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Navigating the Decarbonization Journey

Success Strategies for Multinational Corporations Transitioning to a Carbon-Free Future

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The global business community has reached a new era: Climate action is an economic imperative. The world must be carbon neutral by 2050, and multinational corporations have a key role to play in achieving that outcome.

In this report, we outline the key challenges that multinational corporations face on their decarbonization journey, shared success factors that are emerging from current decarbonization efforts, and how those principles can be applied to help corporations navigate decarbonization challenges.

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1.0 The Onset of the Decarbonization Era

It's been a long road getting here. For decades, senior business leaders worldwide have wrestled with critical questions. They asked whether climate change required action at all. If so, what measures would be necessary to slow climate change? What was the private sector's role in the solution? Would their organization need to take action? Would it benefit the business more to wait for regulations or to position itself as a leader? And could they afford to take action? Could they afford not to?

It is now clear they cannot afford inaction. BlackRock CEO Larry Fink's increasingly emphatic annual letter to CEOs demonstrated a "tectonic shift" of investors tilting toward sustainability in 2021. In it, he called for global, uniform ESG disclosure standards, urging all public boards to incorporate climate risk into their long-term strategies.[1] "There is no company whose business model won't be profoundly affected by the transition to a net zero economy," he wrote. Among those investors applying pressure to this tectonic shift are the New York State Common Retirement Fund and Macquarie Asset Management, which both plan to transition their portfolios to net zero by 2040.[2, 3]

The reasons why are becoming increasingly clear as the need for global emissions mitigation and adaptation becomes increasingly concrete: in 2019, the world's 215 biggest companies reported $1 trillion in climate-related risk in the years ahead.[4] Record-breaking natural disasters in 2020, including historic wildfires, floods in China, and more North Atlantic hurricanes than ever before, contributed to $210 billion in losses worldwide.[5] And a 2021 Dutch court ruling requiring Royal Dutch Shell to reduce emissions 45% by 2030 confirmed that climate-related risks can take legal forms as well.[6]

A slew of new and forthcoming regulations adds to the pressure. EU preparations to reach climate neutrality by 2050[7] and the US shift from languishing on climate action to an aggressive emissions target of 50 to 52% reduction below 2005 levels by 2030[8] eliminate any remaining doubts about the global shift toward climate regulation.

As market and regulatory pressures mount, business leaders around the globe are signaling their understanding of the inevitability of decarbonization. One-fifth of the world's 2,000 largest companies, representing nearly $14 trillion in sales, have committed to net-zero targets.[9] The Climate Pledge, a public commitment to reach net-zero emissions by 2040 started by Amazon, now has 105 signatories.[10] And more than 2,000 organizations in 78 countries have aligned themselves with the reporting requirements proposed by the Task Force on Climate-Related Disclosures.[11]

Now that decarbonization pledges are streaming in from all directions, a new, final question remains for multinational corporations with big climate goals: how can they achieve those objectives?

1. Larry Fink, "Larry Fink's 2021 letter to CEOs," BlackRock, https://www.blackrock.com/corporate/investor-relations/larry-fink-ceo-letter.
2. Office of the New York State Comptroller Press Office, "New York State Pension Fund Sets 2040 Net Zero Carbon Emissions Target," New York State Comptroller, https://www.osc.state.ny.us/press/releases/2020/12/new-york-state-pension-fund-sets-2040-net-zero-carbon-emissions-target.
3. Macquarie Group News, "Addressing climate change and accelerating the low carbon transition," Macquarie Group, https://www.macquarie.com/us/en/about/news/2020/addressing-climate-change-and-accelerating-the-low-carbon-transition.html.
4. CDP Media, "World's biggest companies face $1 trillion in climate change risks, CDP, "https://www.cdp.net/en/articles/media/worlds-biggest-companies-face-1-trillion-in-climate-change-risks
5. Munich Re Media, "Record hurricane season and major wildfires – The natural disaster fig-ures for 2020," Munich Re, https://www.munichre.com/en/company/media-relations/media-information-and-corporate-news/media-information/2021/2020-natural-disasters-balance.html.
6. Verdicts, "ECLI:NL:RBDHA:2021:5339," Netherlands Case Law, https://uitspraken.rechtspraak.nl/inziendocument?id=ECLI:NL:RBDHA:2021:5339.
7. European Commission, "European Climate Law," European Unions, https://ec.europa.eu/clima/policies/eu-climate-action/law_en.

1.1 Decarbonization Challenges

The knowledge that decarbonization is inevitable is separate and distinct from a clear understanding of the discrete steps necessary to shift a complex, multinational organization to a new paradigm. As corporations dive into their sustainability pursuits, several key obstacles emerge that threaten to delay or derail their progress.

