BUSINESS

CORPORATE LOW-CARBON TRANSITION PLANNING:

Best Practices & Recommendations to Support Credible Action

C2ES CENTER FOR CLIMATE AND ENERGY SOLUTIONS

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EXECUTIVE SUMMARY

Thousands of companies have set ambitious, interim 2030 carbon reduction goals and pledged net-zero emissions by 2050. Yet, some stakeholders are skeptical, suggesting corporate net-zero goals are no more than greenwashing. The United Nations High Level Expert Group (HLEG) report *Integrity Matters: Net Zero Commitments by Businesses, Financial Institutions, Cities and Regions* emphasized that net-zero commitments should deliver significant near- and medium-term emissions reductions, which are based on an implementation plan that is: science-based, transparent, verifiable, and that aligns actions and investments with net-zero commitments.[1]

With this project and the accompanying report, the Center for Climate and Energy Solutions (C2ES) aims to support and accelerate the development of low-carbon transition plans that align with the objectives of the Paris Agreement among companies in real-economy industry sectors. To this end, it is important to understand: (1) the existing guidance landscape for target setting, planning, and credibility, as well as broader stakeholder requirements for transition planning; and (2) the current state of corporate transition planning.

This work began with an analysis of transition planning guidance focused on real-economy companies from non-governmental organizations (NGOs), governments, and quasi-governmental organizations that focused on identifying commonalities and unique requirements. Guidance from the Task Force on Climate-Related Financial Disclosure (TCFD) and the Glasgow Financial Alliance for Net Zero (GFANZ) were both the most comprehensive and the most widely adopted of all the guidance reviewed. There is a high level of correspondence between TCFD and GFANZ and other transition planning guidance, though there are some differences. Areas of divergence arise when a particular guidance provides more in-depth or specific requirements around certain topics. For example, the UK Transition Planning Task Force (TPT) guidance recommends companies disclose their intended use of carbon credits and update these disclosures annually. Guidance also varies with regard to just transition and nature-based impacts, with GFANZ and Ceres both including these thematic considerations.

The degree to which consensus exists around what makes a credible plan was determined by analyzing guidance focused on the processes, elements, commitments, and strategies required for a plan to be deemed credible. Seven key dimensions encompass the majority of credibility-building guidance:

- net-zero targets
- net-zero strategy
- policy/engagement
- transparency and verification
- nature and just transition
- governance
- contribution to climate solutions.

An area of divergence among credibility-building guidance was the inclusion of guidance on areas outside of core plan elements. For example, several guidance regimes indicate that specific planning methods—scenario analysis, for example—are required for credible plan development. Other guidance includes specific strategy elements that credible strategies should adopt, such as the HLEG requirement that the strategy includes a commitment to phase out the use of fossil fuels.

To gain insight into the state of transition planning, C2ES conducted structured interviews with 14 real-economy sector companies spanning 12 industries (Appendix A). Key findings from the corporate transition plans and interviews include:

- **Incomplete Target Specification:** Most companies did not define the terms net zero or carbon neutral when presenting targets, and only two of the 12 companies with a transition plan specified the level of long-term, absolute emission reductions for their net-zero or carbon-neutral targets.
- **Plan vs Planning:** 12 of the 14 companies interviewed had a transition plan. Of those, only five had a stand-alone plan, with the other seven incorporating transition plan elements in an existing annual sustainability report.
- **Importance of Senior Level Commitment:** Almost all the interview participants mentioned that when looking to create internal buy-in for plan development, target setting, and strategy implementation, visible board- and executive-level support, along with coordinated cross-functional participation, was instrumental to success.
- **Guidance Overload:** Most companies interviewed indicated that staying up to date on the latest guidance around transition planning and credibility was difficult, and the volume of guidance is making it difficult to assess which is the most important to follow.
- **External Stakeholder Engagement to Build Credibility:** Given the uncertainty around guidance and the lack of consensus around credibility conferring partners, several companies mentioned proactively reaching out to key stakeholders to engage them during the transition plan development process to build credibility.
- **Knowledge Gaps:** Interviewees cited significant knowledge gaps during the development of transition plans. Companies struggled with a lack of in-house and institutional knowledge regarding decarbonization pathways, climate scenario analysis, climate and emissions data management, materiality assessments, climate discourse, supplier engagement, renewable energy procurement, life cycle assessment, enterprise-wide emissions reduction strategy integration, climate-related investment analysis, capital allocation strategies, investor engagement, just transition, near-term goals, and climate lobbying. Strategies identified by interviewees to close gaps included: assessing peer actions, reassessing internal roles and responsibilities, refining data management strategies, engaging in employee education, and upskilling efforts. There was also a heavy reliance on external consultants.
- **Transparency Gulf:** The interviews identified a wide gulf between the transparency expectations outlined in transition planning guidance and the level of transparency that companies are currently comfortable with. The primary concern cited is that any deviation from a publicly available plan will be used as evidence that a company is greenwashing or lacks commitment.
- **Lack of Interim Targets & Measures:** Corporate targets are centered around the key 2030 and 2050 milestones outlined by the UN Framework Convention on Climate Change (UNFCCC) for achieving 50 percent reduction in emissions and net zero, respectively. There are few instances where companies have outlined an interim target between 2030 and 2050. Without additional, publicly available interim targets there is insufficient data for stakeholders to assess whether a company is on track to meeting their long-term 2030 and 2050 targets
- **Just Transition:** there was a wide variation among sectors in understanding and addressing just transition issues; however, there was a clear acknowledgment of the issue's emerging importance. Interviews identified the need for establishing best practices and better metrics and approaches for meaningful community engagement.

This report concludes with recommendations that fall into three broad categories and are informed by the research conducted on transition planning guidance, corporate transition plans, and the lessons learned from the corporate interviews. The first category offers recommendations to enhance the planning process. The second category focuses on recommendations to enhance transparency, with proposed actions for companies and their stakeholders; the interviews made clear there is a gulf between transparency practices and expectations. The third category offers suggestions to shift the focus from planning to measuring performance.

ENHANCING PLANNING

Fully Specified Short-Term and Long-Term Targets

A fully specified target is the first piece of information that stakeholders use to assess ambition and credibility of a transition plan.

Recommendation: To the extent companies are setting their own net-zero targets, we recommend that companies follow the target-setting guidance outlined in *IFRS S2: Climate Related Disclosures*, and specifically, the guidance on setting *Climate-related targets* beginning at paragraph 33.[2] Alternatively, *Section 4.4. Metrics and Targets*, of the GFANZ guidance: *Expectations for Real-economy Transition plans* provide guidance on how to fully specify targets and their accompanying metrics.[3]

More Interim Targets

Recommendation: To ensure transparency and the ability for stakeholders to assess whether companies are on track to meeting long-term targets, we recommend that companies follow *ISO Net Zero Guidelines* and set interim targets every 2–5 years.[4] More frequent interim targets also enable companies to more clearly demonstrate how strategies are being adjusted to reflect changes in technology and policy, among other things.

Converge Transition Planning and Credibility Guidance

Interview findings made it clear that the crowded and evolving transition planning guidance landscape is creating confusion, which may be slowing corporate action.

Recommendation: NGOs and standard-setting bodies should seek opportunities to converge transition planning guidance to create certainty and reduce confusion.

Recommendation: To the greatest extent possible NGOs should seek to use existing guidance to inform real-economy sector companies about the development and content of credible transition plans. Only when there is a gap should the development of new guidance be considered.

ENHANCING TRANSPARENCY

Transition Plan Content Index

To increase transparency, it is important for companies to make the components of their transition plan explicit and accessible when they are not part of a stand-alone plan (i.e., when they are placed in other sustainability reporting documents).

Recommendation: Companies should use a transition plan context index when their transition plan elements are presented in a document that does not exclusively focus on the transition plan.

Creating an Environment that Encourages Greater Corporate Transparency

Interviews revealed a wide gulf between the level of transparency called for in transition planning guidance and what companies are willing and comfortable disclosing. Bridging this gap will require movement on the part of companies and their stakeholders regarding the iterative nature of the planning process, and that credibility is a function of performance, not planning.

Recommendation: Setting the expectation among companies and stakeholders that the focus should not be on a single transition plan, but ongoing transition planning will be important first step to creating conditions where greater transparency is the norm, and changes in strategy are understood and accepted by stakeholders.

FIGURE ES-1: Dimensions of Net Zero Transition Credibility

<table>
<tr><td rowspan="7">PERCEIVED CREDIBILITY</td><td rowspan="3">REAL CREDIBILITY</td><td rowspan="3">INTERNAL</td><td rowspan="3">Planning</td><td>Targets</td></tr>
<tr><td>Plans</td></tr>
<tr><td>Governance</td></tr>
<tr><td rowspan="2">PERFORMANCE</td><td>PROGRESS</td></tr>
<tr><td>TRANSPARENCY</td></tr>
<tr><td rowspan="5"></td><td></td><td></td><td></td></tr>
<tr><td rowspan="4">EXTERNAL</td><td rowspan="2">Historical Context</td><td>Sector</td></tr>
<tr><td>Company</td></tr>
<tr><td rowspan="3">Current Context</td><td>Science Aligned</td></tr>
<tr><td>Proportionate</td></tr>
<tr><td>Transparent</td></tr>
</table>

Recommendation: Companies and stakeholders (e.g., NGOs, standard setters) should be clear that real credibility will be measured by how a company performs in terms of absolute emissions reductions and performance toward their net-zero targets.

ENHANCING PERFORMANCE

During our evaluation of company transition plans and guidance frameworks, we observed a significant gap in guidance and expectations on what constitutes credible levels of performance. Significantly, many company transition plans focused on the act of planning, rather than on their performance against their plans.

We mapped key elements from several different organization's guidance and frameworks including Exponential Roadmap, TPT, GFANZ, IIGCC, CA100+, Planet Tracker, and UN Integrity Matters on a continuum that sought to classify these elements into five categories: developing, aligning, credible, leading, and exceeding.

- Aligning activities included steps that underpin a robust plan like emissions disclosure for Scopes 1, 2, and relevant Scope 3 categories; target setting; and public commitments.
- A credible plan seeks to deliver on targets with a dedicated strategy that demonstrates emissions reductions and regularly discloses plan shortcomings, uncertainties, and updates.
- Leading plans demonstrate enhanced ambition with achievement of targets ahead of stated ambition.
- Exceeding plans go a step further and seek to set and achieve emission reduction targets beyond the company's value chain within society.

Recommendation: Criteria for development of a transition performance continuum (as opposed to planning) should be developed to serve as a guide for assessing the credibility of climate action that is a result of transition planning. As companies move from planning to execution it will be increasingly important to have clarity on the levels of performance required for implementation of decarbonization goals to be deemed credible.

INTRODUCTION

The central aim of the UN Framework Convention on Climate Change's (UNFCCC) Paris Agreement is to limit global temperature rise to 1.5 degrees C above pre-industrial levels.[5] To achieve this goal global greenhouse gas emissions must be reduced 45 percent by 2030 and to net-zero by 2050. The Intergovernmental Panel on Climate Change's (IPCC) 2023 Climate Change Synthesis Report states that it is unequivocal that human influence has already warmed the atmosphere, ocean, and land; and this has led to widespread damage and losses to nature and people.[6]

Experts agree that the world is not on track to limit global temperature rise to 1.5 degrees C. The planet broke records in 2023, seeing the hottest year ever measured with the global average near-surface temperature 1.45 degrees C above the pre-industrial baseline.[7] This was accompanied by record sea surface temperatures and the highest level of Antarctic Sea ice loss ever recorded.[8] The first global stocktake of the Paris Agreement released in December 2023 underlines that collectively, Parties are still not on track to achieve the Paris Agreement long-term goals.[9] The stocktake also highlights that the impacts of climate change are accelerating and emphasizes that urgent action must be taken because the window to achieve the goal of limiting global average temperature rise to 1.5 degrees C is rapidly closing.[10]

Hundreds of large, publicly traded companies in the United States—thousands on the global scale—have set ambitious, interim 2030 carbon reduction goals and pledged to achieve net-zero emissions by 2050. Yet, as more companies set net-zero targets skepticism is emerging, with some stakeholders suggesting corporate net-zero goals are no more than greenwashing. Recognizing the growing credibility problem, the United Nations established its own expert panel to provide recommendations to companies and other non-state entities on net-zero commitments. The panel released the report *Integrity Matters: Net Zero Commitments by Businesses, Financial Institutions, Cities and Regions* in November 2022. The report emphasized that net zero commitments should deliver significant near and medium-term emissions reductions from an implementation plan that is: science-based, transparent, verifiable, and aligns actions and investments with net-zero commitments.[11]

Skepticism from institutions and the public has a chilling effect that threatens to slow or stall private sector ambition and the investment needed to reduce emissions at a time when a quickened pace is required. Likewise, corporate uncertainty around transition planning guidance and what constitutes a credible target and plan only serves to slow commitment and action. The ripple effect is confusion and clouded view on how individual companies and sectors will achieve a low-carbon transition. This lack of clarity may make it harder for policymakers to adopt policies that will facilitate corporate net-zero ambitions and the move towards a low-carbon, clean energy economy. Likewise, despite the large amounts of climate-related data companies publicly disclose, investors lack the information needed to holistically assess the climate impacts of their portfolios.

WHAT IS A TRANSITION PLAN?

