The Numbers Add Up:

How Analytics Can Play a Key Role in Corporate Sustainability

Kelsey Polansky
Supply Chain Manager &
Sustainability Champion

The corporate world today has bought into sustainability far more than it has over the past years and decades. A sustainability survey conducted in 2022 found that 96% of the top 250 global companies report on their sustainability efforts, compared to only 18% in 2002.
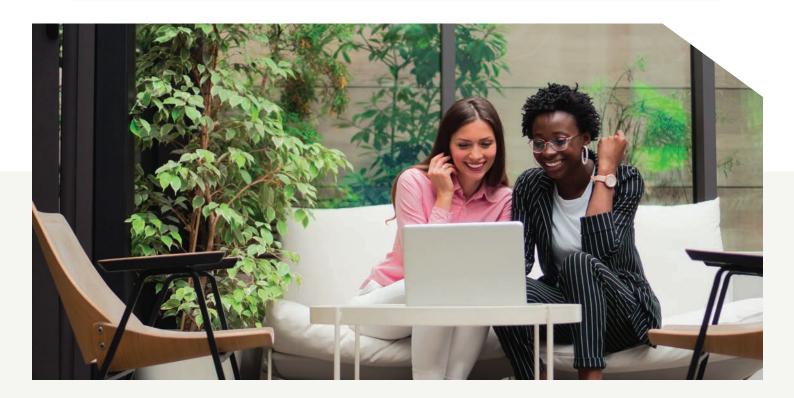
WHY ESG CONTINUES TO BE IMPORTANT FOR CORPORATE SUSTAINABILITY

The increasing importance of Environmental, Social, and Governance (ESG) factors is a major driving force behind this shift. Stakeholders, including investors, employees, consumers, customers, and regulators, increasingly demand that companies demonstrate their progress toward sustainability.

In response, the ESG ecosystem has emerged, comprising many players, including standard setters, framework providers, and assurers, all working to support companies in their efforts to become more sustainable. This has provided structure and direction for companies to measure and disclose their progress; however, companies often lack the data and digital maturity for such complex processes.

Corporations do not just pursue sustainability to appease stakeholders. It is a long-term value generator, as proven by companies with a strong ESG record having higher returns on investment (ROI) compared to those who don't.

THE MESSAGE IS CLEAR: ESG has transitioned from being a mere trend to becoming a business imperative that drives growth, creates long-term value, and demonstrates a company's commitment to sustainability.

THE GROWING ROLE OF ANALYTICS IN CORPORATE SUSTAINABILITY

The rise of ESG has elicited the need for accurate and actionable data to inform and guide sustainable business practices. The magnitude of ESG data generated across an organization and its supply chain can be challenging. As a result, companies struggle to obtain sufficient visibility into all of this data, and even fewer can extract the right insights from the data to take productive action.

Today, **sustainability analytics are increasingly being used as an enabler for corporate sustainability** to help companies understand their ESG data and articulate the narrative it supports.

Using sustainability analytics, a company can understand why they are not compliant with regulations or falling short on an ESG goal (e.g., emission reduction). Additionally, it can uncover possibilities, such as expediting an ESG objective or introducing new sustainability initiatives. And, if applied correctly, analytics can even transform an organization with average sustainability performance into a leader in its field.
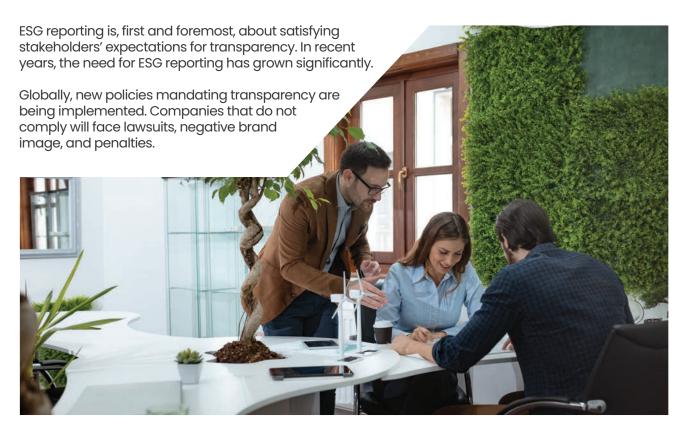
How a corporation utilizes sustainability analytics depends on its objectives. This might vary based on a company's sustainability journey and its desired level of sustainable maturity. Consequently, the company's use of sustainability analytics can be categorized into three groups:

2

Racing to the finish line- achieving ESG goals

3

Striving to new heights- integrating sustainability into core operations to create a competitive advantage

1

Checking the box- complying with regulatory requirements

In the subsequent section, we will focus on the objectives of these categories and how sustainability analytics capabilities can be leveraged.

CHECKING THE BOX –
COMPLYING WITH REGULATORY REQUIREMENTS

ESG reporting is, first and foremost, about satisfying stakeholders' expectations for transparency. In recent years, the need for ESG reporting has grown significantly.

Globally, new policies mandating transparency are being implemented. Companies that do not comply will face lawsuits, negative brand image, and penalties.

For instance, the newly proposed EU deforestation due diligence law will require companies to demonstrate that their supply chains on commodities like cocoa and soy are not linked to deforestation. Companies that do not comply might face fines of up to four percent of their turnover in an EU country. Many of these upcoming regulations (e.g., SEC, CSRD) have ESG risk disclosure requirements.