1.1.2 Expertise

One of the most immediate challenges multinational corporations face is accessing the appropriate breadth and depth of expertise needed to understand and tackle emissions. Rarely is sustainability a core function of these organizations, yet they now must rapidly develop a level of subject matter and technical proficiency sufficient to shift every inch of their complex operations into transformational emissions reduction mindsets and strategies.

1.1.3 Business Model

Corporations must also confront the challenge of ending their reliance on traditional, linear business models. Many multinationals have historically functioned in consume-and-dispose mode. Operating this way significantly restricts companies' ability to reduce emissions. To reach net-zero, many companies will need to fundamentally rethink the way they design and offer their goods and services, introducing circularity into design and use of product—a major shift in business practice.

1.1.4 Data

Large corporations will almost invariably face a data challenge in their decarbonization efforts. An emissions reduction plan requires a clear and complete picture of the business's current emissions. The components of that picture run through every internal department and division, as well as each external entity upon which the company relies, including partners and vendors. Accounting for the emissions of all these sources is not only an enormous task, but the results can be confounding, as disparate datasets fail to add up to a legible and reliable tally on which critical business decisions can depend.

In short, the data is a mess. Without the ability to accurately track current emissions, corporations are unable to meet requirements for ESG reporting and compliance in some countries. And without clear, accurate metrics, decarbonization plans amount to educated guesses, sowing discomfort and skepticism among stakeholders.

1.1.5 Supply Chains

Even without a clear, common metric to guide decarbonization plans, one trend tends to emerge for large multinationals: most of their emissions come from their supply chain, generated by vendors outside their direct control.

On average, those emissions exceed operational ones by a factor of five.[12] There is no looking the other way when it comes to this huge emissions source. The Science-Based Targets initiative,[13] which has swiftly become the global standard for climate targets, calls on companies to include their supply chain in their climate targets if its emissions—referred to as scope 3 emissions—account for more than 40% of the company's overall carbon footprint.

Motivating suppliers to decarbonize is as crucial as it is challenging. No unilateral declaration from the C-suite can easily dictate how the company's vendors operate. And strict vendor requirements that may be unachievable for some suppliers can upset the delicate supply chain upon which the business relies.

8. Leaders Summit on Climate, "Leaders Summit on Climate: Day 1," U.S. Department of State, https://www.state.gov/leaders-summit-on-climate/day-1/.
9. The Energy & Climate Intelligence Unit and Oxford Net Zero, "Taking Stock: A global as-sessment of net zero targets," The Energy & Climate Intelligence Unit, https://ca1-eci.edcdn.com/reports/ECIU-Oxford_Taking_Stock.pdf?mtime=20210323005817&focal=none.
10. The Climate Pledge, https://www.theclimatepledge.com/.
11. Task for on Climate-Related Financial Disclosures, "Support the TCFD," TCFD, https://www.fsb-tcfd.org/support-tcfd/.
12. CDP, "CDP Supply Chain: Changing the Chain," CDP, https://6fefcbb86e61af1b2fc4-c70d8ead6ced550b4d987d7c03fcdd1d.ssl.cf3.rackcdn.com/cms/reports/documents/000/004/811/original/CDP_Supply_Chain_Report_Changing_the_Chain.pdf?1575882630.
13. Science Based Targets, "From Ambition to Impact: How Companies are Reducing Emissions at Scale with Science-Based Targets," Science Based Targets Initiative, https://sciencebasedtargets.org/resources/files/SBTiProgressReport2020.pdf.

1.1.6 Finance

The plummeting cost of renewable energy, in combination with the adoption and integration of smart technology like the internet of things, electric vehicles, and artificial intelligence, has been a major boon for corporate decarbonization, enabling organizations to embrace renewables as a cost-saving measure. However, corporations still face financing obstacles while pursuing their decarbonization strategies. For one, if corporations attempt to finance decarbonization solutions for vendors to reduce their scope 3 emissions, tracking the return on that investment is a challenge; other customers of the vendor could share in the benefit. Additionally, the most meaningful decarbonization measures have high capital requirements with extended payback periods. Corporations therefore often de-prioritize these high impact measures, starting first with lower-cost investments. Often, the intention is to finance the bigger investments with the returns from the smaller. However, this starting-small approach typically sets the organization's decarbonization journey at a pace that is insufficient to meet their targets.

