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The Race To Decarbonization: A Spotlight On Data Centers

Results From The November 2021 Thought Leadership Paper, “The Race To Decarbonization”

A FORRESTER CONSULTING THOUGHT LEADERSHIP PAPER SPOTLIGHT COMMISSIONED AND DEVELOPED IN COLLABORATION WITH JOHNSON CONTROLS, MARCH 2022

Executive Summary

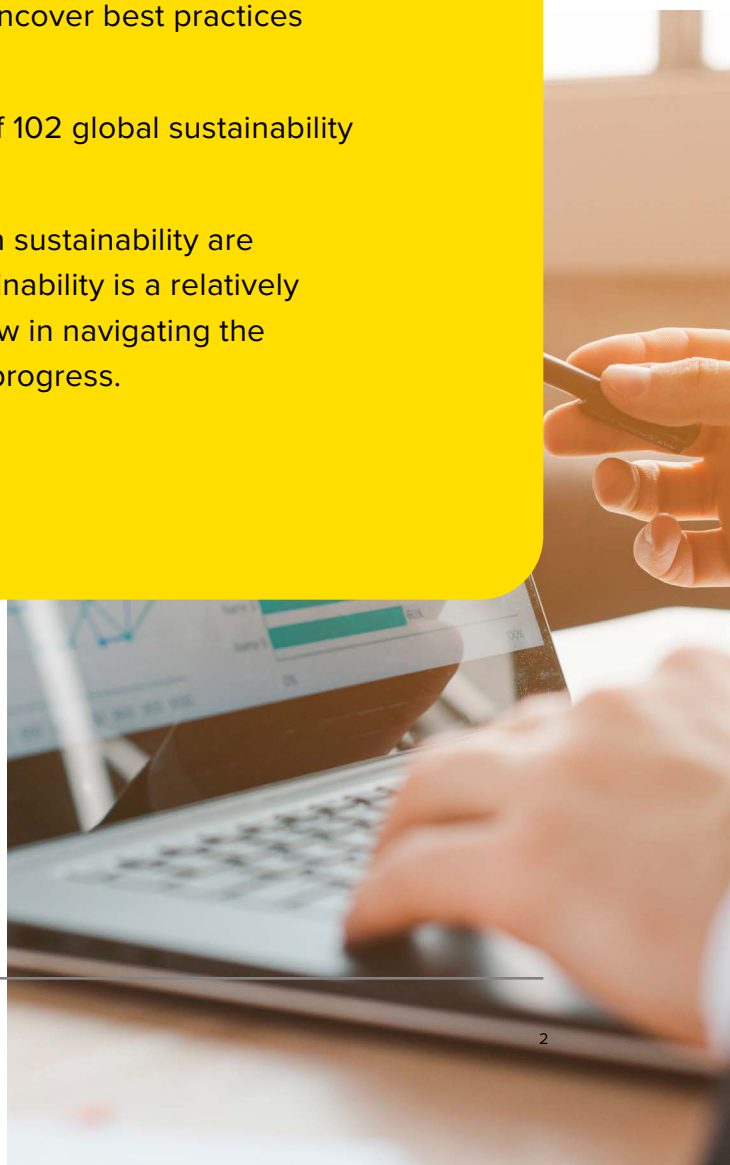
Data center operators are making sustainability commitments as part of their environmental, social, and governance (ESG) programs. These sustainability initiatives often revolve around data center characteristics such as energy intensity, power consumption, and water usage. Yet many data center decision-makers struggle to measure the impact of their sustainability investments accurately and systematically.

Forrester Consulting conducted a Thought Leadership Study commissioned by and developed in collaboration with Johnson Controls to evaluate the progress that sustainability-focused companies have made in pursuing their goals.

To explore this topic, Forrester conducted a series of interviews and fielded an online survey with 2,348 global sustainability strategy leaders in 2021. Respondents represented companies in 25 countries and across 19 industries. Forrester then created a maturity model based on levels of people, process, and technology investments to uncover best practices and benefits that sustainability leaders realize.

For this spotlight, Forrester focused on a subset of 102 global sustainability strategy leaders at data centers.

We found that the business benefits of investing in sustainability are immense. At the same time, because scaled sustainability is a relatively new concept, most data centers have room to grow in navigating the complexities of measuring and reporting on their progress.



