

Viewpoint: The importance of sustainability metrics to sustainability management

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Every student of management knows that performance measurement is an essential element of effective management. To paraphrase the great management scholar Peter Drucker, you can't manage something if you

can't measure it.

Without measures, you can't tell if management's actions are making things better or worse. Some managers don't believe this. They believe their decisions should be guided by experience, judgment, and gut instinct. My view is that guessing is not a good substitute for data. Experience and judgment are required to interpret data, but without performance data, they cannot be applied to the reality an organization confronts.

This brings me to sustainability metrics: a new field of study still being solidified. We are in the early days of developing these measures. Originally, we emphasized environmental sustainability and those metrics that focused on the physical inputs to an organization and the pollution created by the organization's work processes, supply chains, and outputs. These elements lend themselves to hard measures such as:

- The source, amount, and efficiency of energy, material, and water use.
- The organization's impact on biodiversity and air quality, and its effluent discharges, including [greenhouse gas emissions](#), and;
- Other measures of the physical dimensions of environmental sustainability.

Over the past decade, we have developed increasingly sophisticated measures and methods of estimating greenhouse gases. In Columbia's Master of Science in Sustainability Management program, we even offer a course in greenhouse gas measurement, along with another analytic course in life cycle analysis. These courses focus on the measurement of the physical dimensions of sustainability.

But the definition of sustainability management has expanded over the past decade or so and has come to include non-environmental factors.

We have added [social impacts](#) and organizational governance to the definition of sustainability. This is sometimes called ESG (Environmental, Social, and Governance) management. In addition to environmental impacts, sustainability management now includes diversity, equity, and inclusion and the relationship of the organization to the communities it operates in.

Organizational governance focuses on the diversity of life experiences and viewpoints present in corporate boardrooms and management. This is often translated into measures of race, gender, and ethnicity, although I believe these demographic measures are inadequate. Diversity should not only be seen as the personal characteristics you are born to but also as the life experiences of individual managers, staff, and board members.

Community impact can be operationally defined as the relationship and trust the organization has with its host communities. These non-physical factors present challenges to measurement that make it more complex to measure and manage than environmental sustainability. Nevertheless, the organization's ability to compete in a global, brain-based economy depends on its ability to attract the best and the brightest people to the organization.

Any biases based on race, gender, religion, or nation of origin limit the pool of talent the organization can attract and can impair its competitiveness. Similarly, organizations that do not cultivate their host community can find themselves engaged in political battles that impede operations.

These broader concepts of organizational sustainability must be measured and then integrated along with measures of environmental sustainability in an effort to manage an organization sustainably and ensure its operations do as little damage to the planet as possible. The

first step in accomplishing this is to integrate these sustainability measures into an organization's key performance indicators and performance measurement system.

Sustainability measures must be included with the other nonfinancial indicators of performance and then be analyzed to determine their contribution to financial indicators of success. All sustainability measures are not created equal. Some will be more important to individual organizational success than others, so they must be assessed to determine which will become [key performance indicators](#) and integrated into the organization's overall [performance measurement](#) and management system. These key indicators will vary by organization.

Once sustainability indicators are understood and utilized, it becomes possible to integrate sustainability management into routine organizational management. All organizations have distinct financial units to provide data on financial trends and performance to senior management. They collect financial data from operating units, analyze those data, and help senior management understand the operational factors contributing to financial success or failure.

The units responsible for an organization's sustainability performance will collect data from operating units to measure sustainability performance, assess the causes of organizational sustainability success and failure, and then work with the organization's financial unit to determine how these sustainability indicators contribute to financial success and failure.

One of the difficulties faced by sustainability management is the ideological and nonmanagerial elements of sustainability management. This has created an impression in conservative political circles that sustainability management is some kind of "woke" form of management that requires politically correct behavior and language that is unrelated to

organizational performance.

This ideological strain of sustainability is not a right-wing fantasy—it exists—but I am putting forward a managerial definition because I believe these factors are increasingly important to managers in the 21st century. Organizations operate in an increasingly complex physical, demographic, political, social, cultural, technological, and economic environment. Many of the variables influencing an organization's success or failure are outside of its ability to control or influence, but where these factors can be understood and accommodated or influenced, they should be.

I have seen many organizations operate under the mistaken belief that they can muscle their way through a community's opposition, only to find after a lot of time and effort that they've come up empty. Local politics prevents them from operating as they hoped. As for [environmental sustainability](#), the field of industrial ecology has already demonstrated that even service organizations can reduce costs by paying attention to their use of energy and water and by modernizing their methods of waste disposal.

The final area where sustainability metrics are becoming more important is in the reporting and management of environmental risk. We are starting to see mandatory reporting requirements for carbon disclosure. The State of California, the European Union, and, in the very near future, the U.S. Security and Exchange Commission (SEC) are mandating clearly defined corporate carbon disclosures. In the case of the SEC, these will sit alongside financial disclosures and influence access to and success in public capital markets.

The first generally accepted sustainability metrics will be the greenhouse gases measured as part of these mandated corporate carbon disclosures. Investors will be able to compare corporate carbon footprints. It is

unlikely that they will be satisfied with these indicators alone but will also ask for indicators of exposure to climate impacts and other environmental risks. Corporate exposure to environmental liability will also eventually be measured, and when all these risk factors are added to carbon disclosure, investors and public policymakers will be able to measure an organization's sustainability performance alongside its financial performance.

Understanding environmental risk is necessary to understand financial risk. In a complex, rapidly changing technological environment, it is dangerous for managers or investors to be ignorant of these elements of organizational performance. Sophisticated management must be capable of understanding and navigating this complexity. This will require the development of sustainability metrics along with modes of analysis that can relate variation in these metrics to organizational financial success.

The transition to an environmentally sustainable economy will come as we learn how to develop wealth while carefully stewarding our planet's fragile and sometimes scarce resources. Renewable resources like solar power and everything that grows due to photosynthesis will enable growth along with a circular economy that reuses resources rather than burning them or dumping them in a hole in the ground. The key step in developing the [management](#) capacity to build this new economy is to create meaningful, actionable [sustainability](#) metrics. That process is well underway.

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