No amount of willpower or external pressure can erase the real challenges companies face on the path toward decarbonization. But best practices around these barriers are slowly gaining traction. Slowly, however, is not ideal given the urgency of climate change. If corporations are going to meet their bold, public pledges, speed of iteration and replication of these best practices are critical.

In this report, we examine emerging roadmaps to success now being implemented by some of the most proactive, climate-forward corporations in the world. The avenues they have identified illustrate a new set of sustainability principles all companies must embrace to achieve success in a decarbonized future—and survive the decarbonizing present.

The importance of these solutions goes beyond the corporate sector. The public sector, the financial sector, the legal sector—organized entities around the globe are still struggling with similar barriers to decarbonization. The relative agility of the corporate sphere in implementing and refining these solutions will have far-reaching implications.

2.0 ACCTORS: Essential Elements to Thrive in a Carbon-Free Future

The emerging successes along corporations' decarbonization journeys reveal certain shared principles; we call them ACCTORS.

Agility: Agile companies understand the dynamics of an evolving business environment and introduce limber, supple working practices. This enables them to quickly pivot toward changing market demands or new regulations.

Circularity: Companies that embrace circularity position their operations toward products as services, and take a holistic view of the value chain.

Connectedness: Connected companies operate in a wider, more intricately integrated ecosystem that enables them to recognize and respond to changes quickly.

Transparency: Transparent companies develop clear, public reporting systems that allow investors, customers, employees, vendors, and partners to understand their climate actions, plans, and positioning.

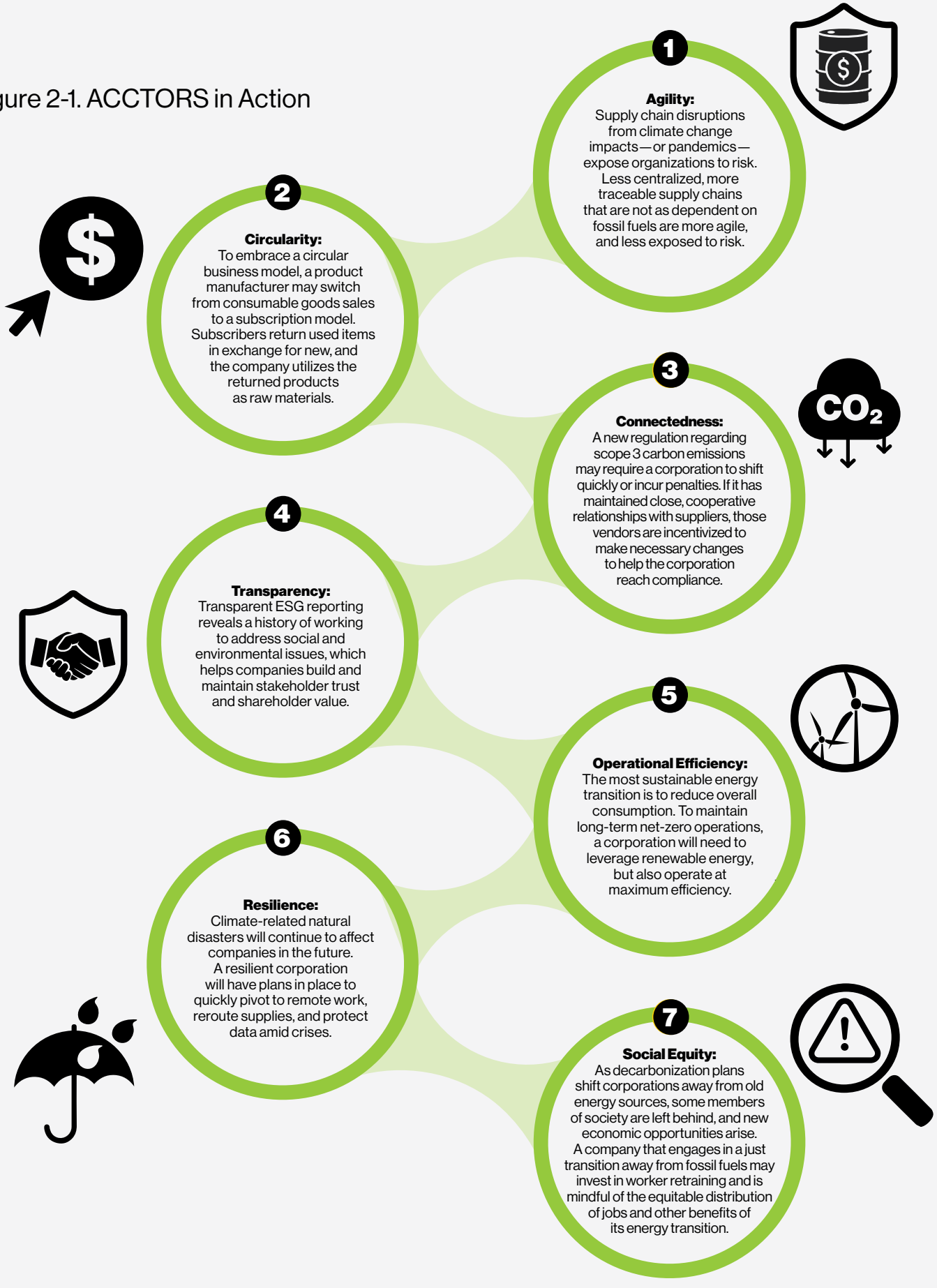
Operational Efficiency: Efficient companies are low impact companies. By deploying cutting-edge technology, businesses can drive out costs, maximize profit margins, and minimize emissions.

