requires a systemic shift, significant investment and rapid alignment of all stakeholders across the electric vehicles value chain. The total capital related to electric vehicle technology is estimated to be close to 330 billion in the next five years when this is aligned with the IEA Sustainable Development scenario of 50% EV sales in 2030.5

To accommodate an estimated 350 million electric vehicles on the road by 2030 we need more than 200 million charging points. This represents a twenty-fold increase from current infrastructure. It needs to be accompanied by investments in upgrading the grid for future power demand and supporting smart grid technologies for efficient grid balancing and scaling-up renewable energy (as referenced in “Action 3: Power-up Green Global Grids”). Coordinated infrastructure planning is needed to ensure timely, equitable and efficient energy and transport integration.

By allowing EVs to bring flexibility to energy distribution networks, companies can empower customers and increase the energy system efficiency to help achieve climate neutrality most cost-effectively. While many countries and cities are signaling infrastructure deployment targets, clear roadmaps, related policy mandates and new financing mechanisms are needed to bring confidence and accelerate private investment to reach net zero in road transport.

**Figure 5: Future passenger EV sales by region**

<table>
<thead>
<tr>
<th>Million vehicles</th>
<th>0</th>
<th>10</th>
<th>20</th>
<th>30</th>
<th>40</th>
<th>50</th>
<th>60</th>
<th>70</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2025</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2030</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>2035</td>
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<td></td>
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<td>2040</td>
<td></td>
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</tr>
</tbody>
</table>

**Source:** BloombergNEF EVO 2021: Economic Transition Scenario.
Business Action
OEMs and EV fleet operators are raising ambitions and committing to 100% electric vehicles portfolios. They are seeking ways to collaborate across value chains, and with policymakers and investors, to drive further adoption.

As an example, WBCSD’s Catalyze project convenes C-level representatives from the demand and supply side of the charging infrastructure to:
• Create coalitions that align on national and sectoral zero-emission targets and policies that can help achieve 64% new light-duty zero-emission vehicle sales and 200+ million charging points by 2030.
• Engage with businesses, investment and policy bodies to explore private/public investment mechanisms that can help close the short-term financial gap.
• Collaborate across sectors to define the shared digital frameworks that allow EV fleet owners to access wholesale energy and participate in real-time to ancillary services markets.

Policy Recommendations
Rapid closure of the delivery gap will also require transformative policies as follows:
• Set vehicle fuel efficiency targets and EV sales targets and create incentive schemes for different user groups including fleet up-scaling.
• Establish coordinated infrastructure planning at the local and national level that defines market and technology requirements, and bring clarity to investments and calls for minimum public and private infrastructure deployment.
• Incentivize flexible energy market participation of EVs and energy storage and stimulate smart grid technology investments alongside space access policies that promote shared and accessible charging infrastructure, as part of multi-modal mobility to help optimize the cost and accessibility of charging.

Transport emits 24% of total CO₂ emissions, making road transport decarbonization a crucial priority.
Target a 50% reduction in CO$_2$ emissions from the built environment system by 2030$^6$ and net-zero emissions by 2050, by implementing bold national and local roadmaps and policies. Create radical collaboration across all stakeholders to focus on the whole life-cycle emissions impact of building and infrastructure activities.

The built environment accounts directly and indirectly for 38% of global energy-related GHG emissions (UNEP 2020). To keep temperatures below the 1.5°C goal, emissions from the built environment system must be halved by 2030 and reach net zero by 2050 at the latest.

This means that by 2030, the operations of all new buildings must be net-zero carbon, including energy efficiency measures. Embodied carbon across the system must be reduced by at least 40%. Achieving a 50% reduction in emissions from the built environment system by 2030, would reduce carbon emissions by 7 gigatons on an annual basis – which is 19% of overall emissions currently generated.

Business Action

Businesses in the built environment must increase collaboration along the value chain. WBCSD works with its member companies and stakeholders to achieve the common vision of a system-wide net-zero built environment by 2050 whilst acknowledging that targets for individual companies will vary according.

To achieve tangible and widespread whole life carbon mitigation (embodied and operational), technical solutions already exist. However, uptake and dissemination need to accelerate drastically.

