It's time to decarbonize the technology industry

Typically trendsetters, most technology companies are still striving to develop carbon-reduction plans.

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The time to decarbonize is now

Tech companies are universally seen as cutting-edge organizations, but 53 percent do not have a decarbonization strategy or targets in place.

The 2021 KPMG CEO Outlook found 82 percent of tech company CEOs want to lock-in sustainability gains made during COVID-19. Further, 61 percent are looking to invest up to 10 percent of future revenue in sustainability programs.

Today, however, many tech companies are challenged with translating aspirations into actions. While they are usually recognized as disruptors and first-movers, tech companies generally have more work to do when it comes to decarbonization.

In the way are a variety of barriers, meaning there is no silver bullet for decarbonization. In the annual KPMG global survey of more than 800 small, midsize, and large technology companies, leaders reported several of these challenges to be insufficient board and management engagement, investor focus on short-term goals, lack of skills and necessary technology, and the cost of decarbonization.

Unfortunately, delayed action on decarbonization will increasingly create headwinds in the cost of capital, the war for talent, access to necessary material inputs, and consumer confidence. So now is the time for tech company leaders and sustainability professionals to earnestly start developing their decarbonization plans.

At the same time, the tech industry is primed to reclaim first-mover status by leveraging its resources, visibility, and influence to be innovators and positive role models in the fight against climate change, unlocking new value for investors, customers, and employees along the way.

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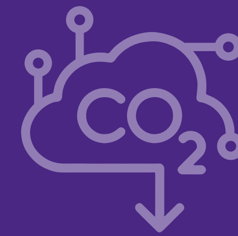


In the technology industry:

53% **do not have a decarbonization strategy or targets**

Of the 47% that do have a decarbonization strategy, efforts are focused on:

- **Renewable energy procurement**
- **Energy efficiency**
- **Carbon offsetting**

64% **have not calculated the financial impact of climate-related risks**

24% **said climate change factors into funding decisions**

13% **have remuneration incentives for decarbonization**

Source: KPMG Technology Industry Survey 2021, n=825

Tech companies challenged by decarbonization

When it comes to implementing an overarching decarbonization strategy, tech companies face a number of challenges—some closely connected to their business models—that can hamper green initiatives.

Tech companies tend to have complex, decentralized footprints that make measuring emissions difficult. A decarbonization strategy must address a variety of elements, including office space, warehouses, supply chain, distribution, and data centers. Since service companies do not own many of the assets they operate, they may face their own challenges measuring decarbonization efforts. Even larger companies that have been vocal about their corporate-level green strategies have been challenged, leading to tactical implementation at the business-unit level.

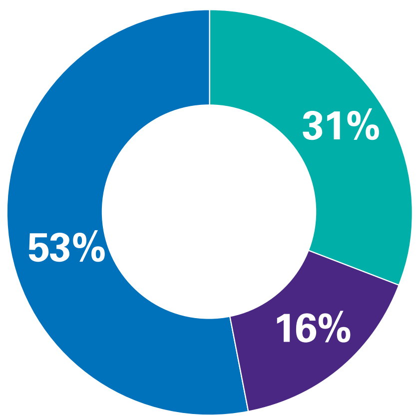
Therefore, a key component of any tech company's effort to reduce carbon emissions will be imposing mandates on suppliers and other third parties with which they do business. Companies should look beyond surface-level values and vendor pricing when evaluating how a particular partner will affect their overall carbon footprint.

Another factor affecting a company's attitude toward decarbonization is the regulatory environment. Despite the renewed focus on reporting, actual requirements can vary greatly depending on country and region. Those companies operating under more stringent rules will obviously be farther along in their decarbonization journeys than those that are in more lax jurisdictions.

Turning to the survey results, a majority of respondents —53 percent—said their companies have not developed a decarbonization strategy or targets. Smaller companies lag on this front (66 percent) compared to their larger counterparts (57 percent for midsize companies and 37 percent for large enterprises).

Looking at ownership structures, private firms have not made as much progress toward decarbonization as publicly held companies (61 percent versus 41 percent do not have a decarbonization strategy or targets)—possibly because public companies need to answer to shareholders who demand greener corporate policies.

Has your company developed a strategy and/or targets to decarbonize the business?