Corporate transition plans go by many different names, but at the most basic level they include a greenhouse gas emissions reduction target and the actions to achieve the targets that are consistent with a transition to a low-carbon

> Though countries need to take the lead, solving the climate crisis is not up to them alone. Non-state actors—industry, financial institutions, cities and regions —play a critical role in getting the world to net zero no later than 2050. They will either help scale the ambition and action we need to ensure a sustainable planet or else they strongly increase the likelihood of failure. The planet cannot afford delays, excuses, or more greenwashing.*
>
> **—High-Level Expert Group on The Net Zero Emissions Commitments of Non-State Entities**

** High-Level Expert Group on The Net Zero Emissions Commitments of Non-State Entities (2022) Integrity Matters: Net Zero Commitments By Businesses, Financial Institutions, Cities And Regions. P. 7. https://www.un.org/sites/un2.un.org/files/high-level_expert_group_n7b.pdf. Accessed 5 February 2024.*

economy. It can also encompass complementary topics like biodiversity, transition risks and opportunities, and just transition considerations. **Table 1** shows the different names that are used to describe corporate transition plans used by different standard-setting bodies and non-governmental organizations (NGOs).

The most common corporate long-term emissions reduction target is a net-zero target. According to the Climate Action 100+ 2023 Progress Update, 78 percent of the 170 focus companies have made a full or partial long-term net-zero commitments.[12] The consensus across standard setters and the broader stakeholder community is that long-term corporate net-zero targets should be aligned with the climate science, committing a company to reduce its greenhouse gas emissions at a rate and scale consistent with a pathway that limits global warming to 1.5 degrees C and then balancing any remaining emissions by removing an equivalent amount of carbon dioxide from the atmosphere. The "net" in a net-zero target is a recognition that for most companies it is unrealistic to reduce all greenhouse gas emissions to zero due to technological or financial constraints. Thus, a company would balance residual, hard-to-abate emissions with an equivalent amount of carbon dioxide removal going forward.

For the corporate ambition expressed in a net-zero target to be seen as credible, it must be accompanied by explicit strategies to achieve the target. Details on these strategies should be outlined in a transition plan. According to a 2023 CDP report only 4,100 (22 percent) of the 18,603 2022 CDP respondents disclosed they had a transition plan aligned with a 1.5 degrees C pathway, and of those only 1,751 (9.4 percent) had made their transition plan publicly available.[13] GFANZ was established in 2021 in the run up to the 26th Conference of Parties to the UNFCCC (COP26) in Glasgow, Scotland, in partnership with the UNFCCC Race to Zero campaign. Though GFANZ was established to encourage financial institutions to make net-zero commitments and plans, it has also addressed real-economy (i.e., non-financial institutions) net-zero commitments and plans. In September 2022, GFANZ released *Expectations for Real-economy Transition Plans*.[14] The guidance drew from and synthesized existing transition planning guidance to develop a practical guide to real-economy transition planning. **Figure 1** shows the components of a transition plan outlined in the guidance.

DRIVERS FOR DEVELOPMENT OF LOW-CARBON TRANSITION PLANS

Companies face myriad pressures and incentives for the development of a low-carbon transition plan from both internal and external stakeholders, which are outlined in **Figure 2**. **Tables 2** and **3** provide more detail on the roles and motivations of internal and external stakeholders.

TABLE 1: Transition Planning Naming Conventions

TRANSITION PLAN	CLIMATE TRANSITION PLAN	CLIMATE TRANSITION ACTION PLAN	NET-ZERO TRANSITION PLAN
Taskforce of Climate-related Financial Disclosures (TCFD)/ International Sustainability Standards Board (ISSB)	CDP	Ceres	Glasgow Financial Alliance for Net Zero (GFANZ)
U.S. Securities and Exchange Commission (SEC)	State Street	Transform to Net-Zero	
Transition Plan Taskforce (TPT)		We Mean Business	
Corporate Sustainability Reporting Directive (CSRD)/ European Financial Reporting Advisory Group (EFRAG)			

FIGURE 1: Components of Real-Economy Transition Plans

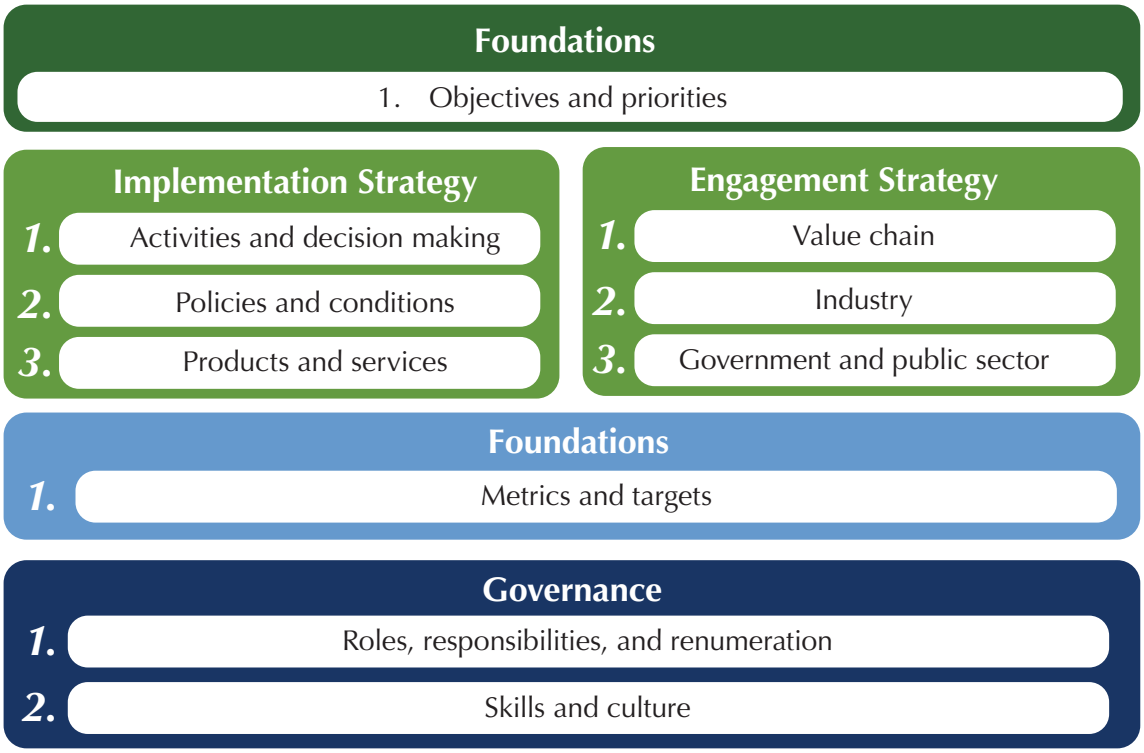


FIGURE 2: Corporate Transition Planning Stakeholder Map

TABLE 2: Internal Stakeholders

OWNERS/SHAREHOLDERS
Company owners are responsible for defining a business strategy, overseeing operations, and driving the overall success of the company. Shareholders are partial owners of a business through the ownership of stock or mutual funds. Owners and shareholders need to be informed about how the transition plan will relate to the overall business strategy and how it will impact the profitability and financial well-being of the company.
BOARD MEMBERS
Members of the board are elected by shareholders to set strategy, oversee business operations, and protect the interests of the shareholders. Because board members have a fiduciary responsibility to look out for the best interest of the shareholders, they also prioritize understanding how the transition plan will impact the bottom line and the financial success of the company. In some cases, board members are tasked to oversee the progress of the transition plan and associated greenhouse gas emission reduction targets and metrics.
MANAGEMENT
Managers are responsible for administering and coordinating day-to-day activities of employees and availability of resources to align with business strategy and meet company goals. Management needs to understand how the transition plan aligns with overall corporate strategy and goals, as well as the potential impacts on day-to-day operations, resource availability, and employee impacts. Management is often tasked with leading the team responsible for the design, implementation, and tracking of transition plan.
EMPLOYEES
Employees are the front-line workers of a company, completing daily tasks to keep business operations running. A resilient company aligns its strategic ambition with its transition plan, including leadership and training programs, human resources (HR) policies and procedures, resourcing, and broad workforce and stakeholder engagement. Employee health, safety, and wellbeing from climate-related impacts is key to business continuity and a productive workforce. Employees will want to understand how a transition plan may impact their employment, role, and daily tasks. This includes things like health and safety, compensation and benefits, and other personal priorities. Employees may also want to understand how the transition plan aligns with company values and goals. Employees may serve on teams responsible for development and implementation of the transition plan or be tasked with implementing specific emissions reduction actions.

TABLE 3: External Stakeholders

INVESTORS
Investors are entities that provide capital to companies with the expectation of creating long-term value for shareholders. Investors may engage companies around transition planning as part of investment due diligence, to identify leaders and laggards within a sector, and to asses portfolio-level risk. Investors will be largely concerned with how the transition plan affects cost, revenue, and profit, but will also be concerned with how the transition plan may reduce or manage climate-related risk. Some investors develop thematic climate-aligned investment funds that focus on decarbonization through a guiding thesis or set of defined criteria.
CREDITORS
Creditors are individuals or entities to whom the company owes money, often in repayment of loans. Creditors will be most concerned with how the transition plan may impact the ability to be repaid, which is likely tied to costs and impact on profitability. Certain sustainable creditors tie the interest rate for a loan with company's greenhouse gas emissions reduction performance as sustainability-linked loan.
CUSTOMERS
Customers are the consumers of the product or service the company provides, whether that be direct-to-consumer or business-to-business consumption. Customers will likely be concerned with transition plan impacts such as access to goods and services, cost, content, sustainability, and quality of products and services. Business-to-business customers may be concerned with how the transition plan implementation impacts progress on their own climate and sustainability goals. Direct-to-consumer customers may also be concerned with how the climate transition aligns with their own values and beliefs.
UNIONS
Unions are organized associations of workers, often in a specific trade or profession, formed to protect and further workforce rights and interests. Within the context of transition planning, labor union representatives may advocate for policies that provide retraining, upskilling, and job placement assistance for workers in industries marginalized or displaced by transition-related activities.
COMMUNITIES
Communities include people and natural ecosystems located in areas surrounding a company's operations. Communities are directly impacted by the company's activities and physical outputs, including but not limited to greenhouse gas and other emissions, chemical pollution, wastewater and stormwater runoff, noise, and traffic. Communities are often also concerned with economic impact of local companies, employment opportunities, and philanthropic efforts. Local communities will be looking to the transition plan to understand how strategy and goals will impact these aspects of operations, therefore impacting their livelihoods and physical environment. By addressing these concerns proactively, companies can build trust, retain and retrain workforces, minimize social disruption, and foster a supportive environment for sustainable change, ultimately leading to a smoother and more successful transition to a low-carbon economy.

TABLE 3: External Stakeholders (cont.)

MEDIA
The media includes television, print, internet, and other outlets where the public can learn about the activities of the company. The media will be most concerned about aspects of the transition plan that the public (especially if that includes customers) will be interested in. This includes reduction targets, alignment with climate science recommendations, and how this strategy will impact access, cost, content, and/or quality of products, services, or other goods ultimately consumed by the public, in addition to any other potential negative public impacts resulting from the transition plan.
RATERS AND RANKERS
Organizations that rate and/or rank performance of third parties (i.e., raters and rankers) review operations of a business to benchmark against best practices and industry averages. They do this to provide comparable information to both internal and external stakeholders on the performance of the company across various measures and impact areas, specifically within environmental, social, and governance (ESG) metrics. Ratings and rankings may be based on compliance with laws, adherence to standards, or a proprietary set of factors specific to the rating or ranking organization. Raters and rankers will need to know the specifics of the transition plan to understand the goals, strategies, and measures used by the company to achieve greenhouse gas emissions reductions to best benchmark against peers and competitors. They will also need data to judge whether companies are on track to meet their stated goals.
NON-GOVERNMENTAL ORGANIZATIONS
An NGO is a group that functions independently of government with the objective of improving environmental and social conditions. NGOs develop many of the standards for carbon accounting, target setting, and transition plan development. They also seek to directly influence companies to set emission reduction targets, as well as develop and implement transition plans, among other environmental and social objectives. NGOs vary widely in their focus areas and will concern themselves with related aspects of the company's transition plan. This could include community well-being, human and labor rights, environmental protection, or other implications of the transition plan. NGOs also develop guidance for companies to develop transition plans and assess plan credibility and alignment to broadly accepted standards.
SUPPLIERS
Suppliers provide input materials for the company, including raw materials, utilities, and other goods and services. Suppliers will need to know any requirements the transition plan lays out for embedded greenhouse gas emissions of input materials, additional social and governance requirements for compliance, and how their own operations will be impacted by strategy and goals in the transition plan.
GOVERNMENTS
A government is the system or group of people governing an organized community, whether this be local, state, national, or multi-national governing bodies. Governments are concerned with how the company's transition plan aligns with any regulations regarding transition planning, government greenhouse gas emissions reduction goals, and how it relates to the company's broader regulatory compliance obligations such as emission of pollution, water use, or material extraction. Companies' public statements on transition planning and other environmental initiatives will also be subject to laws to ensure statements are factual and not misleading; publicly traded companies increasingly have requirements to ensure material information regarding plans and results is publicly available.

Project Objectives and Design

The main objective of this project is to support and accelerate the development of low-carbon transition plans that align with the objectives of the Paris Agreement among companies in real-economy industry sectors. To this end, it is important to understand: (1) the existing guidance landscape for target setting, planning and credibility, as well as broader stakeholder requirements for transition planning; and (2) the current state of corporate transition planning.

Transition Planning Guidance Research

Two categories of transition planning guidance were included in the analysis. The first category is primary transition planning guidance that is specifically targeted to real-economy sector companies and lays out the required components of a transition plan. For this analysis, we gathered guidance from NGOs, governments, and quasi-governmental organizations. The second type of guidance is focused on what processes, elements, commitments, and strategies are required for a plan to be deemed credible.