Figure 6: Total final energy consumption of the global buildings sector, 2020

Source: (IEA 2020d; IEA 2020b). All rights reserved. Adapted from "IEA World Energy Statistics and Balances" and "Energy Technology Perspectives"
For this to happen, system dynamics need to change, and some critical market conditions need to transform. The following conditions will help accelerate the required mitigation measures:

- Adopt whole-life carbon and life-cycle thinking and concepts across the value chain and the market to align on key indicators, metrics and targets consistently.
- Calculate and use the whole life-cycle emissions costs to reflect the true price of products and services.
- Strengthen positive, reinforcing dynamics of supply-demand. This requires support from policy makers and the financial sector, and – most importantly – collaboration between industry players across the core built environment value chain.

**Policy Requirements**

Business calls on governments to:

- Set and include whole-life carbon (operational and embodied carbon) building decarbonization targets, tangible policies, measures, and implementation mechanisms, in national decarbonization and resilience roadmaps linked with NDCs, aligned with at least halving building emissions by 2030.
- Increase deep renovation rates of the existing building stock to 3% each year by 2030 and beyond, focusing on heating and cooling systems, insulation and building materials and implement mandatory, performance-based building energy codes addressing both operational and embodied carbon, as well as measures to enhance building resilience.
- Align public funding, public procurement and economic recovery spending for buildings and infrastructure with commitments to net zero, increasing resilience and upskilling the workforce. Make building decarbonization and resilience a central criterion for public procurement related to buildings and construction.

To keep temperatures below the 1.5°C goal, emissions from the built environment system must be halved by 2030.
Increase the use of engineered carbon removal technologies, combined with permanent storage, focusing on residual emissions from heavy emitting sectors. Implement clear taxonomy and reporting frameworks, develop coherent policy guidance, target investment and develop robust market trading mechanisms.

The most recent IPCC report made it clear that reaching the global climate goals will require a rapid scale up of CO₂ removal. Estimates of "required" removal volumes vary considerably by framework and are highly sensitive to cost assumptions. However, up to 30% of projected emissions from hard-to-abate sectors may need to be removed through NCS or technical solutions, as part of a mitigation hierarchy, to reach net-zero targets. The Race to Zero team has set a 2030 breakthrough target of 100 million tons per annum (Mtpa) of operational carbon removal capacity to be stored in biomass, durable products or geological formations.

Despite a recent acceleration in Carbon Capture and Storage projects (which only remove carbon if it is permanently sequestered), the adoption of technical removal solutions is much slower than required to meet the Paris Agreement goals. Persistent high costs and a lack of targeted policy support hold back adoption. There is also currently no agreed global taxonomy to provide the clarity on removal quality or permanence needed, to ensure removals are used as part of mitigation hierarchies and to support carbon trading.

We are starting to see a welcome scale up of regional and local "cluster" solutions for Carbon Capture, Usage and Storage (CCUS), particularly around the UK and in the North Sea basin. However, further government leadership, public-private investment and business cooperation and commitments are needed to achieve the scale up that is needed.

Figure 7: World CO₂ capture capacity at large-scale facilities by source, 1980–2020

Source: IEA. All rights reserved.
**Business Action**
Scaling CO₂ removal technologies will require ambitious public and private cooperation, especially in building out “clusters” where a mixed economy of energy generation and hard-to-abate industry activities can co-locate. These can offer the best environment for large-scale carbon capture, transportation and sequestration and also provide a location for industries able to use the captured carbon.

However, businesses need to align and cooperate more effectively to accelerate progress. WBCSD members are working together to:
- Co-create a new descriptive taxonomy that clarifies quality and duration of carbon capture and sequestration and a new standard reporting metrics for carbon removals in corporate climate reporting frameworks.
- Accelerate commitments to scale up carbon capture and removals among WBCSD members.
- Collaborate with leading governments to identify best practice policy and implementation support.

**Policy Requirements**
Governments should accompany raised ambition for CCUS and CO₂ removal technology with practical actions that:
- Accelerate the plans for carbon removal clusters to support hard-to-abate industrial activities.
- Ensure policy frameworks for oil and gas extraction include enabling mechanisms for carbon storage.
- Integrate engineered technological carbon removals into policy frameworks.
- Provide enabling policies to support the private sector and civil society to include Carbon Removal solutions in their net-zero targets and to deliver on these targets.
Fast-track high-quality Natural Climate Solutions (NCS) with clear nature-positive goals, coherent policy frameworks, strong demand signals, scaled-up investment and robust market trading mechanisms.

High quality Natural Climate Solutions (NCS) can help address the twin crises of climate change and biodiversity loss. They can facilitate the reduction of emissions, and the removal of CO₂ from the atmosphere (for the medium term) through conservation, restoration and improved land management. While NCS are no substitute for rapid, direct decarbonization, they are a critical part of the net-zero transition and are estimated to provide up to one-third (7 GtCO₂) of the climate mitigation needed to reach a 1.5°C–2°C pathway by 2030 at a lower-cost than other forms of CO₂ removal.6

However, progress has been hindered by insufficient investment (only 8% of public finance targeting climate action is committed to NCS), insufficient integrity to guide the highest possible quality of investment, a stop/start approach to market development and policy disagreements, for example over the scale of removal projects that are “permissible”.

Solutions to these problems are now developing rapidly, particularly with large-scale public-private coalitions like the “Lowering Emissions by Accelerating Forest finance” (LEAF) movement. There is also rapid progress on NCS taxonomy, the establishment of high-quality demand and supply criteria in the voluntary markets, a new Voluntary Carbon Markets Taskforce and Integrity Initiative and technical guidance from the GHG Protocol on land sector and carbon removals that will progress still further. However, we need further rapid policy shifts, large-scale public and private funding commitments and smooth market development to accelerate momentum.

Figure 8: A 1.5°C pathway requires 23GtCO₂ net emission reduction by 2030 compared to 2019 levels

Business Action
To drive Natural Climate Solutions (NCS) adoption and deliver credible reductions, businesses need to:

- Define net zero and corporate claims with greater precision based on a combination of reduction and compensation measures. NCS can be used as part of an offsetting strategy to compensate for emissions and for removal but clarity on definitions and transparency of reporting is crucial to ensure the mitigation hierarchy is followed.
- Highlight good practice for supply and demand credibility such as the guidance contained in the Natural Climate Solutions for Corporates published by the NCS Alliance, a multi-stakeholder group convened by WBCSD and the World Economic Forum.
- Send louder demand signals to provide market confidence. The NCS Alliance Investment Accelerator is targeting high-integrity private sector NCS of over 1 Gt per year by 2025 to help solidify pricing across carbon markets and build confidence in new and improved methodologies.
- Work with regulators and governments to create better market infrastructure to improve trading and liquidity of NCS credits.

Policy Requirements
While many of the barriers to scaling NCS are technical and can be addressed through monitoring frameworks, certification and financial architecture, others are political in nature. They require stakeholder collaboration, international consensus-building and the formulation of coherent policy frameworks in line with international climate goals. Supporting policy measures to accelerate NCS adoption should be designed to:

- Develop alignment of net-zero certification for companies under one commonly accepted international standards body, underpinned by scientifically reviewed sectoral trajectories.
- Connect voluntary and compliance markets to ensure aligned integrity standards, accounting, inventories and maximum liquidity.
- Resolve political differences on Article 6 of the Paris Agreement to build international markets.

High quality Natural Climate Solutions can help address the twin crises of climate change and biodiversity loss
Invest in Nature-Positive Land Use

Transform to nature-positive land use by 2030 and carbon negative by 2050. Help bridge the annual USD $700 billion nature financing gap, with investments that enable net-zero, nature-positive, equitable outcomes.

The Land Use sector represents 24% of total GHG emissions, generated by agriculture and deforestation. However, lands are currently removing more emissions than they emit. Land removed a net 6 GtCO₂-eq per year from 2007 to 2016.

The largest potential for reducing emissions from the land sector is from curbing deforestation and forest degradation, with a range of 0.4–5.8 GtCO₂-eq per year. Deforestation is responsible for about 11% of GHG emissions, with 40% of deforestation being commodity driven.

As the second largest active store of carbon, improving soil health can enable carbon sequestration, reduce the risk of flooding and increase food and nutrition security. The potential for soil carbon sequestration in croplands and grasslands is 0.4–8.6 GtCO₂-eq per year.

Sustainable forest management has the potential to mitigate 0.4–2.1 GtCO₂-eq per year by maintaining and increasing carbon stocks in forests while securing valuable ecosystem services. It contributes to mitigating the effects of climate change on forests (e.g. fires, disease outbreaks) that threaten the permanence of these carbon stocks.

Figure 9: Primary GHG emission sources with today’s natural sinks that remove CO₂ from the atmosphere

Agriculture, peatland destruction and other land-based sources contribute 44% of recent human-driven methane emissions. Rice is a mainstay for food systems across the world. It is eaten daily by 3.5 billion people, produced by 144 million farmers and supports livelihoods for over 1 billion people. Rice production accounts for approximately 12% of total methane global emissions. Therefore, sustainable rice landscapes need to be prioritized.

Less than 10% of global climate finance is used for land use. It is critical to transform the sector to maximize its potential contribution to the global mitigation goal as well as being at the center of adaptive responses, combat desertification and land degradation, and enhancing food security, biodiversity and prosperity for farmers and dependent communities.

Business Action

WBCSD leads on promoting nature-positive land use by accelerating food system transformation and sustainable forest management, focusing on enhancing value-chain collaboration and scaling-up investments.

WBCSD convenes The Good Food Finance Network with financial institutions across the public, private and multilateral sectors. The Network’s goal is to raise ambitions and drive action on food system transformation. But further business action is needed in the following areas:

- Develop sector roadmaps for food and forestry value chains that provide step-by-step guidance for business to adopt nature-positive approaches.
- Create a toolkit to qualify, quantify, and demonstrate the private and public benefits of investing in soil health applying environmental, social and economic indicators.
- Develop a net-zero roadmap for the forest sector to drive credible and science-based net-zero strategies.

Policy Requirements

There is a need for clear policy direction in the following areas:

- Adopt interlinked key targets for a systemic transformation to a net-zero, nature-positive and equitable economy.
- Value and embed nature and climate in decision-making and disclosure to go beyond short-term profit and GDP.
- Reform subsidies and incentives to reward nature-positive and net-zero actions and finance a just transition.
- Develop long-term economic recovery plans that incorporate principles of nature recovery and climate action to build stronger, more resilient economies with strong social benefits.
- Align climate policy with the Convention on Biological Diversity by establishing ambitious and mutually beneficial targets, including to halt and reverse nature loss by 2030 to achieve an equitable, net-zero and nature-positive world.

WBCSD leads on promoting nature-positive land use by accelerating food system transformation and sustainable forest management
Accelerate action towards net-zero supply chains through business collaboration to accurately measure, manage and decarbonize Scope 3 emissions and to create verifiable product-level emissions data.

Approximately 80% of aggregate corporate GHG emissions result from activities undertaken by suppliers or customers within the corporate value chain. These are defined as Scope 3 emissions in the GHG Protocol. Finding effective decarbonization solutions for Scope 3 emissions and choosing to procure low-carbon products and services can therefore dramatically multiply a company’s own climate impact.

Accelerating action towards net-zero supply chains is a realistic goal. An estimated 40% of current global supply chain emissions could be cut with readily available and affordable solutions (less than USD $10 per ton of CO₂e) and the overall impact on end-consumer prices (the so-called “greenium”) would be less than 5% in the medium term.

Scope 3 emissions are clearly defined in the GHG Protocol and there is already wide-spread adoption of product-level carbon accounting and reporting that includes Scope 3 emissions, e.g. ISO standards, the GHG Protocol, and sector-specific guidelines such as the Product Category Rules (PCRs).

Figure 10: Percentage of total Scope 1–3 emissions, based on CDP self-reported data

<table>
<thead>
<tr>
<th>Category</th>
<th>Scope 1+2</th>
<th>Scope 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cement &amp; Concrete</td>
<td>82%</td>
<td>18%</td>
</tr>
<tr>
<td>Air transport</td>
<td>78%</td>
<td>22%</td>
</tr>
<tr>
<td>Pharma</td>
<td>26%</td>
<td>74%</td>
</tr>
<tr>
<td>Packaging*</td>
<td>25%</td>
<td>75%</td>
</tr>
<tr>
<td>Fertilizer*</td>
<td>21%</td>
<td>79%</td>
</tr>
<tr>
<td>Chemicals</td>
<td>19%</td>
<td>81%</td>
</tr>
<tr>
<td>Oil &amp; Gas</td>
<td>8%</td>
<td>92%</td>
</tr>
<tr>
<td>FMCG</td>
<td>7%</td>
<td>93%</td>
</tr>
<tr>
<td>Mining</td>
<td>5%</td>
<td>96%</td>
</tr>
<tr>
<td>Apparel</td>
<td>5%</td>
<td>95%</td>
</tr>
<tr>
<td>Retail</td>
<td>4%</td>
<td>96%</td>
</tr>
<tr>
<td>Automotive</td>
<td>2%</td>
<td>98%</td>
</tr>
</tbody>
</table>

