

# Global Biopharma Turns to ZAETHER to Drive Sustainability Plan

## The situation

With the impact of climate change being felt increasingly around the world, many companies have embarked on sustainability initiatives intended not only to reduce their carbon footprint but also to save costs, attract investors, strengthen competitiveness, and meet regulatory requirements.

One such company is a global biopharmaceutical firm on the S&P 500 specializing in antiviral drugs. The company's leaders had set ambitious goals to reduce greenhouse gas emissions, minimize water usage, reduce waste, achieve carbon net-zero operations, and fully transition to renewable energy at its development and production sites by 2030. To meet that target date, the firm needed to implement a sustainability plan in short order.

## The challenge

The effort was to begin with an energy assessment and analysis of the company's U.S. research and production facilities. This involved delving into historical data to gain insights regarding energy and water consumption patterns, costs, and the carbon footprint. The objective was to pinpoint areas of inefficiency and uncover opportunities for improvement. This initial phase would encompass the following steps:

- Data integration
- Data visualization
- Data exploration
- Raising awareness
- Summary statistics of metrics and KPIs

Upon completion, these steps would lay the groundwork for subsequent phases, such as predictive and prescriptive analytics to gain a deeper understanding of what is likely to occur and suggest appropriate action. This would involve forecasting energy usage and predictive maintenance to avert downtime, production losses, and unexpected costs. Additionally, it would provide actionable insights and recommendations to prevent the recurrence of issues.

A 70,000-square-foot development and production facility in California was chosen for the first analysis. The methodology used there could then be replicated at the company's other sites.

An internal sustainability working group has been tasked with supporting the project's data collection. [The GHG Protocol Corporate Standard](#) categorizes a company's greenhouse gas emission reporting in three scopes. Scope 1 (all direct greenhouse gas emissions) and Scope 2 (indirect emissions from consumption of purchased electricity, heat, or steam) are obligatory for reporting. Scope 3 (indirect emissions from across the enterprise value chain) is voluntary and presents challenges in monitoring due to issues with data quality, availability, and reliability. To address this, the company engaged a third-party platform to assist in data collection, governance, and validation across all three scopes.

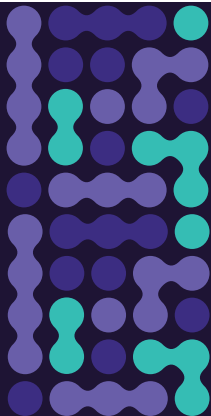
However, due to IT complexity and resource shortages, the company found it challenging to gather the breadth and depth of data required to perform the sustainability analysis. The project leaders then sought an external partner to perform the work and turned to ZAETHER, recognizing ZAETHER's subject matter expertise in energy sustainability and its profound knowledge of the life science industry to ensure the successful execution of the project.

## The solution

ZAETHER's team developed the data and analytics roadmap and successfully executed the first two phases in analytics, encompassing the energy assessment and predictive analytics. These two phases included:

- Data integration from multiple data sources
- Analysis of historical data to get insight into energy usage patterns, cost, and carbon footprint
- Identification of areas of inefficiency and opportunities for improvement
- Identification of usage and cost anomalies
- Monitoring of equipment energy and water usage
- Monitoring of asset health
- Calculation and tracking of emission output
- Forecasting of energy and water usage

As the team moves forward in the analytics phase, subsequent steps will involve asset failure prediction and equipment predictive maintenance. Additionally, the plan includes tracking progress against sustainability goals and implementing continuous monitoring measures.



## The results

With the implemented analytics solution, the company has gained an approximately **65%** enhancement in visibility and clarity in its energy consumption and spending. This capability ensures consistency in energy management practices across all sites. Furthermore, it empowers the organization to explore investments in more energy-efficient technologies, a transition to renewable sources, as well as fostering awareness throughout the company.