Actions Speak Louder Than Words in Delivering Net Zero

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> **By gaining deeper insights into the status and efficacy of their climate initiatives, companies can accelerate efforts across the value chain.**

The message of the 2021 report issued by the Intergovernmental Panel on Climate Change is unequivocal: time is running out. Unless immediate steps are taken to significantly reduce greenhouse gas emissions, the global average temperature is likely to rise by more than 1.5°C—the Paris Agreement's targeted limit—much sooner than previously anticipated.

In short, the science is clear, and real action is needed now. This is particularly true in heavy-emitting industries in the power, industrials, transport, and agriculture sectors, including oil and gas, mining, cement, chemicals, steelmaking, and road transport. Together, these sectors are responsible for more than 80% of total greenhouse-gas emissions. Unless they take decarbonization actions, the world will not meet the Paris goals.

Corporate leaders need to acknowledge that ambitious net-zero goals and interim reduction targets will not be enough. They must move from words to actions—and prepare their organizations to achieve their goals even faster than initially planned.

For each company, the foundation for accelerated action is taking tangible, practical steps to gain a deeper understanding of its current situation and how it can address specific issues across the value chain. Companies need to establish a de-averaged emissions baseline as well as to identify their existing climate initiatives and determine whether these actions are sufficient. With this vital information in hand, leaders can set up the organization to realize its ambitions.

An Uncommon Challenge Demands a Deeper Understanding

It's not as if corporate climate pledges are gathering dust in file cabinets. But moving rapidly from words to actions has not been easy. How to take climate action is an unprecedented business problem because many areas—including technology advancement, investor expectations, and regulation—are constantly shifting.

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Many companies are not prepared to cope with the resulting uncertainty and stakeholder pressure. They are also not set up to monitor developments and change direction fast enough to keep pace. To complicate matters, taking climate action can require far-reaching solutions that no company can address on its own.

Solving complex decarbonization issues at an accelerated speed calls for deep, expansive collaboration—along value chains, across industries, and with governments and many other groups. To start the journey, every company must have in-depth insights into the challenges of reducing its carbon footprint. Companies need to ask three questions:

- **What are the organization's de-averaged emissions across the value chain?** For each stage of the value chain, an organization should determine its emissions and identify the role that it can play to reduce them. These are prerequisites to developing a portfolio of sufficient actions.
- **What are the climate-related and decarbonization actions that the company is pursuing—and are they enough?** To mobilize the organization, the company needs to identify the gaps between what its current actions can accomplish and what is actually needed to achieve its goals.
- **Is the organization set up to execute its climate actions and meet the targets**? To meet interim and net-zero targets over a long time frame, the company needs an operating model that allows it to quickly adapt to the complexity of a constantly evolving problem.

Addressing Emissions Across the Value Chain

By taking three practical steps to address the questions above, companies can promote accelerated action.

ESTABLISH A DE-AVERAGED EMISSIONS BASELINE

Determining the de-averaged baseline for the amount of emissions currently produced by business units and functions and across the value chain is a precursor to taking climate

action. It is critical for producing external communications—such as sustainability reports and climate-transition action plans. And a baseline is needed to set goals and validate them with science-based target-setting organizations, as well as to track progress over time. Put simply, companies cannot measure or resolve a problem that they do not understand.

Given its importance, the accuracy of the baseline is critical. However, our research shows an average error rate of 30% to 40% in emissions measurements. Using the latest technology and artificial intelligence can help companies address this gap, further improving the efficacy of their actions.

A de-averaged baseline allows companies to consider nuanced decarbonization pathways for each stage of the value chain. Variations in the technology and abatement pathways for different products or stages of the value chain mean that the applicable solutions will require different levels of technical maturity and operational complexity. In pursuing these pathways, companies should use disciplined program management. This includes setting goals and milestones for each initiative, defining sufficiently granular roadmaps and implementation plans, and assigning accountable owners and subject matter experts. In addition, companies can use the insights provided by the baseline to facilitate conversations across the business and with participants in the value chain, such as suppliers and customers.

A de-averaged baseline is essential for enabling a company to understand the roles it has across the value chain and the actions that it needs to take. A climate-progressive organization considers how it can exercise control, where it can build partnerships with others, and where it can exert influence to accelerate decarbonization. (See Exhibit 1.)

Exhibit 1 - Companies Have Opportunities to Act Across Emission Scopes

	Exercise control For example, by changing operating procedures and processes and suppliers	**Build partnerships** For example, by collaborating on R&D and co-investing to help commercialize lower-carbon solutions	**Exert influence** For example, by sharing knowledge with other organizations, helping to set industry standards and policies, and participating in collective decarbonization efforts
Scope 3 Downstream external emissions	Reduce emissions related to the use of the company's products and end-of-life treatment	Partner with customers to help them reduce their emissions when using the company's products	Provide thought leadership that contributes to industry decarbonization, and participate in industry and other climate-transition forums
Scope 3 Upstream external emissions	Choose suppliers and procure products using established emissions criteria	Work with suppliers to develop low- or zero-carbon products; consider joining buyers' coalitions to stimulate demand and create a market for emerging low-carbon products	Help suppliers set their decarbonization targets, and communicate the company's commitments
Scope 2 Indirect internal emissions	Reduce energy consumption and switch to low-carbon electricity	Partner with energy providers to develop low-carbon electricity—for example, by establishing renewable power purchase agreements	Support the energy sector's decarbonization efforts—for example, through policy engagement
Scope 1 Direct internal emissions	Change operations and equipment to promote efficiency, and replace fossil fuels with greener alternatives	Collaborate with OEMs to develop equipment with lower energy use and zero emissions; when building new platforms, evaluate opportunities to leverage data and to optimize performance, transparency, and service delivery	Stimulate the green tech sector, communicate needs that require industrywide responses, and explore innovative ways to accelerate agreement on jointly adopted solutions

Source: BCG analysis.

Note: Downstream external emissions are those produced by a company's value chain after manufacturing, such as during product distribution. Upstream external emissions are those related to the products purchased by a company. Indirect internal emissions are those produced by products a company has purchased for its use, such as energy. Direct internal emissions are those related to a company's activities, such as the operation of its facilities or vehicles.

Because scope 3 or external emissions are not always within a company's direct control, they are harder to address. Indeed, some companies have viewed scope 3 emissions as a problem for someone else to confront. However, many organizations and investors recognize that reducing emissions is an ecosystem problem that will be best solved through the concerted efforts of all parties.

Although some companies have taken steps to meet the challenges across the value chain —announcing studies and high-level partnerships with their supply chains and customer bases—they often need to do more. Specific initiatives could include designing more sustainable products that produce fewer upstream and downstream emissions, managing upstream sourcing by working closely with suppliers, and imposing emissions standards

and tracking performance. Companies can also partner with customers to help them gain access to products and technologies that will reduce emissions in their own operations. Consortia have been formed by a variety of participants—including some in the public sector and cornerstone investors—to share information, ideas, and resources across industries and value chains. These efforts recognize that global warming can be mitigated only through carefully orchestrated collaboration among those with common interests.

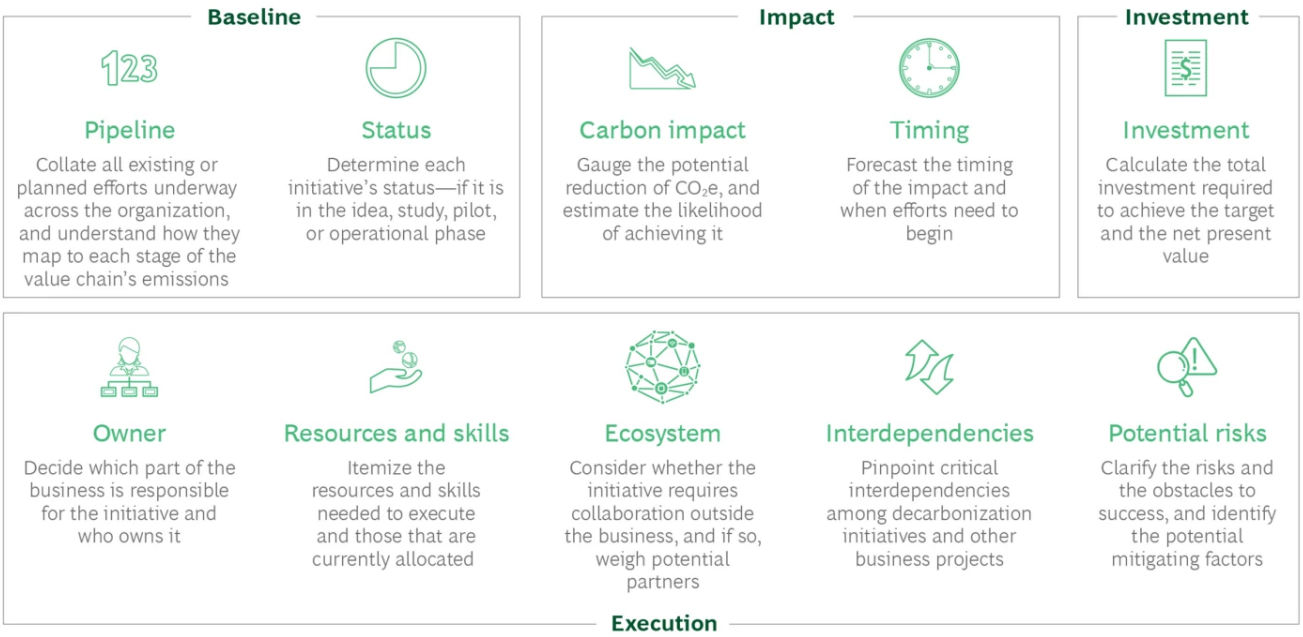
IDENTIFY AND ASSESS THE INITIATIVES IN THE PIPELINE

Many companies have multiple climate-related initiatives, working groups, and forums underway. This is understandable given the topic's importance and the recognition that action is needed. However, the result is that many actions receive fragmented attention and insufficient resources, limiting their ability to achieve impactful outcomes.