* Based on more than 50 selected stakeholders, including Shell, adidas, Pfizer, 3M, Volkswagen.
* Printing and packaging business.
* Includes agricultural chemicals.
However, these standards and protocols leave significant room for interpretation, while poor primary data, fragmented supply chains, competitive behavior and a lack of coordination in data reporting makes taking action on Scope 3 emissions challenging. The lack of clarity over data also creates a strong possibility of multiple corporate GHG reduction claims for a single action while a lack of verifiable product level carbon accounting means that the consumers cannot trust product labeling. In a recent WBCSD study of the most climate-ambitious companies, the difficulty in measuring and addressing Scope 3 emissions was highlighted as the second-largest barrier to decarbonization after policy uncertainties.9

Business Action
Businesses are already collaborating to address the data transparency and coordination challenge. This is helped by the fact that only eight supply chains (food, construction, fashion, fast-moving consumer goods, electronics, automotive, professional services and freight) account for more than 50% of global emissions, with a significant share of activity indirectly controlled by a few companies.

But more work is needed to:
• Share comprehensive emissions data.
• Set clear procurement standards to promote decarbonization though the supply chain.
• Collaborate with similar companies to support and co-fund decarbonization in the shared supply chain.

The WBCSD-led Carbon Transparency Partnership is a leading example of a new system development for Scope 3 data measurement and management. This partnership is supported by the most ambitious sustainable global companies working together to ensure their supply chain data is comparable, consistent and verified. It will be built on an open network to exchange primary product carbon footprints along value chains and across industries. It will also provide interoperability to connect different technology solutions and enable the exchange of other sustainability data.

Policy Requirements
The acceleration of supply-chain emissions management would be enhanced by the policy measures that:
• Support the development of methodological standards and create incentives for the calculation, exchange and display of environmental data, ensuring all types of stakeholders are considered.
• Set guidelines for the production of environmentally responsible products (designed to last, reusable, minimal emissions associated with production).
• Provide investment in research to achieve successful digitalization for a green economy.

An estimated 40% of current global supply-chain emissions could be cut with readily available and affordable solutions.
Accelerate the adoption of high-quality reporting frameworks for corporate climate risks. Integrate climate and financial data in reporting, valuation frameworks and stakeholder analysis to help drive a shift in capital allocation towards true value creation.

Clear, comprehensive, reliable information is the foundation of well-functioning markets. The risks, opportunities, impacts and dependencies associated with climate change need to be clearly visible in the real economy and financial system. This will allow decarbonization action and climate risk to be compared, assessed and included in valuation frameworks and stakeholder analysis.

We need rapid adoption of frameworks such as those proposed by the Taskforce on Climate-Related Financial Disclosures (TCFD). Further convergence of ESG standards – as proposed in the new International Sustainability Standards Board.

Business Action
Multiple business groups exist with the aim of supporting the efforts of regulators and standard setters to develop harmonized sustainability reporting standards. These efforts demonstrate the commitments of both corporate groups and investment communities to use the new standards.

In 2019, only two years after the TCFD taskforce reported, more than four out of ten companies with a market capitalization greater than USD $10 billion were already disclosing some information in line with TCFD recommendations.

Figure 11: Cumulative TCFD commitments

Source: BloombergNEF, TCFD.
WBCSD has been at the forefront of these developments. For example:

- As a key implementation partner for TCFD we help our members shape and prepare for anticipated regulatory requirements and develop strategic scenarios and resilience assessment techniques.
- The WBCSD CFO Network engages with key stakeholders to input into relevant processes (e.g. US Securities and Exchange Commission, European Financial Reporting Advisory Group, International Financial Reporting Standards Foundation).
- We work with the Principles for Responsible Investment (PRI) to bring investors and companies together to clarify how sustainability information is used in the investor-company relationship. We also support businesses and investors to align incentives, evaluation, valuation and decision-making with sustainability considerations.

**Policy Requirements**

Voluntary action can help lead and road-test framework development but ultimately regulatory requirements drive alignment and adoption. We need regulators, stock exchanges and governments to:

- Encourage adoption of sustainability reporting requirements such as TCFD. These should include climate-related risks, transition plans and actions. They need to be coherent and compatible across jurisdictions while supporting the International Accounting Standards Board and International Sustainability Standards Board proposals for greater convergence of ESG standards.
- Strengthen regulatory guidance around the need for climate change to be considered in the mandates, responsibilities, duties of investors and company directors.
- Commit to regular stress testing of the corporate and financial sector to climate risks.

The risks, opportunities, impacts and dependencies associated with climate change need to be clearly visible in the real economy and financial system.
Consolidate data from existing corporate GHG reporting into aggregated Corporate Determined Contributions (CDCs) and use the annual UN Climate Change Conference (COP) to assess business progress against targets.

The Greenhouse Gas Protocol (GHG Protocol) provides a comprehensive, global, standardized framework for measuring and managing greenhouse gas emissions from private and public sector operations, value chains and mitigation actions. The GHG Protocol, which was developed by the WBCSD and the World Resources Institute (WRI), provides a widely-used comprehensive global, standardized framework.

National governments are encouraged to disclose their annual emissions data to the UNFCCC secretariat via the GHG inventory submission process and to set regular updated national targets and net-zero plans through the Nationally Determined Contributions (NDCs) process. These provide a clear way to determine targets and hold governments to account for their country’s progress.

Corporate GHG emissions data reporting is mandatory in some countries, for example in annual reports. Additionally, some businesses also disclose their GHG data on an opt-in basis, such as submitting data to the Carbon Disclosure Project (CDP). CDP has a dataset of more than 7,000 businesses reporting their Scope 1 emissions alone, equating to over 35% of global GHG emissions in 2018.

However, this data is not included in NDCs and there is no formal aggregation mechanism for corporate emissions at a global level to mirror the NDC process. This is despite the private sector being responsible for the majority of GHG emissions and, in many cases, having put in place targets and action plans that are more ambitious than many national governments.

This means that we fail to capture the potential of these ambitious plans in driving further progress with other stakeholders and we lack a common accountability mechanism to assess whether businesses are delivering on their targets leaving them open to accusations of greenwashing.

The development of CDCs will be informed by ongoing work to accurately measure and report corporate GHG emissions. The use of CDCs will allow us to track and assess the different ways companies are driving decarbonization to help the world meet the Paris Agreement goals.

Policy Requirements
We believe that business and policy makers should collaborate to introduce a new Corporate Determined Contributions (CDCs) mechanism that is structured to be:

• A simple reporting portal for all disclosed corporate GHG data that is then published annually.
• Adopted by a current UN structure such as the Marrakesh Partnership for Global Climate Action to avoid needless duplication.
• Open-source and highly accessible allowing stakeholders such as analysts, regulators and consumers to query and analyze the data.
• Able to be expanded, as with the guidelines for NDCs to include reporting against progress for other ambitions targets and aims which help advance the low-carbon transition.

This should be supported by additional funding from climate development mechanisms both to improve national GHG inventory disclosure and for corporate data reporting in the new portal.
Business and policy makers should collaborate to introduce a new Corporate Determined Contributions (CDCs) emissions reporting mechanism.
Endnotes

1 From a 2020 baseline
3 https://www.iea.org/reports/global-ev-outlook-2021
5 https://www.iea.org/reports/net-zero-by-2050
6 From a 2020 baseline
8 https://www.weforum.org/reports/net-zero-challenge-the-supply-chain-opportunity
9 BCG Analysis for WBCSD, 2020
About WBCSD

WBCSD is the premier global, CEO-led community of over 200 of the world’s leading sustainable businesses working collectively to accelerate the system transformations needed for a net-zero, nature-positive, and more equitable future.

We do this by engaging executives and sustainability leaders from business and elsewhere to share practical insights on the obstacles and opportunities we currently face in tackling the integrated climate, nature and inequality sustainability challenge; by co-developing “how-to” CEO-guides from these insights; by providing science-based target guidance including standards and protocols; and by developing tools and platforms to help leading businesses in sustainability drive integrated actions to tackle climate, nature and inequality challenges across sectors and geographical regions.

Our member companies come from all business sectors and all major economies, representing a combined revenue of more than USD $8.5 trillion and 19 million employees. Our global network of almost 70 national business councils gives our members unparalleled reach across the globe. Since 1995, WBCSD has been uniquely positioned to work with member companies along and across value chains to deliver impactful business solutions to the most challenging sustainability issues.

Together, we are the leading voice of business for sustainability, united by our vision of creating a world in which 9+ billion people are living well, within planetary boundaries, by mid-century.

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This document is released in the name of WBCSD. Like other reports, it is the result of collaborative efforts by WBCSD staff, experts and executives from member companies. Drafts were reviewed by members of the Mobility Decarbonization project, ensuring that the document broadly represents the majority view of WBCSD members. It does not mean, however, that every member company or WBCSD agrees with every word.

We would also like to thank BloombergNEF and Systemiq for providing data and analysis for the manifesto.