Resilience: Resilient companies can respond to climate change impacts and low carbon shocks, whether they occur directly to operations, in the market, or via their supply chain.

Social Equity: Companies committed to social good, from fair treatment of employees to community development, reap the benefits of their investment. As climate change impacts exacerbate social inequities, those organizations that commit to consider and address historic inequalities through their decarbonization actions will position their organizations as leaders.

These elements are essential for corporations seeking to decarbonize now and to flourish in a carbon-free future. By embracing these principles, companies can become significant "actors" in global decarbonization and thrive in the new business environment—where change is a constant.

Figure 2-1. ACCTORS in Action



3.0 Strategies for Navigating the Decarbonization Journey

Though the imperative to act is clear, many companies are restricted in their actions by internal and external barriers, some of which fall outside the realm of their direct control. There are several of these obstacles, each of which requires specialized technical expertise to navigate. Here, we highlight three of these challenges: leveraging data, needing to reduce emissions throughout the supply chain, and obtaining financing.

Corporations that have identified the appropriate expertise to approach these barriers have developed strategies to overcome them. These challenge profiles reveal not only the practical ways companies are tackling barriers to corporate sustainability, but also how the elements of success play a role in the decarbonization journey.

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3.1 Decarbonization Data

A Path Toward Agility, Transparency, and Resilience

The adage "you can't change what you can't measure" comes into stark relief for corporations in the early stages of their decarbonization efforts. Accurate, reliable, common metrics are required to evaluate current carbon emissions and develop mitigation strategies. Unfortunately, the carbon emissions data is typically spread throughout an organization and its supply chain, and lacks a common dataset and data governance. This leads to inaccurate and incomplete data from which to measure and report results.

Few multinational corporations are more profoundly impacted by global decarbonization than industrial manufacturers of products that produce emissions throughout their life cycles. These companies need to decarbonize their operations, achieve emissions reductions in their supply chain, and reinvent their product.

For these industrial organizations, decarbonization doesn't just mean upending the way they make their product, it means transforming the products themselves. It entails, in many ways, an identity change. Such an existential pivot is no small task, particularly while maintaining a thriving business throughout the evolution. The appropriate decarbonization pace and strategies are crucial—and they can be determined only through close analysis of clear, reliable data.

The road to acquiring and analyzing such data, as well as developing the common datasets and governance needed to execute on data-driven decisions, requires a level of maturity, agility, and transparency uncommon among long-established industrial corporations. However, for these organizations, the market for emissions-producing products, such as automobiles and machinery, will vanish in a carbon-free future.

As the inevitability of the Paris Agreement starts reverberating through the business world, these corporations must begin charting out their data-driven path to that future.

3.1.1 Case Study: An Engine Manufacturer Charts a Route to a Carbon-Free Future

Company:

A centennial corporation that produces large-scale diesel engines.

Background:

Investors and clients grew more mindful of their own new carbon emissions targets in response to the Paris Agreement. They began inquiring about more sustainable products, and the company knew it was time to develop and execute a definitive decarbonization plan.

Challenge

Identifying the concrete steps necessary to transition their portfolio of fossil fuel engines to carbon-neutral products while balancing the constraints of the business and market with the pressure to expeditiously reduce emissions.

The specific steps required to gradually turn its portfolio from gray to green—and the appropriate pace of that transition—were unclear. The manufacturer needed to understand its options; to understand options, the team needed data.

That need raised a series of questions:

- What data did they need?
- From where and how would they source it?
- Most importantly: with data from multiple sources, how could they translate disparate datasets into a common metric on which meaningful decisions could be based?

Solutions
Leveraging Data to Set Targets

The engine manufacturer partnered with Guidehouse to sort through these data questions. First, they needed to establish their carbon footprint and climate reduction targets in accordance with the Science-Based Targets initiative. SBTi, a partnership between environmental nonprofit CDP, the United Nations Global Compact, the World Resources Institute, and the World Wide Fund for Nature, has become a reliable global standard guiding climate targets for corporations. Working within the SBT framework was a first step toward organizing around clear, meaningful metrics.

The team needed to decide if they were reaching for an SBT of 2 degrees, fewer than 2 degrees, or 1.5 degrees Celsius. In a perfect world, any business might choose the most aggressive pathway, aiming to set a net-zero target in line with a future in which global temperatures rise no more than 1.5°C. So far, over 500 companies, representing more than $13 trillion in market capitalization, have made this pledge.[1]

But the difference between a 2- and 1.5-degree target can be monumental in terms of operational and financial impacts. Determining how ambitious the organization can be while maintaining profitability requires careful research and consideration. What would it take for a diesel engine manufacturer to set 2- or 1.5-degree targets?

Finding the answers required a deep understanding of current market conditions and anticipated market changes in the various regions where clients are located. It also necessitated a good grasp of current technological capabilities as well as the costs and timelines associated with developing technologies.

For example, the company knew that the engines in their future portfolio would be a mix of electric and those that utilize liquid fuels, such as hydrogen. But while the technology to create hydrogen fuel certainly exists, the sustainable infrastructure required to generate hydrogen fuel at an industrial scale does not. In order to know how quickly hydrogen-fueled engines could become a part of their portfolio, they needed to understand how quickly the technology and infrastructure to enable that product would be available. This type of analysis and forecasting would need to happen repeatedly to determine multiple timelines for various factors.

Ultimately, the company and Guidehouse were able to gather, organize, and analyze the needed data to determine that the middle path—the below-2-degree target—is the most ambitious yet achievable plan.

This data also allows the manufacturer to reach new levels of transparency with stakeholders. Every client and investor clamoring for the lowest possible emissions products as quickly as possible will need to know why the company chose a mid-range SBT. Being able to demonstrate how aggressive their target actually is when situated in context helps the corporation explain its sustainability value to customers and investors. With this increased level of transparency, the corporation and its stakeholders are embarking on the company's decarbonization journey together.

1. Science Based Targets, "BUSINESS AMBITION FOR 1.5°C," Science Based Targets Initiative, https://sciencebasedtargets.org/business-ambition-for-1-5c.

Building a Data-Based Roadmap

Once targets were established, the corporation worked with Guidehouse to develop a roadmap for decarbonization of their production and supply chain. The map is based on the technological opportunities in the market for building a virtually brand-new supply chain, as well as a keen understanding of the implications of those changes on production, costs, and emissions. Again, this presented a data challenge: within a complex organization and its sprawling value chain ecosystem, what decarbonization opportunities existed? What would the financial and environmental implications of each be?

The corporation needed a marginal abatement cost curve to evaluate and prioritize the opportunities by expense, potential ROI, and emissions reduction. This required a detailed inventory of emissions reductions so each could be ranked within that cost curve. Once again, this information would come from a broad range of sources and need to be integrated into a single, clear metric.

Once this data was collected and translated into a marginal abatement cost curve, decision-makers were able to create a clear decarbonization roadmap. This roadmap also includes a governance structure to facilitate the target achievement process across company divisions over the decades ahead. For clients and investors wondering if the diesel engine manufacturer would be capable of delivering the sustainable products they will need in a decarbonized future, the corporation now has a clear and affirmative answer, supported by data: yes.

How ACCTORS Overcome Data Challenges

This industrial corporation's path to overcoming its data challenges was a crucial leg of their decarbonization journey. It enabled them to embrace several key components of a successful multinational corporation in a carbon-free future:

Agility: The company has now built agility into its route to decarbonization. By understanding the data, it has eliminated the unknowns and generated a reliable, informed, and flexible plan to evolve.

Transparency: Transparency is now part of its value proposition. Thanks to its streamlined and clear metrics, stakeholders can now track the organization's progress, contextualize its limitations, and continue to understand the value the company offers them now and into the future.

Resilience: Organized, clear, understandable data prepares the manufacturer for an unpredictable future. Now that it has become more adept at exercising its agility, the corporation can continue to re-source, re-evaluate, and re-adjust as markets, regulations, and conditions change in the ever-evolving future.

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3.2 Supply Chain Decarbonization

A Path Toward Connectedness, Transparency, and Efficiency

On the world's collective journey toward a carbon-free future, supply chain emissions are both a puzzle and an opportunity. The opportunity is significant. If key suppliers to 125 of the largest corporate purchasers increased their use of renewable electricity by 20%, this would eliminate a gigaton—one billion metric tons—of emissions, according to CDP.[1]

The puzzle lies in unlocking that opportunity. Though multinational corporations are setting bold climate targets, it will be, in most cases, impossible to reach those goals on their own. With the majority of companies' emissions typically coming from their global supply chains, they must find ways to motivate their partners, vendors, and transportation networks to decarbonize without disrupting the delicate connections on which their businesses rely.

Unlike many decarbonization challenges, the supply chain isn't simply a matter of technology, financing, and other technical issues; it's a matter of relationships.

But delicate as they may be, business relationships can be a powerful motivator for emissions reductions as well.

1. CDP Media, "Supply chains hold the key to one gigaton of emissions savings, finds new report," CDP, https://www.cdp.net/en/articles/media/supply-chains-hold-the-key-to-one-gigaton-of-emissions-savings-finds-new-report#1

3.2.1 Case Study: McCormick & Company Supplier Engagement Program

Company:

McCormick & Company.

Background:

In 2021, Guidehouse announced a new partnership with three major multinational food and beverage corporations — the Supplier Leadership on Climate Transition collaborative (Supplier LoCT), an initiative to help engage suppliers in climate action and solutions.

Through the collaborative, the organizations will mentor and train suppliers in emissions reduction strategies and recognize their achievements. In turn, supplier progress will accelerate the ability of the Supplier LOCT partner corporations to deliver against their individual science-based targets to reduce greenhouse gas (GHG) emissions in their full value chains. These targets were set to align with the overall goals of the Science Based Targets initiative and RE100 to limit global warming and be consistent with the established goal of the 2015 Paris Agreement.

Challenge

In 2019, McCormick & Company, a global leader in flavor, started exploring how to best engage its suppliers to achieve its new scope 3 greenhouse gas (GHG) emissions target. McCormick identified the climate and greenhouse gas impact of its top 80 suppliers, then interviewed five suppliers to determine how to appropriately support them in their climate maturity journey.

McCormick learned important insights from the interviews including:

- Additional questionnaires create reporting fatigue and are not the most effective means for driving climate change initiatives (several suppliers reported to CDP and other initiatives already) and,
- suppliers prefer a collaborative approach to sharing product specific data and reducing value chain emissions.

Solutions

With these insights, McCormick designed and launched a supplier engagement strategy in 2020. Key elements of the company's supplier engagement strategy include two annual meetings with top 10 suppliers to collaborate on product- specific data sharing and reducing full value chain emissions. Several suppliers were able to provide product-specific emissions for high impact scope 3 categories, which has led to better accuracy of McCormick's scope 3 footprint.

An important step for McCormick was joining the Supplier Leadership on Climate Transition (Supplier LOCT) as a launching member with several other major food and beverage brands. The Supplier LOCT knowledge platform helps McCormick's suppliers create an emissions footprint, adopt resolute climate targets and GHG abatement measures, and disclose and reduce emissions.

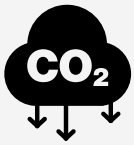
Continuous Improvement

McCormick developed an approach to continuously reduce Scope 3 emissions. Initially, it followed the scope 3 GHG Protocol and calculated scope 3 purchased goods and services emissions-based ingredient volumes and emission factors from lifecycle assessment databases and scientific studies. Once its suppliers can deliver product or ingredient specific emissions, the company can replace the emissions-based ingredient volumes with more accurate supplier ingredient emissions, thereby improving the accuracy of its scope 3 footprint.

How ACCTORS Overcome Supply Chain Challenges

As corporations work to decarbonize their supply chains, it's imperative that they develop three factors that are necessary to thrive in the carbon-free future they are helping to realize:

Transparency: Corporations with rigorous transparency practices set a precedent for their suppliers. As suppliers follow suit, corporations can more productively partner with them to reduce emissions in their supply chains.



Connectedness: Engaging with suppliers allows companies to reap the benefits of deeper relationships with important business partners. In a quickly- evolving business environment, these relationships will provide value as needs for agility increase.

Operational Efficiency: Forming coalitions to scale up supplier engagement helps corporations efficiently manage supply chain decarbonization. Given the urgency of climate targets, efficiency is crucial to success.

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3.3 Financing Decarbonization

A Path Toward Agility, Efficiency, and Resilience

Brilliant decarbonization plans can grind to a halt when the question of financing arises. Often the highest impact measures for reducing emissions have the highest capital requirements and extended payback periods—and other high impact measures have no direct return on investment whatsoever.

Corporations often begin with the low hanging fruit: measures with low capital requirements. The problem with this approach is that the fruits on this particular tree aren't all of equal value. While certain behavioral and operational measures may be easier to finance, they tend to reduce fewer emissions. Higher cost measures are needed to achieve emissions targets. As a result, the corporation's entire decarbonization journey embarks at a slow pace—producing a rate of progress that would likely derail the company's strategy.

Timing is critical to decarbonization plans. But the degradation of Earth's ecosystem isn't aligned with the finance department's schedule. Investors, customers, and regulators are therefore ramping up the pressure to decarbonize and making public commitments to climate targets. Any residual tolerance for slow progress is vanishing. Further, the faster an organization can become less dependent on fossil fuels, the less vulnerable they are to risk from climate change impacts and low carbon shocks, making them more resilient amid a quickly- evolving business environment.

Companies need financial solutions that enable a cost-neutral or profitable implementation of their emissions reduction measures in a timely fashion. Better yet, they need their financial solutions to help accelerate the pace of their decarbonization journey.

3.3.1 Case Study: Logistics Provider Advances Decarbonization with Unconventional Financing

Company:

A global logistics provider with 140 ports around the world.

Background:

The company wanted to quickly advance their value proposition for customers looking to reduce supply chain emissions. It set ambitious emissions reduction goals of 40 to 50% by 2030. When calculating anticipated growth, the target pace in emissions reductions was an aggressive 10% each year.

Challenge

To achieve such ambitious goals, the logistics provider needed to prioritize emissions reduction measures with high capital requirements and high emissions reductions. However, many of these investments have a five- to 15-year payback period, and others have no return on investment at all. Structuring the financing to pursue these measures immediately seemed impossible.

For example, one high impact measure with an extended payback period was replacing equipment at all 140 ports. However, the vast investment was too cost-prohibitive to pursue right away. To meet its goals and remain financially solvent, the company would have to rethink its operations and how it financed major sustainability investments.

Solutions
Keep Low Capital Investments on the Balance Sheet

To determine the best financial path forward, the global logistics company partnered with Guidehouse. The first thing it learned was the instinct to pursue low hanging fruit isn't wrong—but it's just one part of the financial picture.

Measures with low capital requirements can be pursued immediately and kept on the corporation's balance sheet. These can include behavioral measures that create operational efficiencies. The financing can be orchestrated by centralized activities such as asset management.

One way to approach this on-balance-sheet financing is through a green revolving fund. As the funded portfolio of projects and programs generates savings from reduced energy costs, the savings go back into the green revolving fund. Another approach is through green bonds. This is an increasingly popular option, as the green bond market has grown from near zero in 2012 to more than $282 billion in 2020.[1] Some companies are even issuing "SDG-linked" bonds, which are connected to the United Nations' Sustainable Development Goals.

Move High Capital Investments Off the Balance Sheet

Dealing with the measures for high capital requirements is where the logistics company needed to get innovative and agile. Specifically, it needed to find a way to get more energy-efficient equipment into all 140 ports as quickly as possible. In collaboration with Guidehouse, the corporation explored off-balance-sheet financing options for these major investments.

Generally, such options fall into three categories:

- **Energy Savings Agreement:** With an ESA, a third party funds 100% of the project cost. Subsequent repayment is based on the realized energy savings. The third party takes the titles to the energy efficient equipment and pays for maintenance costs until the repayment is complete.
- **Leasing Platform:** Through this approach, corporations rent energy efficient equipment, which can include vehicles, HVAC equipment, and lighting, among other items, without purchasing it outright. The rental payments are treated as an operating expense and are tax deductible. At the end of the lease, customers can extend the lease, or purchase or return the equipment.
- **Special purpose vehicles:** Companies can set up a separate entity, or SPV, to finance the equipment as an off-balance-sheet investment. Local SPVs guarantee business continuity.

1. Jennifer Laidlaw and Francis Garrido, "Net-zero emission targets, new US ad-ministration to drive green bond issuance," S&P Global Market Intelligence, https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/net-zero-emission-targets-new-us-administration-to-drive-green-bond-issuance-62540438.

The global logistics company opted for the SPV route. It created an entity that would bundle the equipment needs of all 140 ports and purchase more efficient, better-performing equipment. The new entity then leases the equipment to each port, so the investment stays off the logistics company's balance sheet. While this approach might be more intuitive for an enterprise wanting to finance vehicle equipment, as in this particular case, it's also worth noting that this approach can be viable for, as an example, a food and beverage company looking to finance more efficient, even potentially pro-circularity operations equipment, such as smart manufacturing technology.