- Have a decarbonization strategy only
- Have both a decarbonization strategy and targets
- Have not developed a decarbonization strategy or targets

Source: KPMG Technology Industry Survey 2021, n=825

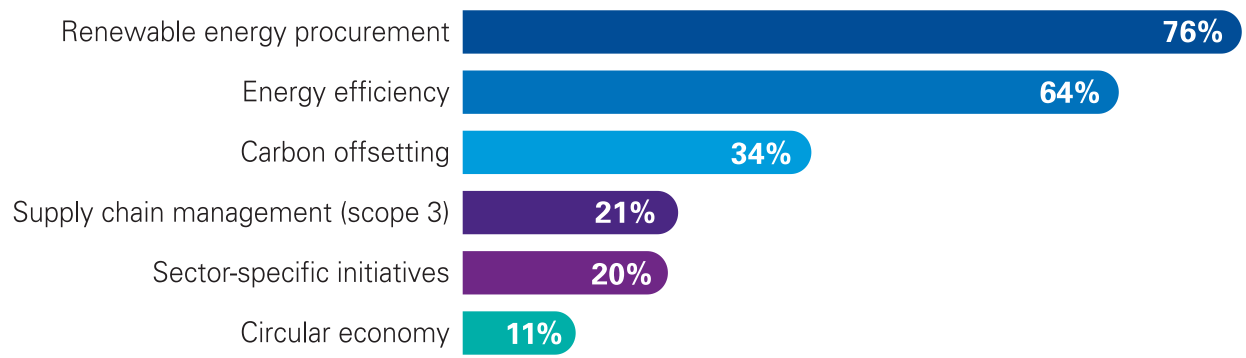
Tech companies challenged by decarbonization *continued*

When asked again in a separate question, "What strategy is your company using in its decarbonization efforts," almost half—45 percent—responded they do not have any decarbonization initiatives. Another 23 percent said they participate in an industry consortium while 21 percent indicated they have created an internal sustainability team.

Tech companies that have already begun to address decarbonization tend to focus on areas such as reducing energy consumption, where improving emissions outputs is a by-product rather than a primary goal. The survey confirmed this assertion and found that, of the companies that said they do have a decarbonization strategy, efforts focused on renewable energy procurement, energy efficiency, and carbon offsetting.

As tech companies ramp up their decarbonization efforts, they will need to reassure customers, employees, investors, and regulators that verifiable progress is being made toward their goals. They will need to document, with high fidelity, auditable data provided by a climate accounting infrastructure, their progress toward meeting their low-carbon footprint commitments.

What are the core components of your decarbonization strategy?



Source: KPMG Technology Industry Survey 2021, n=384
Multiple responses allowed.

Navigating which reporting framework to use can also be daunting. There are several possibilities, and all represent steps in the right direction. Each option should be evaluated based on a particular company's situation. Some of these frameworks are:

— Global Reporting Initiative (GRI) standards
— Task Force on Climate-related Financial Disclosures (TCFD) recommendations
— Sustainability Accounting Standards Board (SASB) guidelines
— United Nations Sustainable Development Goals (SDG) blueprint
— World Economic Forum (WEF) metrics for reporting on sustainable value creation.

Making climate a priority

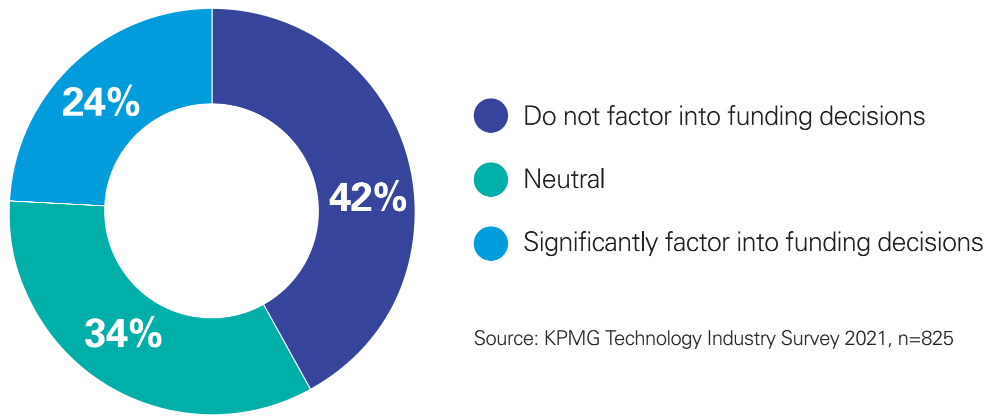
Even with environmental, social, and governance (ESG) issues in the headlines, tech companies are generally not reconciling their business decisions against climate change.

Many tech companies simply do not view climate change as a top consideration when it comes to funding projects. Only 24 percent of tech companies said climate change considerations significantly factor into their funding decisions, while 42 percent said it does not factor in. For small technology companies where it is harder to scale, this number rises to almost half (47 percent).

Moreover, fewer than 4 out of 10 respondents said they wanted their company to publicly lead by example in decarbonization. And only one-third (33 percent) agreed with the statement "my company is creating products and services that enable other companies to implement decarbonization." Leaders from large enterprises had the highest positive response to these questions (49 percent and 43 percent, respectively), although these numbers still represent less than half. These sentiments are consistent with most tech companies saying they do not have decarbonization strategies, targets, or initiatives.

As with other sectors, larger and public tech companies are likely under greater consumer and investor pressure around environmental issues and are taking the lead in decarbonization. For their part, smaller and private companies are waiting to evaluate the approaches taken by their larger counterparts.

To what extent do climate-change considerations factor into your company's funding decisions?



Source: KPMG Technology Industry Survey 2021, n=825

Making climate a priority *continued*

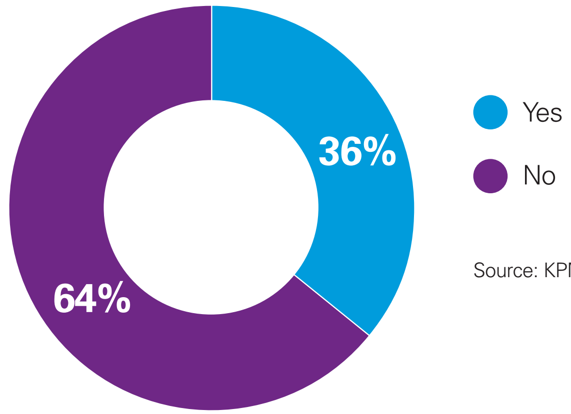
In another indication that climate change is currently a lower-priority concern, a strong majority (64 percent) of tech leaders said their company has not calculated the potential financial impact of climate-related risks. Small tech companies had the highest "not calculated" response rate at 70 percent. Large enterprises were at 56 percent and midsize companies were at 65 percent. Also, the greater percentage of "not calculated" was seen among private companies compared to publicly traded ones (67 percent vs. 59 percent).

A corroborating finding can be found in the KPMG [Survey of Sustainability Reporting at Technology Companies](). Only half of global tech companies even acknowledge the risk of climate change in their financial reporting, much less assign a quantitative impact to it.

The vast majority of tech companies overall have not implemented remuneration incentives for directors to achieve decarbonization targets. Only 13 percent have incentives in place. However, by company size, large companies lead the way with 32 percent indicating they have incentives in place. And public companies outperform private companies on this topic (26 percent versus 6 percent).

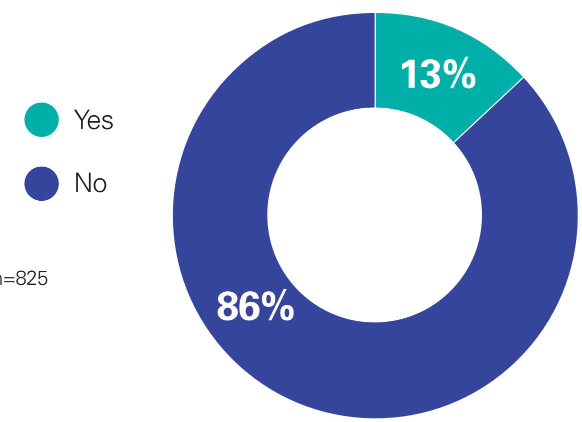
These results suggest that tech companies are still looking at climate-related strategies as a cost and have not determined how decarbonization can actually generate revenue. For example, companies can produce their own electricity through solar and wind and sell the excess to utilities to feed into the local power grid.

Has your company calculated the potential financial impact of climate-related risks?



Source: KPMG Technology Industry Survey 2021, n=825

Has your company implemented remuneration incentives for directors to achieve decarbonization targets?



Source: KPMG Technology Industry Survey 2021, n=825
Percentages do not sum to 100% due to rounding.

Barriers to decarbonization

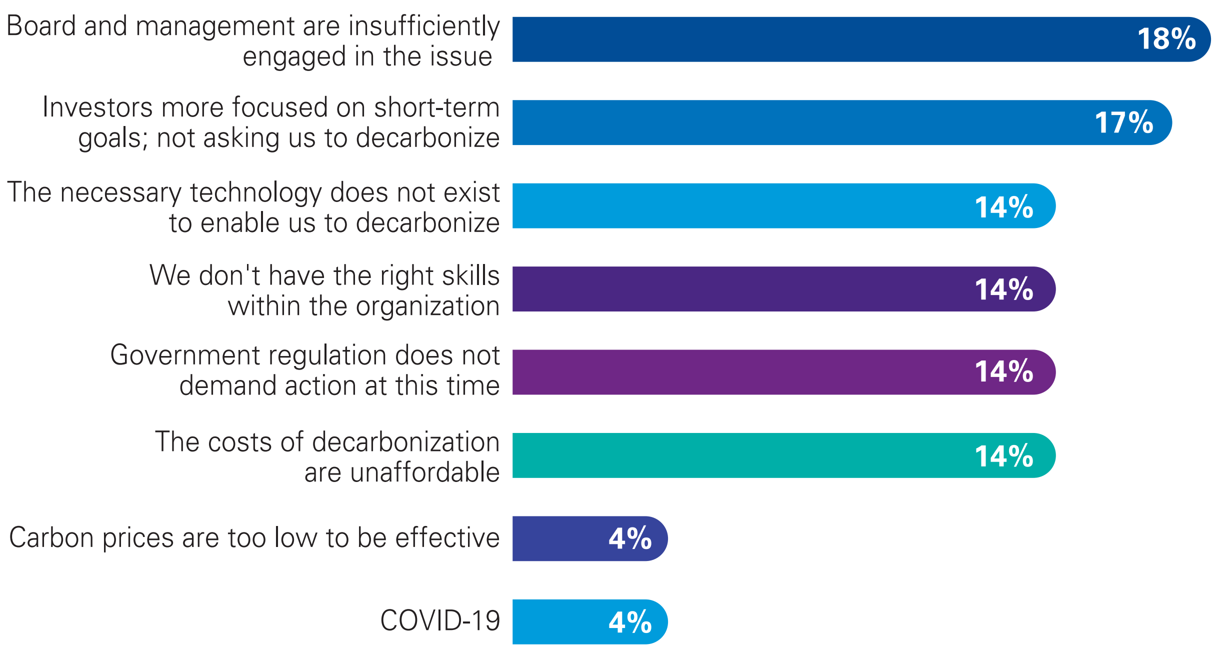
With climate issues receiving so much attention, why are tech companies lagging in their decarbonization efforts? The answer might be a lack of emphasis from the board, management, and investors.

The survey asked respondents to identify the barriers to decarbonization that their company is experiencing. Most of the choices received similar weighting. However, "board and management are insufficiently engaged" and "investors are more focused on short-term goals; not asking us to decarbonize" were cited slightly more frequently than other responses and combined represented 35 percent of the total. Conversely, "Carbon prices too low to be effective" and "COVID-19" were the barriers least frequently cited by respondents.

While the survey results suggest that tech companies are lagging in their decarbonization efforts, new regulations and market demand may begin to force them to be more aggressive in their overall green strategies.

Soon, having robust and verifiable climate-related strategies may become an imperative for tech companies. For hardware companies, those programs will have to include the ethical sourcing of materials, as well as measuring levels of recycling vs. disposal of waste. Production processes will also need to be evaluated for their energy efficiency and effect on the organization's decarbonization efforts.

What do you see as the most challenging barrier to decarbonizing your business?