Key Findings

Investing in sustainability is now a critical differentiator. Respondents ranked sustainability as a top business priority today, and it's the priority that has grown the most in importance over the last two years. Customer expectations were the most impactful driver leading companies to prioritize sustainability.

Sustainable transformation leads to business benefits. Decision-makers reported benefits across the business as a result of undertaking a sustainable transformation. Benefits included improved efficiency, customer and employee experience, and regulatory compliance.

Prioritizing sustainability requires strategic commitment. Sustainability has become a greater focus for businesses, and with that has come lofty goals for reducing carbon emissions. Most data center leaders still struggle with measurement and complexity. Failing to improve on these reporting goals threatens to derail their efforts.

Investing In Sustainability Is Now A Critical Differentiator

Data center decision-makers are starting to understand that making sustainability a business priority is not just a compliance requirement, it's a competitive differentiator for their business. In surveying 102 leaders involved with data centers, we found that:

- **Sustainability is a top business priority today.** Implementing or maturing sustainability practices was nearly as important a priority as increasing overall profits, and it's the priority that has grown the most in importance over the last two years (see Figure 1).

Figure 1

"What are your company's top business priorities in the next 12 months?"

(Rank from 1 to 5, with 1 being most important.)

Base: 102 global data center sustainability decision-makers at organizations that prioritize corporate sustainability
Note: Showing top 5 responses.
Source: A commissioned study conducted by Forrester Consulting on behalf of Johnson Controls, September 2021

- **Customer expectations are driving the priority on sustainability.** Attracting customers who make purchasing decisions based on sustainable corporate values (75%) and integrating sustainable value propositions into the corporate brand (68%) were the top drivers behind the sustainability business priority. Comparatively, just 40% of respondents indicated addressing industry or government regulatory requirements was a driver for them to implement or mature their sustainability practices.

Data center decision-makers are nearly twice as likely to indicate attracting customers who make purchasing decisions based on sustainable corporate values is driving them to prioritize sustainability compared to just addressing regulatory requirements.

Sustainable Transformation Leads To Business Benefits

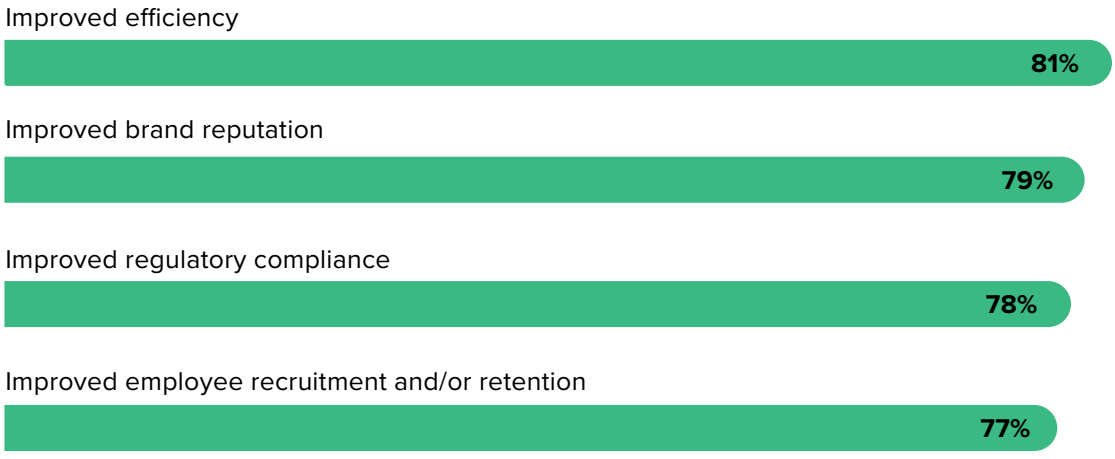
Undertaking a successful sustainable transformation drives competitive advantage and benefits for all stakeholders. While many data centers are in the midst of a sustainable transformation, respondents have realized or expect to realize benefits across many areas of their business.

The top reported benefits were improved efficiency (81%), improved brand reputation (79%), improved regulatory compliance (78%), and improved employee recruitment and retention (77%) (see Figure 2).

Approximately eight out of 10 data center decision-makers reported improved efficiency (81%) and brand reputation (79%) as a result of sustainable transformation initiatives.

Figure 2

"Which of the following benefits have you already realized, or do you expect to realize, from pursuing your sustainability goals?"



Base: 102 global data center sustainability decision-makers at organizations that prioritize corporate sustainability
Note: Showing "This is a benefit we expect to realize" and "This is a benefit we have already realized" responses
Source: A commissioned study conducted by Forrester Consulting on behalf of Johnson Controls, September 2021

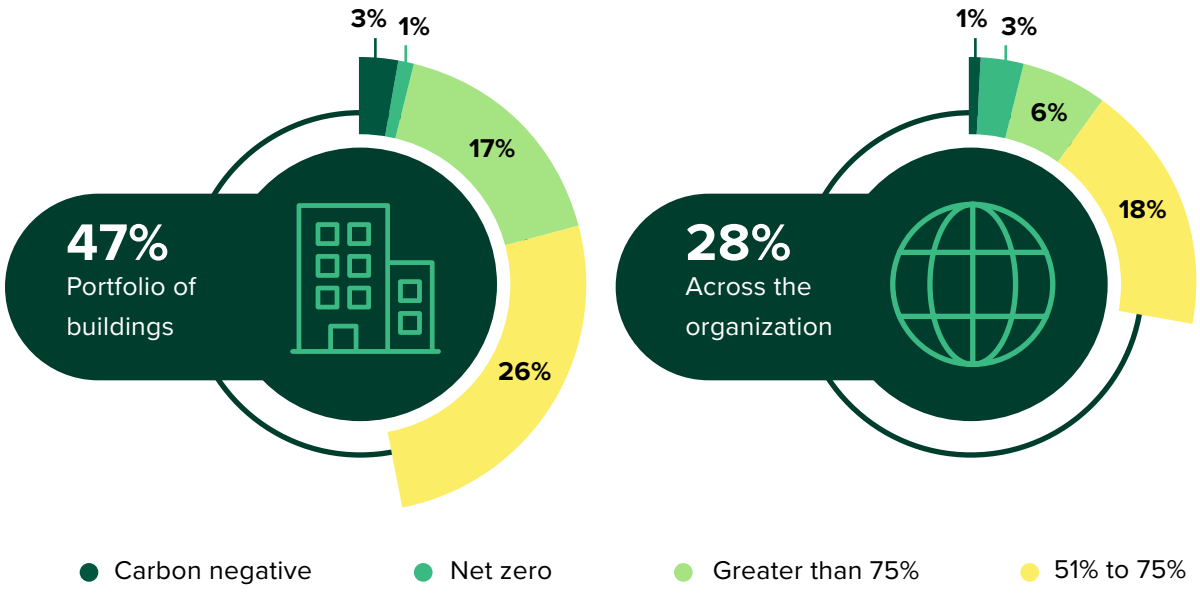
Prioritizing Sustainability Requires Strategic Commitment

While sustainability initiatives have grown in importance for data centers, so too has the importance of executing upon sustainability goals. Data center decision-makers report facing many challenges that threaten to derail their efforts:

- **Data centers are setting lofty sustainability goals.** Nearly half of respondents (47%) indicated they plan to reduce energy consumption across their portfolio of buildings by at least 50%, while 28% have set the same goal across the entire organization (see Figure 3). What's more, the average reported target date for meeting these sustainability goals is 2024.

Figure 3

Long-Term Goals For Reducing Carbon Emissions/Energy Consumption



Base: 102 global data center sustainability decision-makers at organizations that prioritize corporate sustainability
Source: A commissioned study conducted by Forrester Consulting on behalf of Johnson Controls, September 2021

- **Most struggle with measurement.** Just 19% of data center decision-makers indicate they are using ESG reporting software today. Half (50%) are struggling with internal alignment on how and what to track, while lacking in-house expertise (43%), and having siloed data (41%) are other common pain points.
- **Complexity makes scaling difficult.** Data center respondents reported struggling with managing multiple parties involved with executing their plans (38%) and scaling sustainability initiatives (35%) as the top obstacles hindering their ability to achieve sustainability goals. Thirty percent indicated they lack external partners to help them with these pain points.

Nearly half of data center decision-makers have committed to cutting their carbon emissions by at least half by 2024, yet many still struggle to measure their efforts, with just 19% using ESG reporting software today.

- **Failing to deliver on goals threatens to derail sustainability efforts.** The top reported risks associated with failing to improve sustainability were decreased customer trust (56%), poor employee attraction and retention (48%), and poor resiliency (48%) (see Figure 4).