State of Real-Economy Transition Planning

The mechanism for documenting and assessing the state of transition planning was structured interviews and supplementary background research. Interviews sought to:

- document the state of low-carbon transition planning, including how companies have organized themselves to develop a transition plan, the identification of planning hurdles, knowledge gaps, and external guidance and policy supports that could facilitate development and enhance plan credibility
- identify best practices from first movers that have completed plan development., including questions such as: how internal support was built for plan development, how the planning team was structured, what internal and external resources were most helpful, what internal and external resources would have made the process easier, and how stakeholders were managed to build support and enhance credibility
- understand how companies identified and addressed cross-sector interdependencies (e.g., technology and policy) to the successful implementation of their transition plan.

The cohort of companies interviewed for the project, 14 in total, covered seven distinct industry sectors spanning 12 industries (**Table 4**). The companies were guaranteed anonymity to ensure candor during the interview process.

Of the 14 companies interviewed, 12 had a transition plan, and two did not. Of the 12 companies that had a plan, five had a stand-alone plan, and the other seven had transition plan elements in an existing annual sustainability report.

The interview process consisted of a 90-minute structured interview with companies provided the interview questions (**Appendix A**) in advance of the interview to ensure the most appropriate people were present and to gather information in advance of the interview. Background research was done before the interview to gather information on subject companies' target setting and planning. There were 2–4 company participants in each interview. Each interview had at least one representative from the corporate sustainability team (e.g., chief sustainability officer [CSO], sustainability manager), typically accompanied by members of the public affairs and operations teams. To help ensure accuracy and completeness, companies were given the opportunity to review and amend interview notes prior to finalization.

TABLE 4: Real Economy Sectors Interviewed

Basic Materials	Communication Services	Consumer Cyclical
Energy	Industrials	Technology
Utilities		

OVERVIEW OF THE TRANSITION PLANNING STANDARDS & GUIDANCE LANDSCAPE

Companies have an essential role to play in the transition to a net-zero emissions economy. Low-carbon transition plans demonstrate companies' commitments to greenhouse gas emission reductions based on the most up-to-date climate science. The need for companies to develop a low-carbon transition plan has been highlighted by key stakeholders, such as regulatory bodies, standard-setting agencies, and investors. Among all stakeholders, government bodies across the globe have been driving mandatory corporate climate and sustainability disclosure.

Key governmental bodies include:

- **UK Transition Plan Taskforce (TPT):** In April 2022, the UK government launched the Transition Plan Taskforce to develop the gold standard for private sector climate transition plans. The TPT released its Disclosure Framework in October 2023. Most recently, in April 2024, the TPT published their Final Technical Resources, including but not limited to final sector guidance, as well as notes on adaptation, nature, just transition, and implementation guidance.[15]
- **EU Corporate Sustainability Reporting Directive:** In October 2023, the EU Commission adopted Directive 2022/2464, which details the European Sustainability Reporting Standards (ESRS) under the Corporate Sustainability Reporting Directive (CSRD).[16] These standards were developed by the European Financial Reporting Advisory Group (EFRAG). The *ESRS E1: Climate Change* requires organizations to describe their past, current, and future mitigation efforts to ensure that their business model and strategy are compatible with the transition to a sustainable economy, and with limiting global warming to 1.5 degrees C in line with the Paris Agreement.[17]
- **U.S. Securities and Exchange Commission (SEC):** In March 2024, the U.S. Securities and Exchange Commission (SEC) adopted rules to enhance and standardize climate-related disclosures by public companies and in public offerings.[18] As part of the final rule, if a registrant has adopted a transition plan to manage a material transition risk, details on the plan are required in disclosures. The final rule is currently stayed pending litigation outcomes.[19]

Other key stakeholders, such as non-governmental organizations (NGOs), have also developed guidance on low-carbon transition plan development, such as CDP, We Mean Business Coalition, and Glasgow Financial Alliance for Net Zero (GFANZ). Unlike the mandatory low-carbon transition plan and reporting regulation issued by government bodies, NGO-led low-carbon transition plan guidance and frameworks are voluntary and focus on best practices to develop a credible low-carbon transition plan.

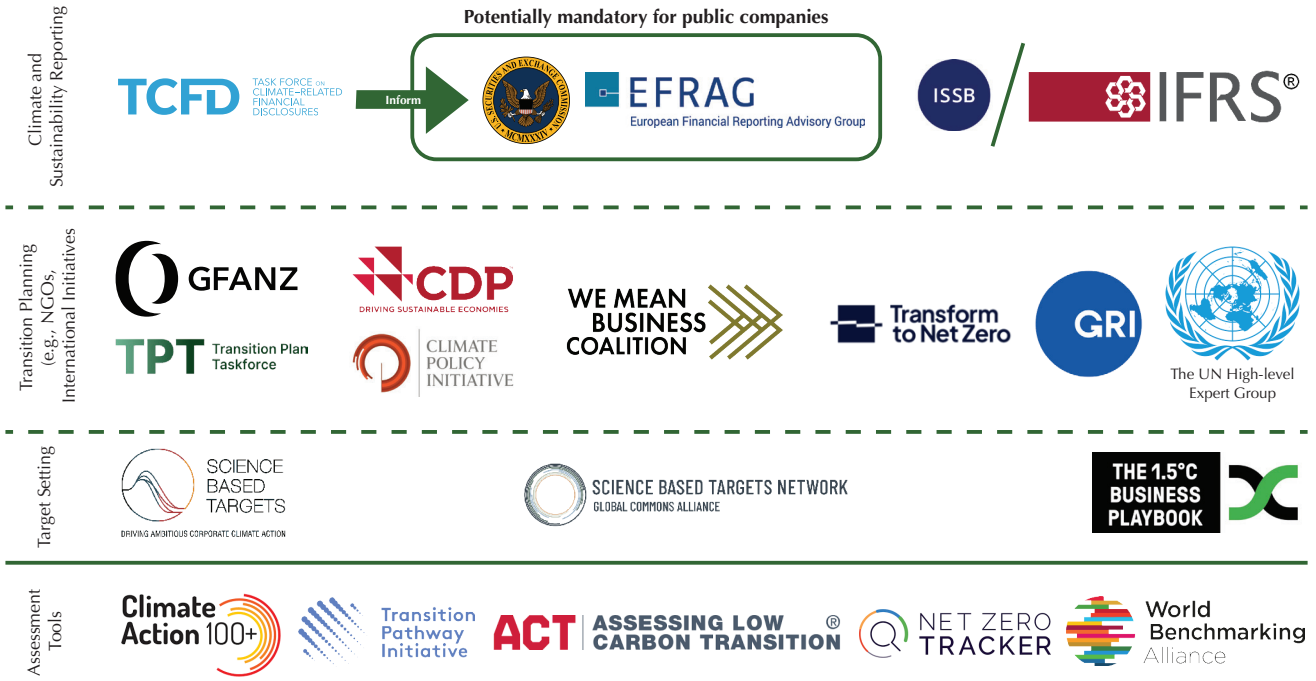
TRANSITION PLAN GUIDANCE CROSSWALK

With different types of guidance and requirements around low-carbon transition plans currently available, the first task that a company must do as it embarks on the development of a low-carbon transition plan is to select guidance that is most relevant for its business. As transition plans are increasingly mandated by different regulatory entities around the globe, ensuring that a company's transition plan is compliant with such regulations should be top priority. Many international companies with global operations might need to consider more than one low-carbon transition plan guidance with which to align. If the company preparing a low-carbon transition plan is publicly listed, it is also important to understand who the main investors are and whether those investor groups have developed transition plan expectations (such as State Street's Guidance on Disclosure Expectations for Effective Climate Transition Plans) that can inform the transition plan development and implementation process.[20]

Hierarchy of Transition Planning

Transition plan regulation and guidance can be categorized into three broad categories: climate & sustainability reporting, transition planning, and target setting. We add assessment tools to the hierarchy because, though they are not guidance, they can indirectly influence content of a transition plan (**Figure 3**).

FIGURE 3: Low-carbon Transition Plan Guidance Hierarchy



Climate & Sustainability Reporting

The Task Force on Climate-related Financial Disclosure (TCFD) developed a climate disclosure standard that includes recommendations on low-carbon transition plans. In 2023, concurrent with the release of its 2023 status report, the TCFD fulfilled its remit and disbanded. The International Sustainability Standards Board (ISSB) as part of the International Financial Reporting Standards (IFRS) took over the responsibilities of the TCFD. In 2023, the inaugural ISSB Standards—IFRS S1 and IFRS S2—were released, which fully incorporate the TCFD recommendations into the ISSB's Standards.[21] The IFRS S2 requires a company to disclose a series of climate-related information that includes the effects of climate-related risks and opportunities on the entity's strategy and decision-making, including any climate-related transition plan the company has in place. Other climate reporting regulations—such as the SEC final climate disclosure rule and EU CSRD ESRS E1: Climate Change—have requirements around low-carbon transition plans that are aligned with the TCFD.

Transition Planning

In addition to the climate and sustainability reporting requirements that include a low-carbon transition plan, there are NGOs and international organizations that have more detailed guidance around the low-carbon transition planning process. The UK TPT, CDP, Climate Policy Initiative, We Mean Business Coalition, Transform to Net Zero, Global Reporting Initiative (GRI), and the United Nations High-level Expert Group (HLEG) each offer detailed low-carbon transition plan recommendations and best practices. In addition, a separate set of guidance has been developed by many of these same entities, as well as other entities such as State Street, GFANZ, ISSB, and ESRS, that focuses on setting guidelines for developing *credible* low-carbon transition plans.

Target Setting

One key piece of the low-carbon transition plan is the company's commitment to setting ambitious, science-based emissions reduction targets. The Science Based Targets initiative (SBTi) develops standards, tools, and guidance that allow companies to set greenhouse gas emission reduction targets in line with the Paris Agreement that aims to limit global warming to 1.5 degrees C above pre-industrial levels.[22] Some companies might also consider nature and climate as part of their low-carbon transition plan, as some guidance require. The Science Based Target Network (SBTN) builds on the progress of establishing science-based targets for climate and is developing a series of guidance on science-based

targets on water, land, biodiversity, and ocean.[23] Finally, the 1.5 degrees C Business Playbook was developed for companies and organizations of all sizes that want to align with the 1.5 degrees C and net-zero ambition. It contains guidelines for companies of all sizes to set targets, strategies, and actions.[24]

Assessment Tools

Informed by the above mentioned guidance, there are a series of assessment tools developed to assess a company's performance against the companies' goals and their progress on the net-zero transition. However, these tools and the criteria they use to assess performance are not standardized and vary based on each unique assessment tool. Such assessment tools include Climate Action 100+, Transition Pathway Initiative, Assessing Low-Carbon Transition (ACT) Initiative, Net Zero Tracker, and World Benchmarking Alliance.

Conducting the Crosswalk

With so much guidance available, the purpose of crosswalking them is to understand and identify commonalities and distinctions. If certain low-carbon transition plan elements have been included in the majority of guidance, that adds credibility to those elements. Additionally, a crosswalk can also help identify any unique low-carbon transition plan elements that distinguish one guidance from another.

The crosswalk highlights that low-carbon transition plan guidance is broad in scope (**Figure 4**) covering not only the content and elements of the plan, but the methods used to develop the plan, such as scenario analysis, and specific strategies that should be included in the plan. Some, but not all, of the guidance suggest that these planning methods and strategies are required for the low-carbon transition plan to be deemed credible.

Transition plan strategies largely vary by sector and the specific company, but some guidance identify cross-cutting strategies that apply to all sectors and companies. For example, phasing out fossil fuel use, ramping up renewable energy use, and the restrictions on the use of carbon credits (e.g., the type of carbon credit, and the carbon credit verification schemes used) are identified in various guidance as cross-cutting strategies.

Additionally, almost all the guidance highlights the importance of establishing a governance process to review and update the plan over time to ensure that strategies are still relevant and effective and to help ensure companies remain on track to achieve their low-carbon commitments.

Net-Zero Data Public Utility

The United Nations is currently developing the Net-Zero Data Public Utility (NDZPU) with the intention of it being "a unified, global, open climate data repository."* The NZDPU is being designed to be integrated with the UN's Global Climate Action Portal, which tracks performance of companies, investors, organizations, regions, and cities.

** UN (2024). Net-Zero Data Public Utility. https://nzdpu.com/home. Accessed 1 May 2024*

To identify commonalities and unique elements in low-carbon transition plan guidance, the transition plan crosswalk includes various types of guidance from NGOs, investors, and regulatory bodies, showcasing a wide range of key players. The transition plan guidance crosswalk incorporates guidance developed by CDP, GFANZ, Ceres, ISSB, SEC, TPT, EFRAG, and State Street. TCFD was chosen as the organizing framework for the guidance crosswalk as it has informed the development of many other guidance as indicated in the Low-carbon Transition Plan Guidance Hierarchy (**Figure 3**). The crosswalk is categorized into governance, strategy, risk management, and metrics and targets.

Figure 5 displays each transition plan element mapped to where it appears in the different guidance. The crosswalk shows that TCFD recommendations serve as a foundational set of instructions across the various low-carbon transition plan guidance. Many of the guidance align with the TCFD transition plan recommendations, including but not limited to GFANZ.