Source: KPMG Technology Industry Survey 2021, n=825

Percentages do not sum to 100% due to rounding.

Recommendations for tech leaders

The survey found that tech companies are struggling to define and navigate a strategy that effectively meets decarbonization objectives. Most are trying to decide what their first steps will be; others have started but are unsure of what to do next.

But tech companies cannot afford any further delays in their decarbonization journeys. Regulators, investors, and consumer are ramping up the pressure for environmentally friendly policies, creating financial and reputational risk for those that fall behind.

The good news is that green strategies, while helping the planet, can also offer positive business outcomes. There is mounting recognition that an effective net-zero transformation can unlock new markets, products, revenue, and value propositions.

There's no right or wrong way to proceed on the decarbonization journey. Strategic levers can include accelerating a shift to renewables, developing new product offerings, relocating facilities, investing in carbon capture, and optimizing tax credits. However, at the center of the net-zero imperative are five pillars of action:

1. Decarbonize with strategic foresight
2. Operationalize sustainable behavior
3. Gain regulatory agility
4. Accelerate climate-focused partnerships
5. Digitalize data and processes to build trust and prove results

Key steps toward low-carbon and net-zero operations:

Ensure decarbonization aligns with your overall business strategy.

Evaluate and develop a common understanding of the nonlinearity of climate change, competition for renewables and offsets, and the impact of decentralized energy in the marketplace.

Define the reporting strategy for internal and external stakeholders, including public disclosures.

Shift your capital structure to account for the increasing role of climate in finance.

Align executive compensation with environmental performance.

Demonstrate provable progress through targeted emissions-reduction initiatives that support broader business goals.

How KPMG IMPACT can help

KPMG believes that a focus on ESG makes businesses better. Companies are facing pressure from investors, regulators, shareholders, customers, and employees to transform their business with an ESG lens. What and how to execute on ESG can be complex and confusing given the number of standards and approaches. ESG is no longer a siloed concept but a value that needs to be embedded in a company's entire strategy and operations. This is where KPMG IMPACT can help.

KPMG IMPACT is a holistic ESG solution that paves a clear path to purpose-led, sustainable business to build resilience and drive profitable and measurable growth. The extensive KPMG services and capabilities focus on key ESG themes such as decarbonization and renewables; sustainable finance; and climate change and reporting. By leveraging a wide range of data-driven solutions, technology tools, and deep industry experience, KPMG can help clients navigate and simplify the complexities of every stage of the ESG journey.

The KPMG IMPACT climate change and decarbonization practice drives business models, products and services that address climate change and help clients reduce carbon emissions.

KPMG IMPACT focus areas:

Climate change and decarbonization

Environmental, social, governance (ESG) and sustainability

IMPACT measurement, assurance, and reporting

Sustainable finance

Economic and social development

About the authors

Alex Holt is the global head of technology, media & telecommunications (TMT) for KPMG and is based in Silicon Valley. A highly accomplished executive with over 20 years' international experience, Alex joined KPMG in 2012 as the chief operating officer in the U.K., taking up the leadership of the U.K. TMT sector in 2015. Alex relocated to the United States, joining KPMG in the U.S. in 2018 as the global account executive for several leading technology companies based in Silicon Valley. In 2020, he took on greater responsibility running the multibillion-dollar global TMT practice, leading thousands of KPMG professionals who serve clients across the TMT sector with a wide range of advisory, tax, and audit services.

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Mark Gibson is the technology, media & telecommunications national sector leader for KPMG in the U.S. During his 30 years in public accounting and advisory, he has served clients in the technology, consumer products, and retail industries, as both an audit and advisory partner. Prior to his current role, Mark was the Seattle office managing partner. He serves as the account executive for several large clients in the Seattle and Silicon Valley markets and as global lead partner for a leading technology company, where he works with KPMG professionals from audit, tax, and advisory in more than 15 countries.

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About the research

The 2021 KPMG Technology Industry Survey, now in its ninth year, included responses from more than 800 global leaders in the technology industry across all the major subsectors, including technology services, internet/e-commerce, hardware/electronics, software/SaaS, and semiconductors. Twelve countries were included in the online survey, and about two-thirds (65 percent) of the respondents were C-level executives. The data collection for this publication was completed in the second quarter of 2021.

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