Figure 4

"Which of the following are risks associated with failing to improve sustainability at your company?"

Base: 102 global data center sustainability decision-makers at organizations that prioritize corporate sustainability
Source: A commissioned study conducted by Forrester Consulting on behalf of Johnson Controls, September 2021

Key Recommendations

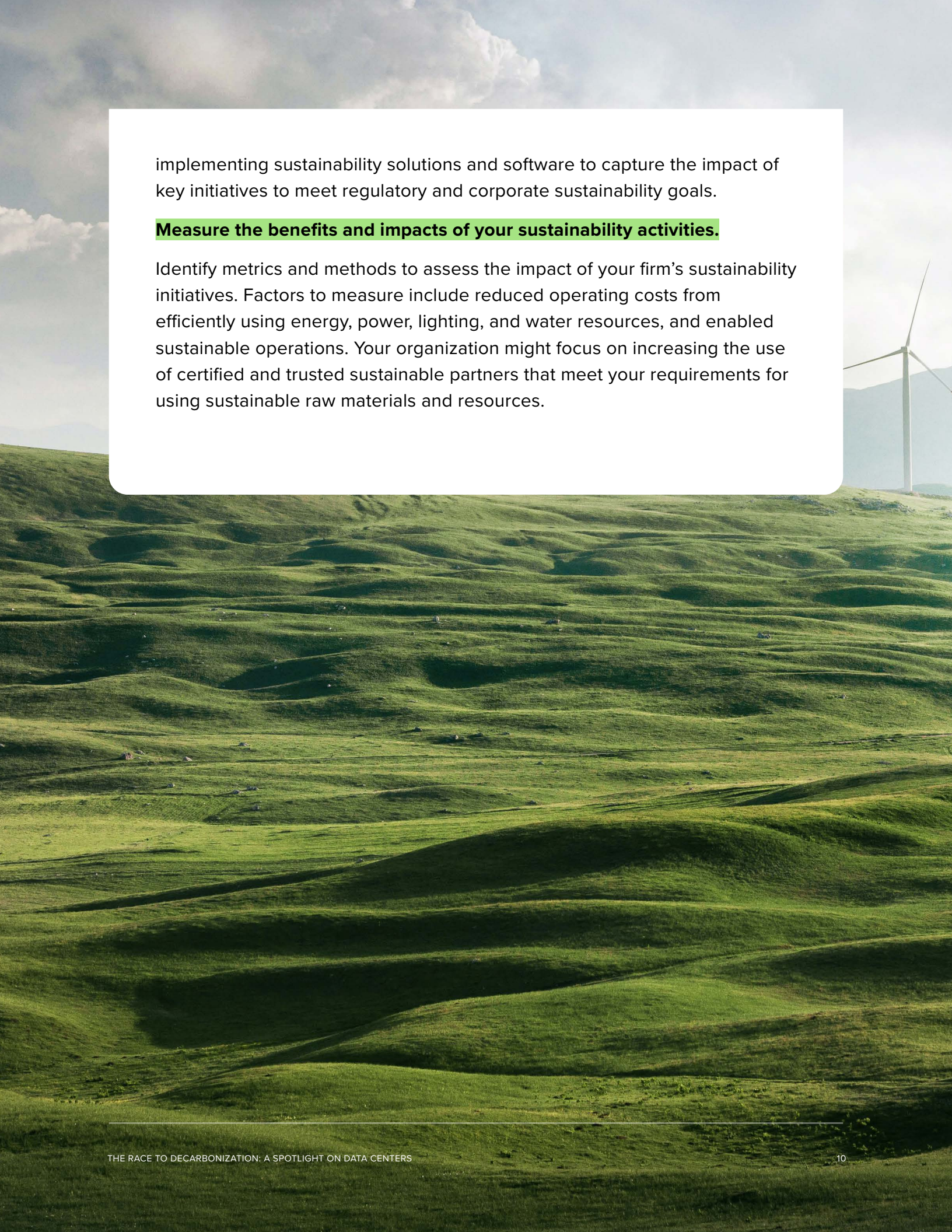
Decision-makers spanning many roles are demanding sustainability from data centers across all regions. Regulators are establishing targets and specific requirements for sustainability elements at the regional and global level. Investors are demanding that firms disclose climate risks and improve their sustainability management. In addition, customers are increasingly considering a firm's sustainability activities and strategic considerations when making decisions about which companies to do business with, and job seekers are doing the same thing when deciding where to apply. To address these mounting pressures from many stakeholders, you should:

Assess your firm's sustainability priorities to align with key data center characteristics.