Getting business leaders to align on which actions to prioritize, and when and how to pursue them, is critical for concrete progress toward interim targets and net-zero emissions. Leaders can use a portfolio approach to identify, test, and challenge the pipeline of climate initiatives. Several sets of actions can promote a meaningful discussion about whether this pipeline is sufficient.

Assess the current pipeline. Determine which emissions-reduction projects and efforts are currently in the pipeline. For each initiative, conduct a wide-ranging assessment to identify the status and potential CO_2 reduction, as well as the challenges to reaching the target and how to overcome them. As part of this assessment, consider whether the organization controls the initiative or whether it would need to work with others in the value chain to complete it. (See Exhibit 2.)

Exhibit 2 - Identify and Examine Each Decarbonization Initiative in the Pipeline



Source: BCG analysis.

Note: CO_2e = carbon dioxide equivalent.

Calculate the gap. Analyze the pipeline's total impact and the timing for potentially reducing emissions. Then consider whether these initiatives allow the company to meet its emissions-reduction target. A sensitivity analysis can aid in understanding whether the company is genuinely doing enough to reach its interim and end-state targets. Use the insights to pinpoint the gap between the identified impact and the stated ambition.

Expand the pipeline. Determine how to build out the pipeline by identifying new initiatives to study or undertake. Seek inspiration by considering initiatives pursued by other companies, either inside or outside the industry. Make sure the relevant leaders and their teams are thinking expansively enough about opportunities. In their efforts to develop ideas and solve problems, they should reach out to people in their ecosystem—including their peers, players in their value chain, contacts in government and at public-private partnerships, and even counterparts at competitors.

> Examining decarbonization initiatives should trigger strategic discussions about new commercial opportunities.

In addition, examining decarbonization initiatives should trigger strategic discussions about potential growth areas and new commercial opportunities for the business. For example, some companies are launching green ventures to incubate and invest in new green solutions from the ground up. All such initiatives should be part of the overall climate-action portfolio.

Actively manage the pipeline. Continually track the pipeline's progress toward the company's climate objectives and evaluate the impact. Bring together key leaders and have robust conversations about whether the pipeline is sufficient to meet the organization's ambitions. Is the company doing enough to decarbonize operations, act within its ecosystem, and capture growth?

SET UP FOR ACTION

Companies can choose from among various approaches when setting up their organizations to move from words to actions. The options include creating dedicated business units, embedding efforts into existing business units, and establishing a climate-related program management office. The best approach will depend, in large part, on the company's operating model and how it views the role of the center. No matter which approach the company chooses, it needs to align its governance and operating model, its business and capital planning, and its culture with its climate goals.

Governance and Operating Model. A company needs a governance and operating model that enables it to track progress, move quickly, and achieve its climate targets. The issues to consider include:

- A structure that will allow the company to understand rapidly evolving climate trends and identify and disseminate tangible actions for different parts of the business
- A setup that will facilitate innovation and capturing new opportunities before competitors do
- Which executive will own each aspect of the climate agenda (monitoring all emission scopes, reporting results, and engaging stakeholders), as well as the role of the executive team and the board of directors
- Which executive or department will be responsible for testing the pipeline of actions (including assessing whether they are adequate to meet evolving external expectations), prioritizing them and providing the needed resources, and tracking progress against targets
- The tools and processes, such as ones powered by artificial intelligence, that will be needed to track emissions and refine emissions measurements

Business and Capital Planning. To improve decision making, companies should assess:

- The allocation of capital and resources that will ensure maximum flexibility, as well as the required changes to the budgeting process and the delivery of capital projects
- The approach to testing and validating assumptions made during the capital-allocation process for both green and traditional investments; it is critical to ensure that underlying assumptions for a decision or pathway continue to hold given the rapidly changing market environment
- Whether any processes or metrics (such as business case hurdle rates or the use of an internal carbon price) will need to be adapted to factor in climate considerations

Culture. A culture that promotes climate action is supported by appropriate behaviors, learning and development programs, incentives, recognition, and workforce planning. To foster this culture, companies should identify:

- The best way to educate leaders about and engage them in the climate agenda and set expectations for what will be required to achieve targets
- Ways to implement climate KPIs and remuneration to incentivize changes in behavior, acknowledging that many climate initiatives may not reach fruition for five to ten years (though ideally with interim milestones)
- A process for anticipating future capability needs and getting ahead in the war for talent

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The urgency of the fight against climate change is the number one topic on the agenda of most CEOs and boards of directors. While decarbonizing current operations is the immediate priority, most companies will need to reinvent their business models to achieve climate goals over the long term. This entails implementing new technologies, redesigning business portfolios, and offering new products and services. To deliver meaningful change over all time frames, companies need deeper insights into how to embed climate actions along their value chains and in everyday decisions. Three practical steps—establishing a de-averaged emissions baseline, identifying initiatives underway and testing their sufficiency, and setting up for action—will position companies for success, before it is too late.

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