FIGURE 4: Low-carbon Plan Element & Strategy

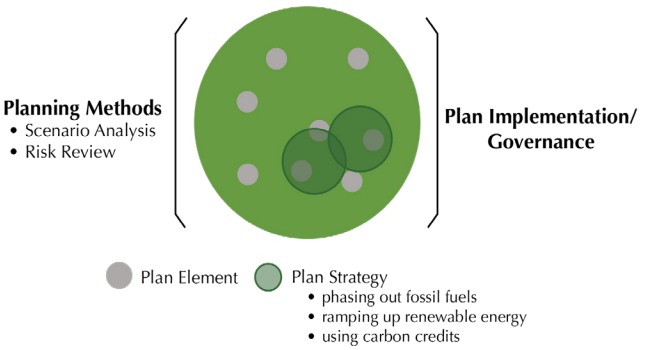


FIGURE 5: Low-carbon Transition Plan Crosswalk

TCFD PILLARS	TRANSITION PLAN ELEMENTS	CDP TRANSITION PLAN ELEMENTS	GFANZ EXPECTATIONS FOR REAL-ECONOMY TRANSITION PLANS	CERES (FOCUS ON SHORT-TERM 1.5°C-ALIGNED PLANS)	ISSB GUIDANCE	TCFD TRANSITION PLAN ELEMENTS	FINAL SEC RULE	TPT	EFRAG	STATE STREET GUIDANCE ON DISCLOSURE EXPECTATIONS FOR EFFECTIVE TRANSITION PLANS
Governance	Board Oversight	•	•	•	•	•	•	•	•	•
	Senior Management Oversight	•	•		•	•		•	•	•
	LCTP Governance Structure	•	•	•		•				
	Incentives	•	•	•		•		•	•	
	Culture and Training		•					•		
Strategy	Scenario Analysis	•		•	•	•			•	•
	Financial Planning & Business Strategy	•	•	•		•	•	•	•	•
	Value Chain	•	•	•	•	•		•	•	•
	Product and Services	•	•					•	•	
	Policy Engagement	•	•	•				•		•
	Idustry and Other Egagement		•					•		•
Risk Management	Risk and Opportunities	•			•	•	•		•	•
Metrics and Targets	GHG Emission Target	•	•	•	•	•	•	•	•	•
	Emission Reduction Pathway		•					•		
	Other Non-GHG Emission Metrics		•			•		•		
	Carbon Credits		•	•	•	•		•	•	•
	Methodology		•			•		•		
Other	Climate-Nature Nexus		•							
	Plan Challenges and Uncertainties		•			•		•		
	Just and Inclusive Transition		•	•						
	Plan Update and Logistics	•	•	•	•	•	•	•	•	
	Verification	•	•		•	•		•		•

As indicated in Figure 3, TCFD is unique in its wide adoption as the basis for regulatory standards by many countries and as a voluntary standard used by many companies where there is not a mandatory regulatory requirement. TCFD has informed many climate-related disclosure regulations such as the SEC final climate disclosure rule and EU's CSRD. As noted earlier, the ISSB has also fully incorporated the recommendations developed by TCFD into the recently finalized IFRS S1 and S2 standards. Countries around the world are considering and, in many cases, adopting the use of IFRS S1 and S2 into their respective jurisdictional regulatory frameworks. According to the IFRS website in April 2024, "Canada, Japan and Singapore are consulting on the introduction of sustainability-related disclosures in their respective regulatory frameworks through the adoption or other use of the IFRS Sustainability Disclosure Standards (ISSB Standards)."[25] Adoption by these countries would add the list of countries that have already adopted or committed to using the standards including Brazil, Costa Rica, Nigeria, Sri Lanka, and Turkey.

TCFD as a climate disclosure framework has also been widely adopted by companies. As shown in **Figure 6** and **7**, the number of TCFD supporters has been increasing since its launch and has been adopted across the globe, with a significant uptake in the Asia-Pacific region.

GFANZ Real-Economy Guidance has the most detailed disclosure requirements, and it closely aligns with TCFD transition plan guidance. Its connection with TCFD could mean it will experience broad uptake as a standard. One distinction, however, is that the GFANZ guidance does not include plan elements for responding to climate-related risks and opportunities (**Figure 8**). GFANZ has noted, "If choosing to include climate risk management in their transition plans, companies should refer to the TCFD for guidance on this component."[26]

FIGURE 6: Global Momentum of the TCFD Recommendations

Jurisdictions Use of the TCFD Recommendations

April 2021: The European Commission issued a proposal calling for the development of sustainability reporting standards that take into account existing frameworks including the TCFD.

June 2021: Switzerland's Financial Market Supervisory Authority amended disclosure rules for banks and insurers to include climate-related financial risks, based on the TCFD.

June 2021: The Tokyo Stock Exchange issued a revised Corporate Governance Code that indicates certain companies should enhance disclosure based on the TCFD.

October 2021: The Canadian Securities Administrators issued proposed disclosure requirements for issuers aligned with the four recommendations of the TCFD.

October 2021: New Zealand passed a law to require certain organizations to make climate-related financial disclosures in line with the TCFD recommendations. The law is expected to go into effect in 2023, subject to the publication of reporting standards.

November 2021: Australian Prudential Regulatory Authority published TCFD-aligned guidance on managing climate risks.

December 2021: The Financial Conduct Authority issued a final rule requiring issures to make TCFD-aligned disclosures on a comply-or-explain basis.

December 2021: The Hong Kong Monetary Authority issued a manual on climate risk management and indicated the TCFD recommendations are "a desirable framework for [Authorized Institutions] to rely upon."

December 2021: The Brazilian Securitites Exchange Commission amended its rules to require issuers to indicate whether they disclose information based on the TCFD recommendations or another recognized source.

December 2021: The Singapore Exchange amended its rule to require climate reporting based on the TCFD by certain industries for FY23 and additional industries for FY24.

March 2022: The U.S. Securities and Exchange Commission published a proposed rule on climate-related disclosure that incorporates key aspects of the TCFD framework.

Other Supporting Initiatives

G7 ITALIA 2024

"We support moving towards mandatory climate-related financial disclosures that provide consistent and decision-useful information for market participants and that are **based on the Task Force on Climate-related Financial Disclosures framework**, in line wiht domestic regulatory frameworks."

G20 BRASIL 2024

"We agree on the importance of promoting globally consistent, comparable high-quality **standards of disclosure for sustainability reporting, building on the recommendations of FSB's Task Force on Climate-related Financial Disclosures**."

European Commission

"The Commission supports initiative by the G20, G7, the Financial Stability Board and others to generate international commitment to develop **a baseline of global sustainability reporting standards that would build on the work of the Task Force on Climate-related Financial Disclosures**."

FSB FINANCIAL STABILITY BOARD

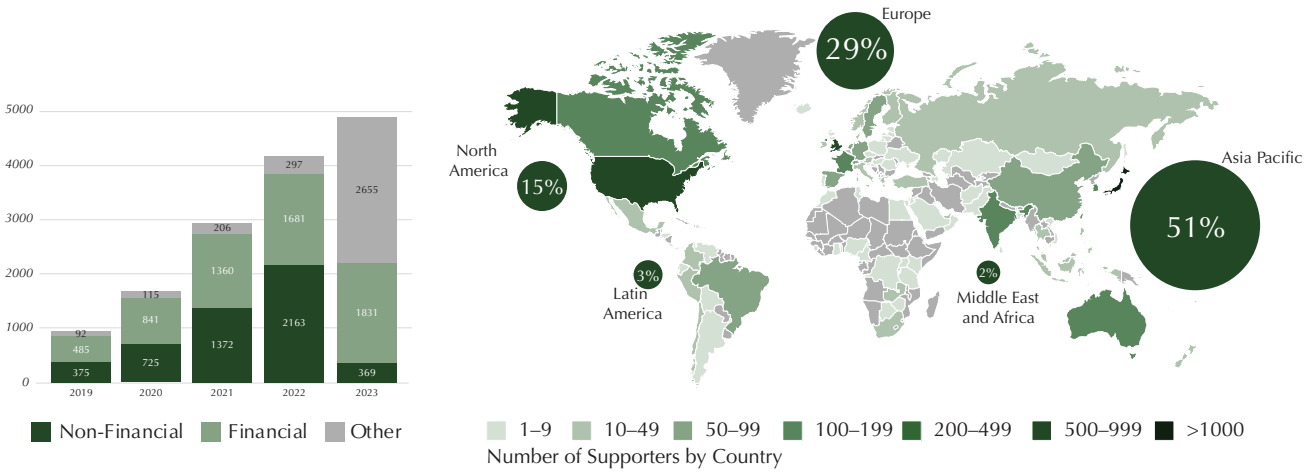
"**The FSB strongly encourages national or regional authorities that are developing requirements or guidance for climate-related disclosure to consider using the TCFD recommendations as the basis.**"

IFRS®

"The International Sustainability Standards Board's proposed sustainability standards "**build upon the recommendations of Task Force on Climate-related Financial Disclosures**."

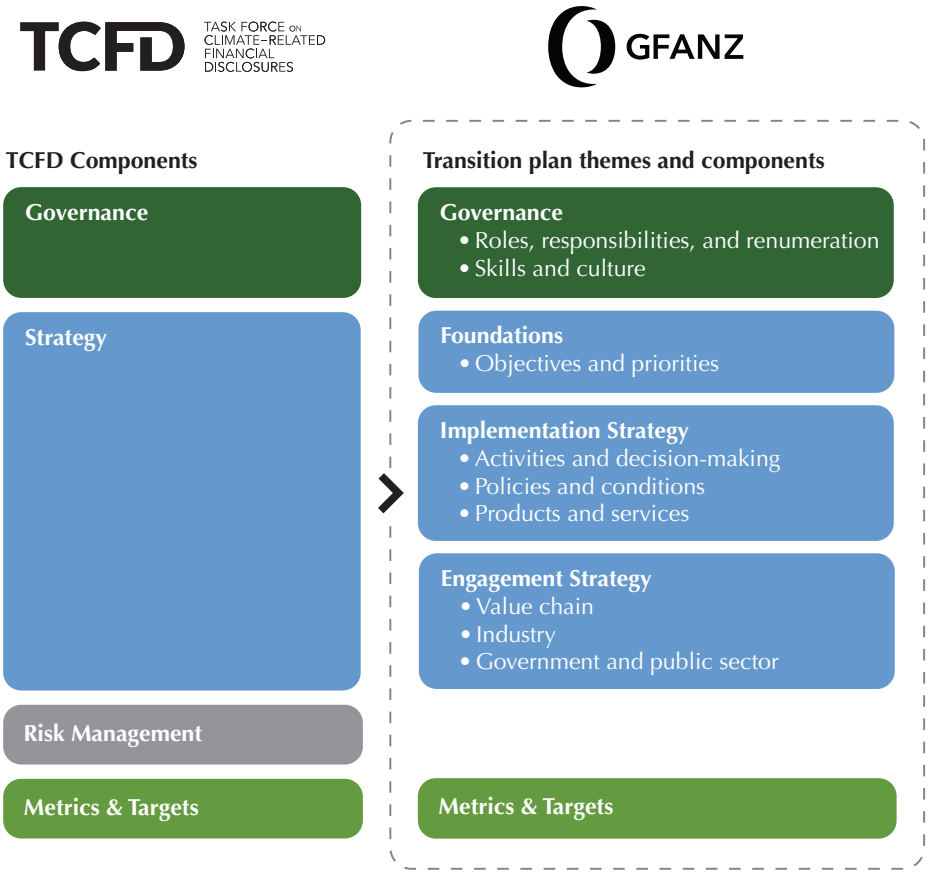
Source: TCFD (2023). "Task Force on Climate-Related Financial Disclosures 2023 Status Report." https://assets.bbhub.io/company/sites/60/2023/09/2023-Status-Report.pdf. Accessed 25 April 2024.

FIGURE 7: Number and Geographic Distribution of TCFD Supporters



Source: TCFD (2023). "Task Force on Climate-Related Financial Disclosures 2023 Status Report." https://assets.bbhub.io/company/sites/60/2023/09/2023-Status-Report.pdf. Accessed 25 April 2024.

FIGURE 8: TCFD framework mapped to GFANZ themes and components



Source: Glasgow Financial Alliance for Net Zero (2022). GFANZ: Expectations for Real Economy Transition Plans. https://assets.bbhub.io/company/sites/63/2022/06/GFANZ_Introductory-Note-on-Expectations-for-Real-economy-Transition-Plans_June2022.pdf

TABLE 5: Guidance Review Under TCFD's Four Pillars

TCFD PILLAR	COMMONALITIES	DIFFERENCES
GOVERNANCE	Most guidance agrees on the importance of an established governance system, such as board oversight of the low-carbon transition plan, management's role and responsibility, and associated remuneration policy.	Only a few of the guidance focuses on company culture and workforce skill training aspects of the low-carbon transition plan.
STRATEGY	Almost all guidance recognizes the importance of financial planning as companies decarbonize and implement emission reduction strategies. This includes having an established financial planning process to support the plan's activities such as implementing decarbonization strategies, as well as engaging with value chain partners and public policy on climate change issues.	Not all guidance requires companies to provide information about their product and service strategy. Also, GFANZ and TPT included guidance focused on how to engage with other industry members, which was not captured in other guidance.
RISK MANAGEMENT	Guidance from CDP, Ceres, ISSB, TCFD, SEC, and State Street highlights the importance of responding to climate-related risks and opportunities as part of a low-carbon transition plan	TPT though not directly addressing risk, it is intended to be used in conjunction with TCFD, which covers risks and opportunities. Likewise, GFANZ does not explicitly cover risks and opportunities but is seen as an addition to TCFD disclosure.
METRICS AND TARGETS	The inclusion of greenhouse gas emission targets is a commonality shared by all guidance, and most also agree on the importance of transparent use of carbon credits.	Only GFANZ and TPT underscore the use of sectoral emission reduction pathways to inform the roadmap and low-carbon transition plan development.

In **Table 5**, we describe the cross-cutting commonalities and key differences across the variety of guidance based on the TCFD's four key pillars.

In addition to the key differences and commonalities that we highlight in Table 5, there are a few elements that TCFD does not categorized but are worth pointing out:

Carbon Credits: The use of carbon credits and offsets to achieve an organization's climate targets has received extra attention. For example, the TPT guidance recommends the organization disclose how they intend to use of carbon credits to achieve progress toward their strategic objectives and priorities, and annually report on the use of carbon credits.[27] The EU CSRD requires companies to disclose their gross greenhouse gas emissions before accounting for use of carbon offsets.[28, 29] Additionally, companies reporting to the CSRD standard must disclose the quality and type of offset they use.

Just Transition Considerations: Several different frameworks, such as GFANZ and Ceres, have highlighted the importance of equity in transitioning to a low-carbon economy. For example, GFANZ recommends incorporating the commitment to just transition—aiming to guarantee that the transition will be fair, decent, and inclusive—as best practice.

Nature-Based Impacts: GFANZ has detailed requirements around nature-based impact and ensuring that climate objectives are not contributing to negative nature-impact.[30] The Transform to Net Zero Initiative's Climate Transition Plan Action Guide recommends taking a system approach to consider interlinkages between climate, nature, and society.[31] Similarly, CDP notes that implementing a climate transition plan should help restore the earth's natural ecosystems.[32] **Table 6** highlights transition planning guidance inclusion of nature.

TABLE 6: Nature-Based Components of Transition Plan Guidance

GFANZ—SUB-COMPONENT NATURE-BASED IMPACT	CDP	TRANSFORM TO NET ZERO
Disclose any relevant policies that the company has in place or plans to implement to mitigate any negative impact—or promote any positive impact—on ecological systems (e.g., land conversion, deforestation, biodiversity loss, pollution); disclose the impact on greenhouse gas reduction targets and transition plan objectives. Disclose any relevant policies that the company has in place or plans to implement to create nature-based solutions (e.g., reforestation); disclose the impact on greenhouse gas reduction targets and transition plan objectives.[33]	The plan covers the whole organization and its value chain, i.e., any exclusions from the plan must not be material to the organization and/or its impact on the natural environment.[34]	Cross-issue evaluation of impact that adopts a systems approach to consider interlinkages between climate, nature, and society. Planned decarbonization activities should address concerns related to nature and biodiversity, as well as social impacts on communities.[35]

The crosswalk also sheds light on different levels of specificity between guidance for the same transition plan element. For example, GFANZ Real-Economy Guidance has very detailed requirements around greenhouse gas emission reduction targets compared to other frameworks. Their guidance includes target dates, Scope 1 & 2 targets, Scope 3 targets (or justification for omission), the definition of materiality, absolute targets, intensity targets, justification for the use of intensity metrics, forecasts of expected physical output to complement targets, coverage/boundaries, methodology, verification, annual disclosure of track record, and more. When compared to GFANZ, TCFD only specifies the types of climate-related metrics, which is not as detailed as GFANZ. TCFD requires a company to "describe metrics the organization will monitor to track progress against plans and targets, including related operational and financial performance metrics, metrics aligned with the cross-industry, climate-related metric categories, and industry-specific or organization specific metrics."

GFANZ greenhouse gas emission target requirements are also closely aligned with SBTi requirements but are not as comprehensive. Thus, if a company has an SBTi-approved target it would meet all the GFANZ greenhouse gas emission targets criteria. Conversely, the GFANZ criteria are broad and full of optionality that if a company relied on them to set targets it would be unlikely they would meet the SBTi criteria. For example, there is no ambition level specified in the GFANZ guidance. Similarly, GFANZ allows companies to set their own exclusion/materiality thresholds whereas SBTi is very prescriptive about this (e.g., no more than 5 percent threshold for baseline recalculation, and Scope 3 must be included if more than 40 percent of total Scopes 1, 2, and 3).

Since GFANZ is not intended to serve as a target-setting framework, companies should refer to other guidance to ensure their targets are science aligned.

CREDIBLE TRANSITION PLAN GUIDANCE CROSSWALK

Many companies have set voluntary emission reduction targets without defining a plan that outlines the steps needed to align the business model with achieving that target, which calls into question whether the company is credibly pursuing their targets. For companies that have a transition plan, there is also concern that the plan is not comprehensive or lacks components necessary for the plan to be considered credible. Many organizations have released guidance on what makes a credible transition plan, including the United Nations

High-level Expert Group (HLEG), CDP, We Mean Business Coalition, the Institutional Investors Group on Climate Change (IIGCC), Climate Policy Initiative (CPI), GFANZ, TPT, State Street, ISSB, ESRS, and GRI. To understand the similarities and differences of the guidance on transition plan credibility, we also conducted a crosswalk.

The low-carbon transition plan credibility crosswalk took a similar approach as the low-carbon transition plan guidance crosswalk. However, the credibility crosswalk was not based on the TCFD framework. Rather, common credibility dimensions and aspects were derived from the guidance review. Seven key dimensions were identified that encompass the majority of credibility guidance:

- net-zero targets
- net-zero strategy
- policy/engagement
- transparency and verification
- nature and just transition
- governance
- contribution to climate solutions.

For each dimension, several aspects were identified. For example, under the net-zero targets dimension, there are five aspects including net-zero target, target alignment, absolute & intensity targets, interim targets, and other climate-related targets.

In viewing the crosswalk dimensions and aspects, it demonstrates the commonalities and areas of divergence across the guidance. Areas of divergence for what constitutes a credible plan are broader than those seen for plan elements, extending to the addition of planning methods and strategies (**Figure 9**). The crosswalk highlights that some guidance prescribe planning methods and specify cross-cutting strategies that should be included for a transition plan to be deemed credible.

There is high-level alignment within the net-zero targets dimension. Most credibility guidance evaluated in the credibility crosswalk emphasizes the importance of target alignment with the best-available science and developing interim targets as crucial aspects of developing a credible transition plan.

Capital Allocation Plan Alignment with Net-Zero Strategy: Most guidance agrees on the importance of capital allocation and alignment of capital planning with the low-carbon transition plan as a credible component to a plan. For example, the UK TPT guidance expects a company to include information about how it is resourcing or plans to resource its activities to achieve the strategic ambition of its transition plan.[36] Some guidance also highlights the importance of identifying near-term actions and sector-specific actions as part of transition planning efforts.

Policy and Engagement Alignment with Net-Zero: Most guidance focuses on aligning lobbying and advocacy activities and value chain engagement with corporate climate policy and commitments. Only a few of the guidance go further than aligning lobbying activities to include disclosure of lobbying activities and accelerating the road to regulation.

Transparency and Verification: This dimension is where most divergence across guidance is found. For example, the HLEG guidance requires public announcement of the low-carbon transition plan and target, standardized data for evaluation, and verification.[37] Other guidance generally emphasizes the importance of establishing an evaluation and verification system for the low-carbon transition plan and supporting data.

Nature and Just Transition: Most guidance underscore nature and just transition principles as companies decarbonize their businesses, considering both affected stakeholders, local communities, and nature.

Governance: There is consistency across guidance about the need for board-level oversight, accountability mechanisms with clearly defined roles and responsibilities, feedback mechanisms, and incentives structures tied to making progress on implementing the transition plan. However, not all guidance requires the board to have climate-related expertise.

Climate Solutions: Several guidance mentions the importance of identifying business strategy and products in contributing to climate solutions. This aligns with the TCFD requirements of identifying not only climate-related risks but also climate-related opportunities.

GFANZ provides the most detailed, credible transition plan guidance, covering most of the identified credibility aspects, ranging from net-zero targets and target alignment to governance structure.

FIGURE 9: Credibility Crosswalk

PRIMARY GUIDANCE	ASPECTS	SOURCE OF GUIDANCE										
		HLEG	CDP	WMBC	IIGCC	CPI	GFANZ	TPT	STATE STREET	ISSB	ESRS	"GRI CLIMATE CHANGE CC-1"
Net-zero Target(s)	Net-zero Target	•	•				•	•	•			
	Target Alignment	•				•	•	•	•	•	•	•
	Absolute & Intensity Targets	•	•		•	•	•			•	•	•
	Interim Targets	•		•	•	•	•		•	•	•	•
	Other Climate-related Targets		•				•	•				•
Net-Zero Strategy	Mitigation Opportunities			•	•		•					
	Near-term Actions					•	•		•	•	•	
	Direct Operation Emissions		•		•		•	•	•	•		
	Sector-specific Actions				•	•	•	•		•		
	Capital Allocation Alignment		•	•	•	•	•	•	•	•	•	•
	Business Strategy Integration					•	•		•	•	•	•
	Carbon Credit Use	•				•	•	•	•	•	•	•
	Phasing Our of Fossil Fuels	•										•
	Scenario Analysis						•		•	•	•	•
	Climate Risk and Opportunities Identification					•	•		•	•	•	•
Policy/ Engagement	Aligning Lobbying and Advocacy	•	•	•	•		•	•	•			•
	Accelerating the Road to Regulation	•										
	Disclosure of Lobbying Activities			•								•
	Value Chain Engagement		•		•		•	•	•	•		
Transparency and Verification	Public Announcement	•										
	Leadership Announcement	•										
	Annual Disclosure	•				•	•		•			
	Standardized Data	•			•		•			•	•	
	Evaluation	•										
	Verification	•	•			•	•	•	•			
Nature and Just Transition	Nature	•			•	•	•					•
	Just Transition and Climate Equity	•		•		•	•					•
Governance	Board-level Oversight		•	•	•	•	•	•	•	•	•	•
	Board Expertise		•	•			•	•		•	•	
	Accountability & Feedback		•			•	•	•	•	•	•	•
	Incentives		•	•		•	•	•		•	•	•
	"Flexibility, Responsiveness, and Rapidly Escalating Ambition"						•			•		
The Contribution to Climate Solutions			•		•			•				

■ Prescribed Strategy ■ Planning Method

In summary, guidance currently available on low-carbon transition plans and elements of such plans that make them credible is widely available and remains an emerging and growing area. The TCFD framework has been widely adopted by companies around the world, transition plan guidance development organizations (e.g., GFANZ and UK TPT), and regulatory bodies (e.g., SEC and EU). Given that, the TCFD serves as a de facto source of guidance to companies developing low-carbon transition plans. Companies wishing to develop a low-carbon transition plan should refer to the TCFD as a key foundation to developing a plan and identify the disclosure regulations or other drivers requiring a plan and their associated requirements.

Both the plan and credibility crosswalks offer companies the opportunity to easily identify and compare commonalities across the guidance, as well as unique elements. Companies may opt to begin addressing the commonalities found across most guidance and then as the plan and implementation mature, gradually align with the unique elements.

KEY FINDINGS: REAL ECONOMY SECTOR INTERVIEWS

The interview cohort included 14 companies, covering seven industry sectors (**Table 7**). The companies were guaranteed anonymity to ensure candor during the interview process. Twelve of the companies interviewed had a transition plan, with five having a stand-alone plan and seven with plan elements in an existing annual sustainability report.

The need for credible low-carbon transition plans is widely accepted by mainstream stakeholders, but a prevailing sense of confusion and uncertainty around best practices and regulations leaves significant barriers to the production of credible plans. Companies expressed varying motivations for developing transition plans, including internal ambition from the board and sustainability teams, meeting carbon reduction goals, remaining competitive with industry peers, satisfying mandates from shareholder proposals, and responding to customer demand. While disparate motivations were identified, there was a universal convergence around the theme of increasing investor pressure.

In many cases, companies hoping to satisfy investor demand are—as one interviewee stated—"building the plane as they take off." During our interviews, we observed a prevailing sense of fatigue with the evolving landscape of voluntary guidance, increased pressure to provide a greater depth and breadth of information, and a lack of available levers to address cross-sector interdependencies. Given these uncertainties, interviewees found regular engagement with key stakeholders like investors, regulators, and standard setters to be essential in plan development and implementation. In addition to these themes, we found a variety of issues, key insights, and areas requiring greater transparency during our background research and conversations with companies.

FINDINGS FROM COMPANY TRANSITION PLAN BACKGROUND RESEARCH

Transition Targets Lack Sufficient Specificity to Assess Ambition and Track Progress

The companies interviewed had either a net-zero or carbon-neutrality target. For reference, the Box below shows the UN Race to Zero definitions for carbon neutrality and net zero.[38]

Figure 10 shows an anonymized graph displayed reflecting the 12 companies' publicly stated Scope 1 and 2 greenhouse gas reduction targets. On the x-axis, the company targets are mapped against the base year, and shown with interim and end target years. On the y-axis, each company begins with 100 percent of its baseline year emissions, declining over time through interim targets and ending with either a net-zero or carbon-neutral target.

Public reporting by each company was reviewed to understand near- and longer-term emissions reduction targets for Scopes 1 and 2. For near-term (interim) targets, the level of detail in reporting was somewhat consistent and included common information such as base year, target year, and target reduction percentage. For longer-term targets, however, often the end-year reduction percentage was not clearly identified. In certain cases, for net-zero targets, company graphs or infographics gave visual indication of the anticipated reduction magnitude but did not include a specific number.

TABLE 7: Real Economy Sectors Interviewed

Basic Materials	**Communication Services**	**Consumer Cyclical**
Energy	**Industrials**	**Technology**
Utilities		

U.N. RACE TO ZERO DEFINITIONS FOR CARBON NEUTRALITY AND NET ZERO

Carbon Neutrality

Referring to the world as a whole, the IPCC defines carbon neutrality as: when anthropogenic CO_2 emissions are balanced globally by anthropogenic CO_2 removals over a specified period.

Race to Zero considers individual actors to be carbon neutral when: CO_2 emissions attributable to an actor are fully compensated by CO_2 reductions or removals exclusively claimed by the actor, such that the actor's net contribution to global CO_2 emissions is zero, irrespective of the time period or the relative magnitude of emissions and removals involved.

Net Zero

Referring to the world as a whole, the IPCC defines net zero as: When anthropogenic emissions of greenhouse gases to the atmosphere are balanced by anthropogenic removals over a specified period.

Race to Zero considers individual actors to have reached a state of net zero when: An actor reduces its emissions following science-based pathways, with any remaining GHG emissions attributable to that actor being fully neutralized by like-for-like removals (e.g. permanent removals for fossil carbon emissions) exclusively claimed by that actor, either within the value chain or through purchase of valid offset credits.

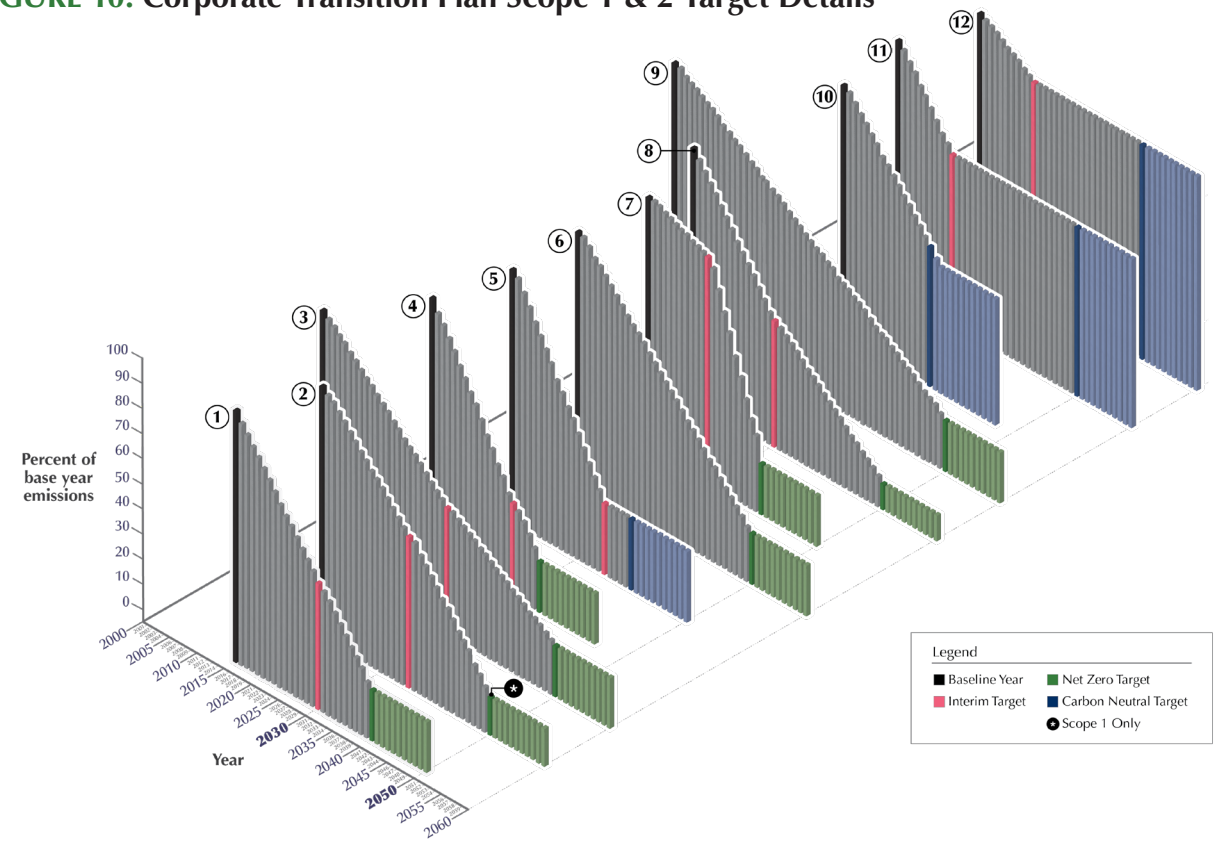
Long-term target definitions

In most cases, companies did not provide clear, specific definitions of 'net zero' or 'carbon neutral' in disclosures concerning their longer-term targets. While many companies pledged to utilize high-quality offsets, there was not a clear distinction on whether companies would restrict offsets to those that removed carbon dioxide from the atmosphere or also include carbon credits that represent avoided or reduced emissions relative to a business-as-usual scenario. Unless a company has an Science-Based Targets Initiative (SBTi)-certified net-zero target, it is typically not clear the extent to which companies plan to rely on offsets versus emission reductions to achieve "net zero" or "carbon neutrality," and they remain ambiguous on what types of offsets are planned to be used. Specifications on type of offsets, including criteria for permanence and durability, are typically lacking. It is clear from the research conducted that net-zero targets require further detail and clarity in public reporting to be considered part of a credible low-carbon transition plan.

Net-zero Targets

While "zero" is part of the target name, it is usually not anticipated that absolute emissions will be reduced to zero. Rather, it is generally understood that there will be a small percentage of residual emissions for activities that cannot be decarbonized within the timeframe. For example, the SBTi requires reductions of 90 percent for most net-zero targets (cross-sector requirement).[39] Of the 12 companies interviewed, eight had net-zero targets. Of the eight companies with net-zero targets, two specified 85–90 percent absolute emissions reductions, leaving 10–15 percent in residual emissions. The remaining six companies did not specify an absolute emissions reduction level.

FIGURE 10: Corporate Transition Plan Scope 1 & 2 Target Details



DEVELOPING THE CORPORATE TRANSITION PLAN TARGET GRAPH

- The decision to focus on Scope 1 and 2 targets was made because the information was consistently available for these scopes. For companies with net-zero targets, these often include some portion of Scope 3 emissions, as well. However, for the purposes of this graph, it was assumed that the reduction percentage would be consistent for Scopes 1 and 2 (i.e., if a company reported that their net-zero target was to reduce all emissions by 85 percent, the anticipated Scope 1 and 2 reductions reflected in the graph is 85 percent).
- Of the eight companies with net-zero targets, only two specified long-term absolute emissions reduction levels. For the six companies that did not quantify absolute emission reductions, an 80 percent reduction level was assumed, leaving 20 percent residual emissions. This assumption is slightly more conservative than the prevailing net-zero target guidance outlined in Figure 10.
- Of the four companies with carbon-neutral targets none quantified emissions reductions beyond their interim target. Accordingly, Figure 10 shows no additional emissions reductions beyond the interim target since it is unclear whether neutrality will be achieved through additional absolute reductions, use of carbon credits, or a combination.
- For both net-zero and carbon-neutral targets, we assumed emissions would continue in a residual state following achievement of the long-term target. Essentially, there will always be a need to neutralize residual emissions. This is illustrated in the graph as lighter color green or purple annual bars carrying out into the future.
- For both net-zero and carbon-neutral targets, we assumed year-over-year emissions reductions levels would be linear between the baseline year and interim target and between the interim and long-term targets.

Carbon-neutral Targets

Carbon neutrality has lacked a consistent definition in the corporate sector, although historically it has commonly been used to refer to a balancing of emissions in any reporting year with an equivalent amount of carbon offset credits, which could represent avoided carbon dioxide emissions or carbon dioxide removals. Four of the 12 companies interviewed had carbon-neutral targets. None of the four quantified emissions reduction ambition beyond their interim target, nor did they commit to only utilizing carbon removals for achieving carbon neutrality.

Planning for the Transition vs. A Transition Plan

There is a distinction between transition planning and creating a separate document that embodies a corporate transition plan. Twelve of the 14 companies interviewed had a transition plan. Of the 12 companies, five had a stand-alone plan in a separate document, and the other seven companies had transition plan elements were integrated into an existing sustainability report. This raises a question about what guidance companies are receiving regarding development of an integrated vs. stand-alone transition plan.

Of the 11 guidance reviewed for the credibility crosswalk, only two mention the development of a stand-alone transition plan.

- UK Transition Plan Taskforce (TPT): "The TPT regards it as good practice that entities also prepare a **standalone** transition plan which is periodically updated...."[40]
- We Mean Business Coalition (WMBC): "The checklist and templates on pages 12-21 can serve as a basis for a **standalone** CTAP or to supplement current disclosures – ESG reports, annual financial reports, CDP, etc."[41]

The TPT guidance goes the furthest in recommending the development of a stand-alone plan as best practice, none of the guidance reviewed require development of a stand-alone plan.

Publicly available stand-alone corporate transition plans support and reenforce many of the key tenets of credible transition planning outlined in guidance. The most obvious synergy is the call for greater transparency. A standalone plan makes explicit what a company considers to be the appropriate baseline and scope, ambition expressed through targets and other commitments, and transition strategies. In turn, this makes it easier for stakeholders to assess the transition plan and track progress over time.

Reporting transition plan elements as disaggregated elements into existing sustainability reports creates opportunities for miscommunication and misunderstanding. This also shifts the burden to the stakeholders to locate, assemble, and assess the plan elements and the plan as whole without the explicit context created by a stand-alone plan. CDP has identified 21 key transition plan indicators. Of the 18,603 2022 CDP respondents 69 percent disclosed 0–7 of the key indicators, 19 percent disclosed 8–14, 13 percent disclosed 14–20, and only 81 respondents (0.4 percent) disclosed all the key indicators.[42] This raises questions of interpretation. For example, should the disclosure of 14 of 21 key indicators be interpreted as a poor or incomplete transition plan, or one that is under development? Should the elements not be interpreted as being part of a transition plan unless expressly flagged as such? These same issues will also make tracking progress over time more difficult as the presentation of individual elements will likely vary from year to year.

Developing a stand-alone transition plan has internal benefits for a company with respect to communicating plans to internal stakeholders and governance. When a company sets a net-zero target and develops their first transition plan, it will be important to gather feedback and socialize the plan with internal stakeholders. This activity will be much easier if the plan is in a stand-alone document. Similarly, for governance purposes it will be important to explicitly define the all the plan elements to ensure accountability, facilitate tracking and update the plan as needed.

FINDINGS FROM STRUCTURED INTERVIEWS

Senior-level Commitment is Important for Building Internal Support

Almost all the interview participants mentioned that when looking to create internal buy-in for plan development, target setting, and strategy implementation, visible board- and executive-level support, along with coordinated cross-functional participation, was instrumental to success. Several interviewers mentioned that CEO-level ambition was the primary driver for creating a transition plan. Conversely, interviewees cited significant difficulties in developing an enterprise-wide coalition for plan implementation when this support was lacking.

Guidance Overload, Lack of Credible Actors

Most companies interviewed indicated that staying up to date on the latest guidance around transition planning and credibility was difficult. Also, that the volume of guidance

SCIENCE-BASED TARGETS INITIATIVE

Setting a science-aligned target is a foundational step for developing a credible corporate transition plan. All the companies interviewed acknowledged that Science-Based Targets Initiative (SBTi) is seen as the de facto standard for corporate target setting, but also voiced concern with the current state of the SBTi guidance or its target-setting process.

Concerns ranged from the inability to get timely feedback from SBTi to progress the development of a target, to the lack of sector-specific guidance needed for target development. One interviewee expressed frustration of working with SBTi to develop a 2 degrees C-aligned target for over a year only to find out at the end of the process that SBTi was releasing a 1.5 degrees C guidance for their sector. A concern raised by multiple companies was that SBTi offers one-size-fits-all guidance, not recognizing the variation within a sector with respect to historical progress (early movers are penalized) to the differing starting points that companies in the same sector may be coming from. In many cases, companies stated that these concerns have slowed progress while they wait for a response or guidance to be released.

Another structural concern is that SBTi is both the standard setter and the certifier of targets. Many companies interviewed pointed to the International Standards Organization (ISO) model where they set a standard, but then enable third parties to review and certify compliance to the standard. It is believed that this model would help speed the process for development and certification of science-aligned targets. In September 2023 SBTi announced that, in line with best practice for assurance bodies, they would be separating the standard setting and validation functions into distinct entities to help safeguard impartiality.* SBTi has also increased staffing to help reduce wait times and increase throughput.

The most significant concern raised is that an ostensible target setting standard includes mandatory strategy proscriptions that apply to all sectors covered by SBTi guidance. Interviewees expressed that the mandatory strategy proscriptions stifle innovation, discourage early action, and in the worst-case scenario the setting of a target and development of a transition strategy.

As companies begin the internal deliberation process to set a science-aligned target and/or develop an implementing transition plan they must reconcile many competing issues: numerous voluntary guidance, mandatory reporting requirements, decarbonization technology uncertainty, and data quality/availability issues. The interviewees' concerns with SBTi outlined above have led many to see seek an alternative for setting a science-aligned, third-party certified target that does not have mandatory strategy requirements.

** SBTi (2023). Corporate climate action gets a boost with upgrade to target validation and standard setting. https://sciencebasedtargets.org/news/corporate-climate-action-gets-a-boost-with-upgrade-to-target-validation-and-standard-setting.*

from different non-governmental organizations (NGOs) and standard-setting bodies has reached a point that it is making it difficult to assess the which guidance is the most important to follow. Many companies also mentioned there no longer appears to be a leading partner that can confer credibility to companies and help ensure a company is on the right path.

External Stakeholder Engagement to Build Credibility

Given the uncertainty around guidance and the lack of consensus around credibility-conferring partners, several companies mentioned proactively reaching out to key stakeholders to engage them during the transition plan development process. A variety of external stakeholders were cited as essential to building support, developing strategies, and achieving enhanced plan credibility. Companies identified engagement with third-party standard setters, NGOs, industry peers, and investors. Science-aligned third-party verification entities and NGO partners were viewed as fundamental to establishing credibility for goals and commitments. Peers played an essential role in company efforts to level-set industry expectations and share best practices.

The most influential external stakeholders identified across companies and industries were investors. Investors

drove what frameworks were seen as credible, the ambition of commitments, approaches to external engagement, the establishment of enhanced accountability mechanisms, and expectations for leading practices. Interviewees identified investors as the primary audience for disclosure and the leading driver for plan development. Investor coalitions were cited as particularly influential through shareholder advocacy practices like collective dialogues and filing shareholder proposals. Companies cited the growing sophistication of investor understanding within transition planning and investment firms' increasing use of in-house analysis over data provided by sustainability ratings agencies.

Knowledge Gaps

Interviewees cited significant knowledge gaps during the development of transition plans. A variety of competencies are required to build out key plan elements. Many of these competencies currently reside outside company sustainability, climate, and environmental, social, and governance (ESG) departments. Companies struggled with a lack of in-house and institutional knowledge regarding decarbonization pathways, climate scenario analysis, climate and emissions data management, materiality assessments, climate discourse, supplier engagement, renewable energy procurement, life cycle assessment, enterprise-wide emissions reduction strategy integration, climate-related investment analysis, capital allocation strategies, investor engagement, just transition, near-term goals, and climate lobbying.

Companies cited various strategies to close gaps, including assessing peer actions, reassessing internal roles and responsibilities, refining data management strategies, engaging in employee education and upskilling efforts, following external experts, utilizing untapped cross-functional competencies, and committing to continuous improvement in all efforts. A prevailing theme that appeared throughout company efforts to develop plans was the use of consultants. Consultants were used for various activities, from shorter supplementary analyses to longer-term efforts to build strategy, accelerate planning, develop programming, and cultivate buy-in.

Aspirational vs. Obtainable Goals

Companies identified a tension between setting aspirational and obtainable goals. In this context, an obtainable goal is one that the company has a clear strategy to achieve. On the other hand, an aspirational goal is one where the strategy is not obvious or is dependent on the development of a technology or a policy that is outside the control of the company. Interviewees also made it clear that the presence of significant interdependencies and the lack of clarity on strategy can be a deterrent to setting targets and developing a transition plan.

It should be noted that when the frame of reference for target setting is shifted from the current capabilities of a company to the global climate system, a goal that was deemed aspirational in one context is simply one aligned with the climate science.

Transparency Gulf

The interviews identified a wide gulf between the transparency expectations outlined in transition planning guidance and the level of transparency that companies are currently comfortable with.

"We share results, not plans"

"We are vague until we can be specific"

The primary concern cited is that any deviation from a publicly available plan will be used as evidence that a company is greenwashing or lacks commitment. Several of the companies interviewed shared anecdotes about publicly available commitments or plans where outcomes were different than what was originally planned leading to pushback or negative press. Only one of the companies interviewed shared that they were able to communicate to stakeholders a strategy that did not yield desired results and a subsequent pivot without receiving negative press or stakeholder pushback.

Lack of Interim Targets & Measures

Corporate targets are centered around the key 2030 and 2050 milestones outlined by the UN Framework Convention on Climate Change (UNFCCC) for achieving 50 percent reduction in emissions and net zero, respectively. There are few instances where companies have outlined an interim target between 2030 and 2050. After 2024 only five years remain to achieve 2030 milestones, and after that a full 20 years to 2050.

Without additional, publicly available interim targets there is insufficient data for stakeholders to assess whether a company is on track to meeting their long-term 2030 and 2050 targets. As noted earlier, most 2050 net-zero and carbon-neutral targets lack sufficient specificity regarding

the level of emissions reductions that are being targeted. Together, these two issues make it extremely difficult, if not impossible, to assess whether a company is making sufficient progress year-over-year toward achieving their long-term targets.

It is unclear why companies have not specified more interim targets. Some of potentially contributing issues may be:

- **Transparency Gulf:** The general corporate reluctance to publicly share plans intersects with this issue.
- **Transition Planning is an Emerging Corporate Discipline:** Though many companies have a long history with sustainability programs, most have relatively little experience with transition planning.
- **Unsettled Guidance:** As previously outlined, the transition planning guidance landscape is evolving quickly, with multiple new guidance released at the end of 2023 and early 2024. This creates uncertainty among companies with respect to which guidance to follow, and whether guidance may change again in the near term.
- **Unclear Signals from Guidance:** Existing guidance is either silent on the need for interim targets or, if it does speak to interim targets, the recommendations are insufficient to ensure the needed level of transparency.
- **Lack of Target & Measure Diversity:** Net-zero and carbon-neutral targets are denominated in greenhouse gas emissions. Most companies' only measure for this target is the lagged reporting of corporate carbon emissions. During the interviews companies expressed reluctance to report non-greenhouse gas interim measures. These measures could include investments made or progress on building out a facility or technology that would lead to emissions reductions in the future.

Just Transition

Just transition ensures that resilient, low-carbon economies are promoted in a way that is fair and equitable, creating decent work opportunities, and leaving no one behind. It aims to ensure that the transition to net-zero emissions is orderly, inclusive, and just. There was a wide variation among sectors in understanding and addressing just transition issues; however, there was a clear acknowledgment of the issue's emerging importance. The electric utility sector was the most engaged on the topic and cited internal and external pressure for evaluating just transition considerations. Across feedback, there was a universal frustration with a lack of established best practices. Interviews identified the need for more established metrics, key performance indicators (KPIs), and approaches for meaningfully engaging with communities.

RECOMMENDATIONS

As outlined in the Introduction to this report, non-state actors are critically important to achieving the goal of limiting global temperature rise to 1.5 degrees Celsius above pre-industrial levels as outlined in the Paris Agreement. With that in mind, the recommendations outlined below are keenly aware of the current global context, that collectively, we are not on track to limit warming to 1.5 degrees C, and greater urgency is required. Likewise, though credible transition plans are an important first step towards that goal, it is the performance against those plans and the real emissions reductions that flow from them that are needed.

Recommendations fall into three broad categories and are informed by the research conducted on transition planning guidance and corporate transition plans, and the lessons learned from the corporate interviews. The first category offers recommendations to enhance the planning process. The interviews made it clear that there was a wide gulf in terms of transparency expectations and practice; the second category focuses on recommendations to enhance transparency, with proposed actions for companies and their stakeholders. The third category offers suggestions to shift the focus from planning to measuring performance.

ENHANCING PLANNING

Fully Specified Short-Term and Long-Term Targets

As outlined in the interview findings, most long-term net-zero and carbon-neutral targets lacked necessary specificity to understand what was being committed to. The primary example is most long-term targets did not explicitly state the level of absolute emissions reductions that accompanied the target. It is unclear whether long-term absolute emission reduction targets have not been set, or whether they are just not being disclosed. If the former, it is important for companies to fully define their long-term ambition as part of the planning process, and to disclose this information as part of their overall plan. A fully specified target is the first piece of information that stakeholders will use to assess ambition and credibility of a transition plan.

Recommendation: To the extent companies are setting their own net zero targets, we recommend that companies follow the target setting guidance outlined in International Financial Reporting Standards *(IFRS) S2: Climate Related Disclosures*, and specifically, the guidance on setting *Climate-related targets* beginning at paragraph 33.[43] Alternatively, *Section 4.4. Metrics and Targets*, of the Glasgow Financial Alliance for Net Zero (GFANZ) guidance: *Expectations for Real-economy Transition plans* provides guidance on how to fully specify targets and accompanying metrics.[44]

More Interim Targets

Background research on corporate transition plans showed that most targets are focused on or around the 2030 and 2050 milestones years, with few if any interim targets between 2030 and 2050. The Science-Based Targets Initiative (SBTi) guidance defines a near-term target as covering 5–10 year timeframe, and a long-term target covering 10+ years.[45] Admittedly, the SBTi guidance does not speak directly to the need for interim targets to ensure transparency and facilitate assessment and accountability. The *ISO Net Zero Guidelines* do speak directly to the need for interim targets, recommending that companies set interim targets every 2–5 years as milestones to clearly define the path to net zero.[46]

Recommendation: To ensure transparency and the ability for stakeholders to assess whether companies are on track to meeting long-term targets, it is recommended that companies follow *ISO Net Zero Guidelines* and set interim targets every 2–5 years. More frequent interim targets also enable companies to more clearly demonstrate how strategies are being adjusted to reflect changes in technology, policy, etc.

Recommendation: Non-governmental organizations (NGOs) and standard-setting bodies should update existing guidance and include in guidance under development the requirement for the development and disclosure of more frequent interim targets consistent with the International Standards Organization's *ISO Net Zero Guidelines*.

Converge Transition Planning Guidance

Interview findings made it clear that the crowded and evolving transition planning guidance landscape is creating confusion, which may be slowing corporate action. The

guidance crosswalks also made it clear that there is already significant overlap of existing guidance, with the Taskforce on Climate-related Financial Disclosures (TCFD) and GFANZ having primacy in terms of planning guidance.

Recommendation: NGOs and standard-setting bodies should seek opportunities to converge transition planning guidance to create certainty and reduce confusion. An example of NGOs coming together to converge guidance to accelerate action is the Accountability Framework Initiative (AFi). AFi brings together 25 NGOs to develop consensus-based standards to protect ecosystems and human rights.

Recommendation: To the greatest extent possible, NGOs should seek to use existing guidance to inform real-economy sector companies about the development and content of credible transition plans. Only when there is a gap in existing guidance should the development of new guidance be considered, and then it should, to the greatest extent possible build on existing guidance.

ENHANCING TRANSPARENCY

Transition Plan Content Index

As outlined in the findings, many companies are not developing stand-alone transition plans; instead, the elements of the plan are reported in an existing sustainability report. To increase transparency, it is important for companies to make the components of their transition plan explicit and easy to find when they are not part of a stand-alone plan.

Recommendation: Companies should use a transition plan context index when their transition plan elements are presented in a document that does not exclusively focus on the transition plan.

In an effort to standardize these indices, the Center for Climate and Energy Solutions (C2ES) will leverage the transition plan guidance crosswalks to develop a proposed transition plan content index template. C2ES will also convene a group of NGOs working on transition planning to build consensus on the content and delivery of the index.

Creating an Environment that Encourages Greater Corporate Transparency

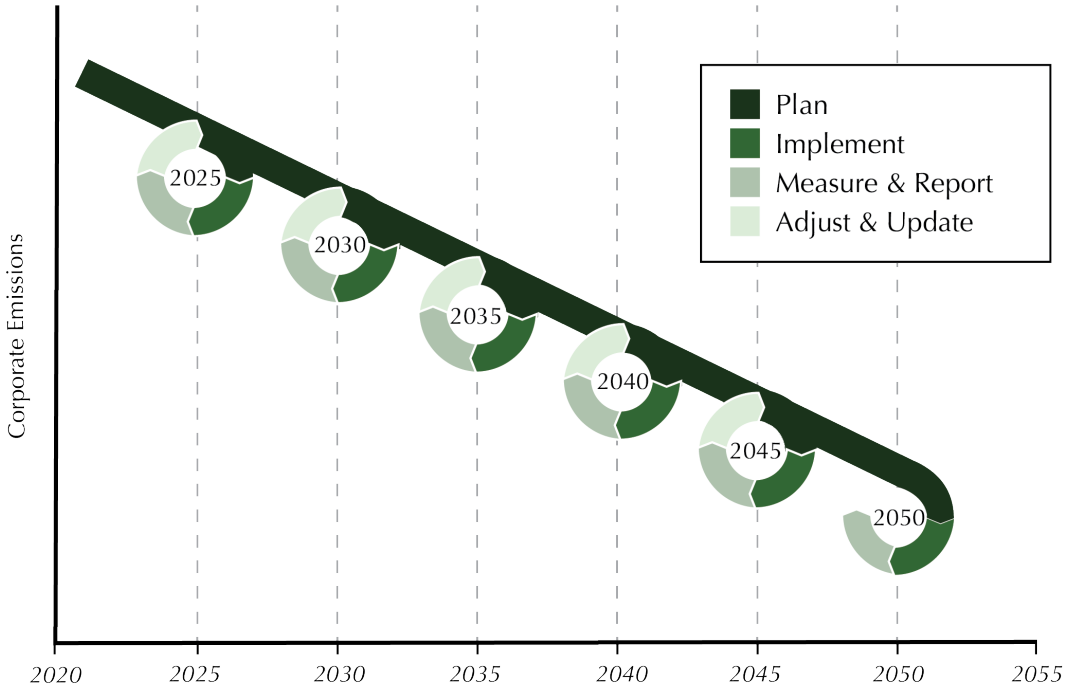
Interviews revealed a wide gulf between the level of transparency called for in transition planning guidance and what companies are willing and comfortable disclosing. The primary concern expressed around greater transparency was that more information would be used to critique corporate performance and question credibility. Bridging this gap will require movement on the part of companies and their stakeholders regarding the iterative nature of the planning process, and that credibility is a function of performance, not planning.

Recommendation: Setting the expectation among companies and stakeholders that the focus should not be on a single transition plan, but ongoing transition planning will be important first step to creating conditions where greater transparency is the norm, and changes in strategy are understood and accepted by stakeholders. The GFANZ guidance *Expectations for Real-economy Transition Plans* points out that transition planning is not a one-time exercise but an ongoing process.[47] Companies are being asked to develop transition plans that span over 25 years and charts a course to a state of business operation that does not currently exist in most cases, which makes a once-through process unrealistic (**Figure 11**).

Companies face many uncertainties and interdependencies to executing a successful transition plan. In many cases companies need new technologies to be developed or existing technologies to become more economic so they can be deployed at scale. Most companies face interdependencies, where their transition is dependent on another sector decarbonizing. The most common example is companies relying on continued decarbonization of the utility sector to address their Scope 2 emissions. The evolving policy landscape may also necessitate an update to corporate transition plans. This is not to suggest that the development of a credible transition plan, as defined by existing guidance, is not important, but that planning will and should be iterative so that companies can continue to adjust to changes in technology, policy, and markets (**Figure 12**).

FIGURE 11: Once-through plan development

FIGURE 12: Iterative Transition Planning Cycle



Acknowledging that transition planning will be iterative and that companies will have to adjust in the future as the landscape evolves should help create an environment where they are more open to sharing plans and updating them as they evolve. Stakeholders focus will still be on whether plans and actions taken are credible, but the evaluation of a missed interim target or other deviation should be more fulsome. Evaluation should include how the company governance system incorporates what was learned to adjust strategy going forward and steps taken to ensure the overall target can still be reached. However, this requires companies to disclose more frequent interim targets to make the overall path clear and how plans are being adjusted to stay on track.

Recommendation: It is important to make clear to companies and stakeholders (e.g., NGOs, standard setters) that real credibility is a function of performance. That is credibility will be measured by how a company performs in terms of absolute emissions reductions and performance toward their net-zero targets.

Figure 13 maps the primary dimensions that go into the assessment of credibility. It highlights that performance (i.e., emissions reductions, carbon removals) is the only path to real credibility with respect to a net-zero transition. It also outlines that there are different considerations that go into the assessment of real credibility and the external perception of credibility. Perceived credibility from external stakeholders may lag real credibility, but the only legitimate way to close the gap and build trust is through greater transparency and progress.

FIGURE 13: Dimensions of Net Zero Transition Credibility

<table>
<tr><td rowspan="8">PERCEIVED CREDIBILITY</td><td rowspan="5">REAL CREDIBILITY</td><td rowspan="5">Internal</td><td rowspan="3">Planning</td><td>Targets</td></tr>
<tr><td>Plans</td></tr>
<tr><td>Governance</td></tr>
<tr><td rowspan="2">PERFORMANCE</td><td>PROGRESS</td></tr>
<tr><td>TRANSPARENCY</td></tr>
<tr><td rowspan="5"></td><td rowspan="3"></td><td rowspan="3"></td><td rowspan="3"></td></tr>
<tr><td rowspan="4">EXTERNAL</td></tr>
<tr><td rowspan="2">Historical Context</td><td>Sector</td></tr>
<tr><td>Company</td></tr>
<tr><td rowspan="3">Current Context</td><td>Science Aligned</td></tr>
<tr><td>Proportionate</td></tr>
<tr><td>Transparent</td></tr>
</table>

ENHANCING PER`FORMANCE—SHIFTING FOCUS FROM PLANNING TO PERFORMANCE

During our evaluation of company transition plans and guidance frameworks, we observed a significant gap in guidance and expectations on what constitutes credible levels of performance. Extensive guidance and disclosure frameworks exist that focus on planning elements, but considerably fewer resources are devoted to assessing and disclosing demonstrated performance. We mapped key elements from several different organization's guidance and frameworks including Exponential Roadmap, TPT, GFANZ, Institutional Investors Group on Climate Change (IIGCC), Climate Action 100+ (CA100+), Planet Tracker, and UN Integrity Matters on a continuum which sought to classify these elements into five categories: developing, aligning, credible, leading, and exceeding. Aligning activities included steps that underpin a robust plan like emissions disclosure for Scopes 1, 2, and relevant Scope 3 categories; target setting; and public commitments. A credible plan seeks to deliver on targets with a dedicated strategy that demonstrates emissions reductions and regularly discloses plan shortcomings, uncertainties, and updates. Leading plans demonstrate enhanced ambition with achievement of targets ahead of stated ambition. Finally, exceeding plans go a step further and seek to set and achieve emissions reduction targets beyond the company's value chain within society.

Greater transparency must be incentivized to allow for the recalibration and reassessment of strategy. Shorter planning cycles of 2–3 years with articulated governance strategies must be normalized to reflect demonstrated emissions reductions and ensure plans are regularly evolving to reflect changing dynamics, areas of uncertainty and lessons learned. Finally, more information must be disclosed on activities that do not include immediate emissions reductions to better understand how they fit into decarbonization strategies. We intend to collaborate with a group of NGO partners to better understand and outline how performance can best be measured and assessed.

Recommendation: Criteria for transition performance (as opposed to planning) should be developed to serve as a guide for assessing the credibility of climate action that is a result of transition planning. As companies move from planning to execution, it will be increasingly important to have clarity on the levels of performance required for implementation of decarbonization goals (i.e., Transition Performance Continuum) necessary for companies to continue to be seen as credible into the future.

LOOKING AHEAD

Phase 2 of this project will build on the findings from **Phase 1** and add new dimensions to the research. The anticipated areas of exploration for **Phase 2** include:

- Leveraging **Phase 1** findings to enhance utility and support uptake of corporate low-carbon transition planning and implementation
- Utility Sector Interdependency Analysis
- Financial Sector Intersection with Real Economy Transition Planning

LEVERAGE PHASE 1 FINDINGS

As outlined in the preceding Recommendations Section, the Center for Climate and Energy Solutions (C2ES) will seek to work with other non-governmental organizations (NGOs) and interested stakeholders to raise awareness of issues that are limiting the uptake and pace of transition planning, and to develop tools where appropriate to enhance transparency and fill gaps in guidance.

UTILITY SECTOR INTERDEPENDENCY ANALYSIS

To varying degrees, every real-economy sector is dependent on utility sector decarbonization to meet their own transition planning targets. Given this, and the fact the electric power sector represents 25 percent of annual U.S. carbon emissions, it is important to understand the interdependencies and challenges the utility sector faces to achieve their own decarbonization goals. The research will explore the unique aspects of electric sector transition interdependencies to enable a more holistic and robust conversation on how to enable and accelerate the transition.

FINANCIAL SECTOR INTERSECTION WITH REAL ECONOMY TRANSITION PLANNING

Phase 1 corporate interviews identified financial-sector stakeholders (e.g., shareholders, investors, banks) as the most influential with respect to driving real-economy sector companies transition planning. However, companies reported that these interactions are fairly basic—asking whether a target has been set and/or if a transition plan is in place. There is the opportunity for these interactions to be more impactful in driving real-economy transition planning. Additional research will be conducted to identify strategies and interventions that will enhance the ability of the financial sector to accelerate real-economy transition planning and strategy implementation.

APPENDICES

APPENDIX A: INTERVIEW TEMPLATE

Corporate Low-Carbon Transition Plan Interview Template

COMPANY NAME:		DATE:
Sector:		
Interviewee(s):		
(names, titles)		
Interviewer(s):		
(names, titles)		

Company Background Information (pre-interview data collection)

QUESTION	Y/N	NOTES
Sustainability Report?		
Carbon Footprint? (Baseline Year)		
Scope 1 (absolute, % total)		
Scope 2 (absolute, % total)		
Scope 3 (absolute, % total)		
CDP Report		
CDP Climate Change Report?		
CDP Climate Change Score?		
CDP C3.1: org's strategy includes transition plan aligns with a 1.5°C world?		
GRI Report?		
TCFD Report?		
Low Carbon Plan Transition Plan?		
Commitment to Low Carbon Plan?		
NZ or Low-Carbon Targets set, dates?		
SBTi Target?		
Sector or other commitments?		

Company Interview Questions

SUSTAINABILITY REPORTING
Does the company publish an integrated or standalone sustainability, CSR, or ESG report? If yes, what year was the first report published?
Does the report follow any specific guidance or standard such as **TCFD**, **GRI**, etc.?
How and when is the report made public?
How often is it updated?
Has the company made any other external commitments such as **Race to Zero**, **RE100**, etc.?
GOAL/TARGET SETTING
Has a net-zero or low-carbon goal been set? If yes, what is the due date, any interim goals, and dates, etc.? If no, are you considering or in the process of setting a goal? What is the #1 barrier to setting a net-zero or low-carbon goal for your company?
Does the goal include Scope 3 emissions? If yes, what is included? If no, is there a plan to assess and include them in the future?
Was an external standard or group such as **SBTi** used to help set the goal?
Has a transition plan been developed to achieve the goal(s)?
Has a set of metrics been developed to track progress towards the final goal? What is measured to track progress towards the final goal (inputs, outputs, outcomes)?
Was an external standard or guidance such as **GFANZ** used to inform plan development?
GOAL & STRATEGY DEVELOPMENT PROCESS
What were the primary motivations for developing the goal and plan, both internal and external? Was the process initiated at the top, from the existing sustainability/ESG function, other? What came first a net-zero or low-carbon goal, or a carbon reduction or transition plan? Looking back would you have sequenced the goals or plans differently?

Who were the primary stakeholders considered, internal and external? How were these stakeholders consulted and/or involved in the process? How do they continue to be involved in the process? Was there any pushback from other internal stakeholders? Any unanticipated support or positive reactions?
How did the company organize itself to develop the goal and transition plan? What business function led the development process? What other functions in the organization worked on development of the goal and plan? Was the finance function integrated into the process; were new investments, shifting investment priorities, and setting aside appropriate budget line items to support goal and plan execution considered during the strategy development process? Did the process leverage any existing stakeholder structures (e.g. committees, task forces), or were new groups formed?
Were outside consultants or other resources engaged to help with or guide strategy development?
Were data or knowledge gaps identified during the process? How were they addressed/overcome?
What was the most helpful resource or suggestion?
What hurdles or roadblocks were faced? What was the most significant? How were they overcome?

NET-ZERO INTERDEPENDENCIES

An industry sector may have an interdependency when it comes to achieving their net-zero target or goal. For example, a sector that has significant carbon emissions in Scope 2 (purchased electricity) may need the utility sector to decarbonize for them to reach their net-zero ambitions. Similarly, the aviation sector has significant Scope 1 emissions from fuel use. They would need innovation, or a scaling up of existing technology to produce a cost competitive sustainable aviation fuel.

Were specific interdependencies identified during the goal/plan development process that will materially impact the ability to achieve the goal? • **Sector Interdependency:** for example, must the utility sector decarbonize to achieve your Scope 2 emissions reduction goal? • **Technology Interdependency:** Does a new technology need to be developed, or become economic to achieve Scope 1 or Scope 3 emissions reduction goals?
Was the plan or goal adjusted to reflect these interdependencies?

Were actions identified to address these interdependencies? Policy: advocating for a policy such as incentives or tax breaks to advance a technology? Technology: making an investment to bring about a required new technology? Collaboration/Coalition: forming or leveraging industry or trade groups to advocate for policy changes?
MANAGING THE PLAN
How did the company organize itself to manage plan implementation? How is this different than the plan development? What business function has the lead for implementation? What other functions in the organization are working on implementation? How has the board or C-suite been involved in overseeing implementation of the transition plan?
Are outside consultants or other resources engaged to help with implementation?
Is Transition Plan management integrated with core business management activities or handled separately?
How often are the measures updated? Is this the same frequency as financial and other material management measures? If not, why is the timescale different?
How and by whom are the measures used internally to track progress?
Have you experienced deviation of targets since tracking progress? How did this change get communicated internally and publicly?
Is there a process in place to assess progress and adjust the plan? If yes, what is the frequency of this reassessment?
COMMUNICATING THE GOAL & PLAN
What factors were considered and addressed to ensure that the goal would be perceived as credible by internal and external stakeholders? Are there factors you were unable to address, or not able to fully address that impact credibility? Are external standards and commitments helpful to setting a credible goal? What resources could make this process easier?

What factors were considered and addressed to ensure the transition plan would be perceived as credible by internal and external stakeholders? Are there factors you were unable to address, or not able to fully address that impact credibility? Are external standards and commitments helpful to developing a credible plan? What resources could make this process easier?
Could you provide an idea of the timing for communicating the goal/plan — was the plan socialized internally prior, during, or after development? What would you say were lessons learned from this process, and how would you advise other companies on socializing the plan?
Has the entire goal and plan been made public, how & when? If no, how do you determine which parts of the plan to make public and when?
How are the measures shared with external stakeholders to demonstrate progress? How are limitations, uncertainties, and interdependencies in the transition plan communicated with stakeholders?
Are external stakeholders requesting goals, a transition plan, specific data, or analysis?
OTHER QUESTIONS
Are there any gaps or weaknesses in the goal or plan that still need to be addressed? What resources or tools would be helpful in addressing these?
What have we missed that you think we should know?
How can C2ES be helpful in addressing development of transition plans & achieving net zero goals?
QUESTIONS FOR ADVANCED COMPANIES/EARLY MOVERS
Are there lessons learned from transition plan development, management and updating process? Anything that could have done differently throughout the process?
Has the transition plan been helpful in terms of change management, informing business strategy and financial planning process?

Are there any aspects of your company that you were able to leverage to make this process easier? For example, company culture, existing stakeholder engagement processes, communication, or other assets. Do you have any recommendations for other companies to tap into these items for their planning purposes? Did the process reveal any opportunities to improve these processes, or provide any other benefits or insights?
Have you made any changes to the goal, plan, or processes since the initial planning stages, based on your lessons learned? If so, what are these?

APPENDIX B: DATA FOR CORPORATE CLIMATE TARGET BAR GRAPH

INDUSTRY SECTOR	CO. #	BASE YEAR	TARGET YEAR	TARGET REDUCTION LEVEL	LONG-TERM EMISSIONS	STANDARD OR PROCESS TO SET TARGET
Utilities	1	2015	2030	50%		Committed near-term SBTi
		2015	2040	80%	20%*	
Transportation	2	2019	2035	40%		Approved near-term SBTi
		2019	2050	85%	15%	
Utilities	3	2007	2030	50%		
		2007	2050	80%	20%*	Science aligned †
Services	4	2015	2030	63%		Approved near-term SBTi
		2015	2035	80%	20%*	
Transportation	5	2018	2035	72%		Approved near-term SBTi
		2018	2040	carbon neutral	28%	Committed net-zero SBTi
Energy	6					
		2018	2050	80%	20%*	Science aligned †
Manufacturing	7	2019	2030	10%		
		2019	2040	80%	20%*	Unclear
Energy	8	2015	2030	50%		
		2015	2050	90%	10%	Science aligned †
Utilities	9					
		2000	2050	80%	20%*	Unclear
Manufacturing	10	2021	2035	carbon neutral		
		2019	2037	50%	50%	Approved near-term SBTi
Manufacturing	11	2017	2030	33%		
		2017	2050	carbon neutral	67%	Unclear
Manufacturing	12	2020	2030	15%		
		2020	2050	carbon neutral	85%	Unclear

* For companies that did not specify an absolute emission reduction level for their net zero target an 80% reduction level is assumed, which results in long-term emissions that are 20% of baseline.

† Companies self-report that the target is science aligned according to various standards.

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