A comprehensive sustainability assessment requires you to consider data center impacts on a wide array of initiatives. Key initiatives will align with managing factors impacting sustainability including electricity consumption, greenhouse gas emissions, water usage, and waste generation. You should align sustainability priorities to address pressures from stakeholders and provide insight into the environmental impact of data center operations.

Assess opportunities to leverage partners to assist with your organization's sustainability roadmap.

As a data center leader, you must establish your own roadmap and path forward for sustainability. Your organization's sustainability maturity often begins with the need to comply with regulations and standards. Many firms create sustainability roadmaps and targets that include greenhouse gas (GHG) emission reduction and plans for carbon neutrality. Your organization's operational sustainability initiatives can include optimizing existing data centers or new builds and identifying innovative processes to optimize data center efficiencies or achieve technology optimization. It is also important to assess your organization's requirements for partners to assist with



implementing sustainability solutions and software to capture the impact of key initiatives to meet regulatory and corporate sustainability goals.

Measure the benefits and impacts of your sustainability activities.

Identify metrics and methods to assess the impact of your firm's sustainability initiatives. Factors to measure include reduced operating costs from efficiently using energy, power, lighting, and water resources, and enabled sustainable operations. Your organization might focus on increasing the use of certified and trusted sustainable partners that meet your requirements for using sustainable raw materials and resources.

Appendix A: Methodology

This study was commissioned by Johnson Controls and conducted by Forrester Consulting. Johnson Controls collaborated on the survey questions and design, but Forrester retained final editorial control. For this study, Forrester conducted an online survey with 102 global sustainability strategy leaders to evaluate the progress that sustainability-minded companies have made in achieving their goals. Survey respondents included directors, vice presidents, and C-level executives in IT, operations, sustainability, governance, risk, compliance, facility management, and commercial real estate roles from the data center industry. The study began in August 2021 and was completed in September 2021.

To read the full results of this study, including best practices from sustainably engaged firms, please refer to the Thought Leadership Paper commissioned by Johnson Controls titled, "The Race To Decarbonization."

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Contributing Research: Forrester's Infrastructure & Operations research group

Appendix B: Demographics

NUMBER OF EMPLOYEES	
500 to 999	**33%**
1,000 to 4,999	**40%**
5,000 or more	**26%**

INDUSTRY	
Data center	**100%**

RESPONDENT LEVEL	
Director	**48%**
Vice president	**37%**
C-level executive	**15%**

RESPONDENT DEPARTMENT	
IT	**19%**
Operations	**37%**
Sustainability	**15%**
Facility management	**10%**
Governance, risk, and compliance	**11%**
Commercial real estate	**9%**

RESPONDENT CORPORATE SUSTAINABILITY RESPONSIBILITY	
I am the final decision-maker in this area.	**71%**
I influence decisions in this area as a primary part of my job.	**29%**

LEVEL OF SUSTAINABILITY IMPORTANCE	
Very important	**48%**
Important	**41%**
Somewhat important	**11%**

Note: Percentages may not total 100 because of rounding.

Appendix B: Demographics Continued

GEOGRAPHY	
Brazil	**1%**
Canada	**4%**
China	**14%**
France	**4%**
Germany	**3%**
Hong Kong	**2%**
India	**8%**
Ireland	**5%**
Italy	**1%**

GEOGRAPHY CONTINUED	
Japan	**14%**
Malaysia	**3%**
Mexico	**2%**
The Netherlands	**3%**
New Zealand	**3%**
Qatar	**2%**
Singapore	**4%**
South Korea	**10%**
Switzerland	**2%**
Thailand	**3%**
United Arab Nations (UAE)	**3%**
United Kingdom	**6%**
United States	**7%**

Note: Percentages may not total 100 because of rounding.

Appendix C: Supplemental Material

RELATED FORRESTER RESEARCH

"Guide Your Sustainability Program With The Forrester Sustainability Maturity Model," Forrester Research, Inc., October 25, 2021.
"Embrace The Green Business Opportunity," Forrester Research, Inc., March 30, 2021.

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