These off-balance-sheet solutions are ideal for financing high impact measures with high capital requirements because the anticipated ROI mitigates the risk. These measures result in cost savings from day one, making the funds for debt or lease payments immediately available.

Finance No-ROI Investments with Savings

Finally, to maximally accelerate a company's decarbonization journey, corporations must address investments with high environmental impact but no direct return on investment as quickly as possible. This is key to the optimal vision for a corporation's decarbonization journey: high cost measures, low cost measures, and high-impact measures with no ROI should not be prioritized one above the other, but pursued concurrently.

It may sound unfeasible. However, the combination of immediate investment in low cost measures and off-balance-sheet financing of measures with high returns creates a funding structure for the measures without ROI.

For example, Dutch airline company KLM's climate strategy focused on sustainable aviation through bio-jet fuel. KLM first created the entity SkyNRG to develop the fuel from sustainable raw materials. It then was able to finance a bio-jet fuel factory by selling certificates for the use of the fuel.

How ACCTORS Overcome Financing Challenges

The global logistics provider had to decide how to prioritize its decarbonization investments in such a way that it accelerates emission reductions while remaining cost-neutral or even generating profit. The answer involved embracing unconventional financial solutions that allowed the company to pursue all measures concurrently. The result is not only a maximum reduction of emissions at an optimal pace, but a company better positioned for a carbon-free future via three significant elements:

Agility: Decarbonization investments require corporations to think beyond the typical payback period of two to three years. These are long-term investments with long-term implications—and they have equally long-term financing horizons. Corporations like the logistics company must become agile enough to incorporate longer-term thinking into their financial plans.

Efficiency: Efficiency is a central tenet of decarbonization and thriving in a carbon-free future. The global logistics provider placed an appropriate value on increased efficiency by making the investment necessary to accelerate the implementation of a more efficient, climate-forward fleet of equipment.

Resilience: More efficient equipment gives the logistics company a decreased reliance on fossil fuels, and a stronger value proposition for both customers and investors. This builds resilience into the company in an increasingly volatile business environment.

4.0 Preparing for an Interconnected, Carbon-Free Future

Conclusion

The decarbonization of the business world is both a collective journey undertaken as a corporate community and an often lonely and puzzling path for individual companies. Connectedness is not simply an essential element for each multinational corporation, but for the entire business world. The more connected, equitable, and transparent the global business environment becomes, the more agile, efficient, circular, and resilient companies across all industries can be.

Senior decision-makers of multinational corporations are awash with reasons and motivations to decarbonize. All that is left to do is to act. But navigating a complex web of challenges, changing regulations, and transition risks are monumental tasks. By embracing the ACCTORS elements, understanding the emerging success strategies, and leaning on experts with the technical expertise to implement decarbonization strategies, companies can maintain a continuity of business while taking the steps necessary to achieve sustainability and thrive in a carbon-free future.

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About Guidehouse's Energy, Sustainability, and Infrastructure Segment

With more than 700 consultants, Guidehouse's global Energy, Sustainability, and Infrastructure segment is the strongest in the industry. We are the go-to partner for leaders creating sustainable, resilient communities and infrastructure, serving as trusted advisors to utilities and energy companies, large corporations, investors, NGOs, and the public sector. We've solved big challenges with the world's 60 largest electric, water, and gas utilities; the 20 largest independent power generators; five of the 10 largest oil & gas majors; the 20 largest gas distribution and pipeline companies; European governments; and the US federal government's civilian agencies involved in the country's land, resources, and infrastructure. We combine our passion, expertise, and industry relationships to forge a resilient path toward sustainability for our clients. We turn vision into action by leading and de-risking the execution of big ideas and driving outcomes for our clients that enable them to reach their ambitions through transformation. For more information, please visit www.guidehouse.com/esi.

About Guidehouse

Guidehouse is a leading global provider of consulting services to the public and commercial markets, with broad capabilities in management, technology, and risk consulting. We help clients address their toughest challenges and navigate significant regulatory pressures with a focus on transformational change, business resiliency, and technology-driven innovation. Across a range of advisory, consulting, outsourcing, and digital services, we create scalable, innovative solutions that prepare our clients for future growth and success. The company has more than 10,000 professionals in over 50 locations globally. Guidehouse is a Veritas Capital portfolio company, led by seasoned professionals with proven and diverse expertise in traditional and emerging technologies, markets, and agenda-setting issues driving national and global economies. For more information, please visit www.guidehouse.com.

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