

The background of the slide is an aerial photograph of a vast tulip field. The rows of tulips are in various stages of bloom, creating a vibrant pattern of colors including green, yellow, orange, red, and brown. In the distance, a single white wind turbine stands prominently against a dark, overcast sky. The overall scene conveys a sense of sustainable agriculture and clean energy.

How to Use Data to Develop a Decarbonization Strategy That Drives Business Value

As organizations develop their sustainability programs, each journey will be different, but all have common themes and challenges. One challenge that we hear often is about collecting and communicating carbon emissions data and identifying and acting on opportunities.

Fortunately, across different organizations there are common approaches to data-driven decarbonization strategies. We've identified four key approaches and had the opportunity to employ each one recently with one of our clients, a food processing company looking to mature its sustainability reporting and improve its decarbonization strategy.



COMMON APPROACHES TO DATA-DRIVEN DECARBONIZATION STRATEGIES



1. Align and define your strategy.
2. Build a strong foundation with accurate and reliable data.
3. Identify quick wins and develop the business case for investing.
4. Build a long-term strategy that is aligned with broader business goals.



1. Align and define your strategy.

The best place to start is working with company leaders to identify their reasons for investing in sustainability and their desired outcomes.

In this case, our client wanted to manage climate risk and highlight its successes supporting sustainable agriculture with its suppliers. However, these objectives were not fully integrated with broader business strategies like managing operating costs and developing sustainable products to meet demand from customers who are becoming more conscious about sustainability.

We interviewed leaders across the organization to understand their commercial, growth and product development strategies; cost drivers; and other important factors, such as strategies for attracting talent and sustainable sourcing. We did the same with customers to help understand what was driving their purchasing decisions. This information gathering helped the food processor refine its program to align with cost management, growth and product development strategies.

Building alignment and shared ownership positioned teams to effectively prioritize and coordinate across business functions as they worked to implement an integrated strategy. Identifying and aligning the business case allowed us to move to the next stage — obtaining more detailed, reliable data to serve as the foundation for a decarbonization strategy.





2. Build a strong foundation with accurate and reliable data.

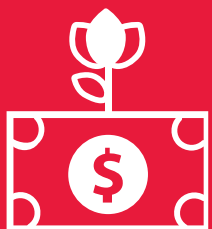
After aligning priorities around a decarbonization strategy, company leaders can focus on opportunities to help improve the depth of emissions data, streamline data collection, and enhance analysis to better inform strategy and decision-making.

Our client's sustainability program focused on emissions disclosures. The process was generally manual, and data was difficult to collect from the organization's various processing locations that are run by different general managers. The manual and decentralized nature of data collection and processing limited the accuracy, depth and how often the data could be reported. Consequently, it was difficult to identify decarbonization opportunities, justify investments and measure the impacts of decarbonization investments.

We developed a data lake to centralize all the data in a single location and developed standard models to improve consistency of how emissions are calculated, tagged and consolidated from process manufacturing at each facility. To reduce the burden of processing the data, this structure leveraged solutions like Arcadia and automation tools like power apps that automate the data collection from the source systems and vendors. This enabled more regular and consistent reporting. We also recommended normalizing data by product quality produced for each product type. This helped us understand which locations were further ahead in their decarbonization efforts, share best practices and target investment.

Using a greater depth of data to develop a decarbonization roadmap can help a company reduce operating costs, support new product development strategies and improve its sustainability profile.





3. Identify quick wins and develop the business case for investing.



Better emissions measurement and modeling can help point to quick wins and value creation opportunities.

For example, when working with our client in the food processing business, we observed that the company was using simple emission factors that were generalized across larger electric grid regions. We recommended updating the model to use the emission factors at the point where the processing plants interconnect to the grid. We identified that most of the processing locations were in areas with a power generation mix below the regional average due to local solar and wind generation.

We then determined the primary driver of energy use. Energy use in one of the plants was driven by the heating of water to clean raw food materials and process them into final products. We identified opportunities to improve the strategy to reduce operating costs and emission factors. This involved heating water with thermal solar rather than using natural gas. The equipment could be retrofitted into the processing plant's existing boiler, limiting investment cost.

The BDO team identified incentives to fund the project and a developer that leased and operated the solution at a lower price than the current cost of fuel. This helped to ensure price stability and reduced the plant's emission profile. The project has a return on investment (ROI) of less than a year and eliminated the need to deploy significant capital up front due to the tax credit and alternative financing strategies that the BDO team structured and implemented.



4. Build a long-term strategy that is aligned with broader business goals.

Stakeholder ownership, strong data and quick wins give sustainability leaders opportunities to connect to their organizations' broader goals and use those to build long-term sustainability strategies.

For our client, it meant continuing to identify other decarbonization and sustainability-focused projects for water and waste management. All the projects require strong support from the operations, commercial and finance teams to execute.

Investing in a strong data infrastructure positioned the food processor to be able to tag and allocate the decarbonization and purchase carbon offsets to neutralize the carbon profile of its products. Now, it can bring these products to market and test customer reaction without reengineering its entire sourcing and processing strategy.

While solutions will look different for every company, strong data gives organizations the opportunity to model multiple solutions and focus on those that add the most value.

BDO collaborates with companies on their climate mitigation efforts to create practical, holistic strategies that can simultaneously drive commercial and environmental success. [Contact us](#) to learn more about our [Climate Mitigation services](#) or to schedule an assessment.

CONTACT US



RIZWAAN SAHIB
Managing Director
Sustainability & ESG Climate Services
rsahib@bdo.com



KAREN BAUM
Managing Principal
Sustainability & ESG
kbaum@bdo.com

At BDO, our purpose is helping people thrive, every day. Together, we are focused on delivering exceptional and sustainable outcomes — for our people, our clients and our communities. Across the U.S., and in over 160 countries through our global organization, BDO professionals provide assurance, tax and advisory services for a diverse range of clients.

BDO is the brand name for the BDO network and for each of the BDO Member Firms. BDO USA, P.C, a Virginia professional corporation, is the U.S. member of BDO International Limited, a UK company limited by guarantee, and forms part of the international BDO network of independent member firms: www.bdo.com

Material discussed in this publication is meant to provide general information and should not be acted on without professional advice tailored to your needs.

© 2023 BDO USA, P.C. All rights reserved.