Sustainability analytics can help identify risks by leveraging AI, data science, and other business insights gathered over time. The results can be aggregated into a concise view for disclosure preparation and mitigation action.

Sustainability analytics can also enhance a company's resilience within the ever-changing ESG landscape by identifying areas for improvement and proactively addressing new regulations. In addition, well-trained AI can build on analytics and suggest changes to the organizational strategy that will help meet revised sustainability goals. For example, a company can use AI to track performance against a sustainable sourcing goal while monitoring risks that inform updates to the company's sustainable sourcing certification timeline. With this capability, the company has more visibility and agility, and it can provide more accuracy and transparency in its disclosures, reducing exposure to non-compliance, litigation, and negative publicity.

RACING TO THE FINISH LINE –
ACHIEVING ESG GOALS

Companies with adequate and compliant transparency can use sustainability analytics to drive progress toward achieving ESG goals. This requires the right data in the right format.

Inconveniently, sustainability data frequently sits in several silos across an organization and is both structured and unstructured. Some of this data is available in real-time, while some are collected in batches.

The intricacies of sustainability data can pose a challenge for companies seeking to progress toward their ESG goals. After all, an ESG goal is only as good as the company's ability to achieve it. AI and data science can help prioritize sustainability initiatives based on opportunities identified over time, enabling companies to focus on the activities that will have the most impact. For instance:

Scenario analysis allows companies to inspect several potential activities to determine where efforts are best spent in the near- and long-term. These capabilities enable companies to be flexible and resilient across various future scenarios.

Even external climate and historic energy data can reveal a trend toward emission increases at a particular site.

With this information, the company can prioritize that site for introducing renewable energy sources so future increases in emissions are avoided, keeping decarbonization goals on track.

STRIVING TO NEW HEIGHTS –
INTEGRATING SUSTAINABILITY INTO CORE OPERATIONS TO CREATE A COMPETITIVE ADVANTAGE

Best-in-class companies strive to embed sustainability into the overall operations of an organization. These companies see beyond pressures and obligations, understanding sustainability as a value generator. They can fully tap into this value generation by incorporating sustainability into operations.

Prescriptive analytics is one of the many capabilities that may be leveraged to improve corporate performance by including sustainability requirements.

If a grocery store wants to reduce food waste in its inventory, for instance, it may use prescriptive analytics for inventory management to optimize perishable food orders from suppliers and better align shelf-life products with consumer demand. Here, analytics prioritize the sustainability criterion of reduced food wastage, but the store will also save money and improve sales by reducing food wastage.

Another useful application is in distribution. Truckers transporting goods have a specific driving style, and how the vehicle is driven affects the level of wear on vehicle components such as tires. The placement of interconnected sensors in strategic areas on the truck can collect data on driving style and vehicle wear. This data can be analyzed to determine how to optimize vehicle operating parameters to save fuel and decrease vehicle maintenance. This results in both financial savings and reduced emissions for the company.

By applying sustainability analytics in such a way, companies can leapfrog to best-in-class sustainability maturity, disrupting their sector for the better.

ESTABLISHING A STRONG DATA AND DIGITAL FOUNDATION FOR SUCCESSFUL SUSTAINABILITY ANALYTICS IMPLEMENTATION

A valid data and digital foundation is critical to successfully implementing sustainability analytics. This entails identifying key indicators, collecting the right data, and setting up data lakes. Once complete, the structured data may be translated into a customized visual format where SQL analytics, data science, and machine learning can be applied.

For sustainability analytics to do its job, data standards and governance must exist. A system of policies, rules, processes, and measures must be in place to govern the use of data and ensure it is trustworthy, consistent, and handled properly.

Additionally, there must be cooperation between different functional teams and between business partners throughout the supply chain. Through collaboration, holistic data visibility and analytic actionability are feasible.

CLOSING WORDS

Regardless of where your company is in its sustainability journey, analytics can be used to support your current needs and future aspirations.

At Tredence, we have hands-on experience in analyzing and optimizing all facets of value chains, and our team of leading data scientists and data engineers can provide you with the analytics support you need to advance your sustainability initiatives.

Kelsey Polansky
Supply Chain Manager &
Sustainability Champion

Kelsey comes from management consulting experience in Supply Chain Sustainability and ESG/Sustainability. She has served many Fortune 500 clients across a variety of industries, but most of her experience is working with CPG, Life Science, and Industrial Manufacturing companies.

Kelsey has a large breath of sustainability strategy and ESG reporting experience. Her work has ranged from setting clients' sustainability strategy and ESG goals to auditing ESG metric reporting processes. She has also helped clients with integrating ESG into ERM frameworks, as well as designing ESG governance and organizational structures.

Today at Tredence, Kelsey is helping clients leverage data and digital solutions to achieve their sustainability ambitions. Tredence's leading data science and AI solutions allow her to help clients improve ESG performance by enabling them to process and analyze data across a wide range of ESG-related factors – resulting in actionable, data-driven insights. Kelsey's experience in supply chain sustainability and ESG reporting allows her to make sure the data and digital solutions implemented are regulation compliant, aligned with the client's ESG reporting needs, and drive long-term value across the client's organization.

Want to know more about us?

Please visit: www.tredence.com

Follow us at: