

Quick Answer: Sustainability: What Should Leaders Do for Greenhouse Gas Emissions?

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Initiatives: [Executive Leadership: Sustainability](#); [CIO Leadership of Innovation, Disruptive Trends and Emerging Practices](#)

What should executive leaders know and act upon to help make their enterprises become sustainable? This research provides a foundational overview to get started on greenhouse gas emissions as part of an overall enterprise sustainability initiative.

Quick Answer

What should executive leaders do to respond to greenhouse gas emissions?

- Read and discuss enterprise materiality assessment, climate strategy and greenhouse gas (GHG) targets.
- Identify tools and training resources to acquire the necessary data and analytics (D&A) skills to report GHG initiative progress.
- Create an enterprisewide D&A platform for identifying metrics to report progress toward enterprise GHG goals.
- Develop a sustainable IT program with two parts — fix IT by initiating a green IT program (migrate to the cloud, colocate servers, promote energy-efficient data centers), and fix the business by reducing Scope 1, 2 and 3 GHG emissions (work from home, adopt energy-efficient usage of IT).
- Create a baseline IT energy footprint using on-premises data centers, workplaces and focusing on reducing Scope 3 emissions (this could include utilizing cloud and network technology and distribution centers).
- Set targets for energy, water usage, waste generation and Scope 3 emissions by obtaining a baseline and setting ambitions.
- Develop detailed plans for data centers and a digital workplace by aligning to GHG goals.

- Engage key vendors and partners to understand risks, innovation opportunities and ongoing GHG initiative progress, and to develop guidance for future sourcing strategies.

More Detail

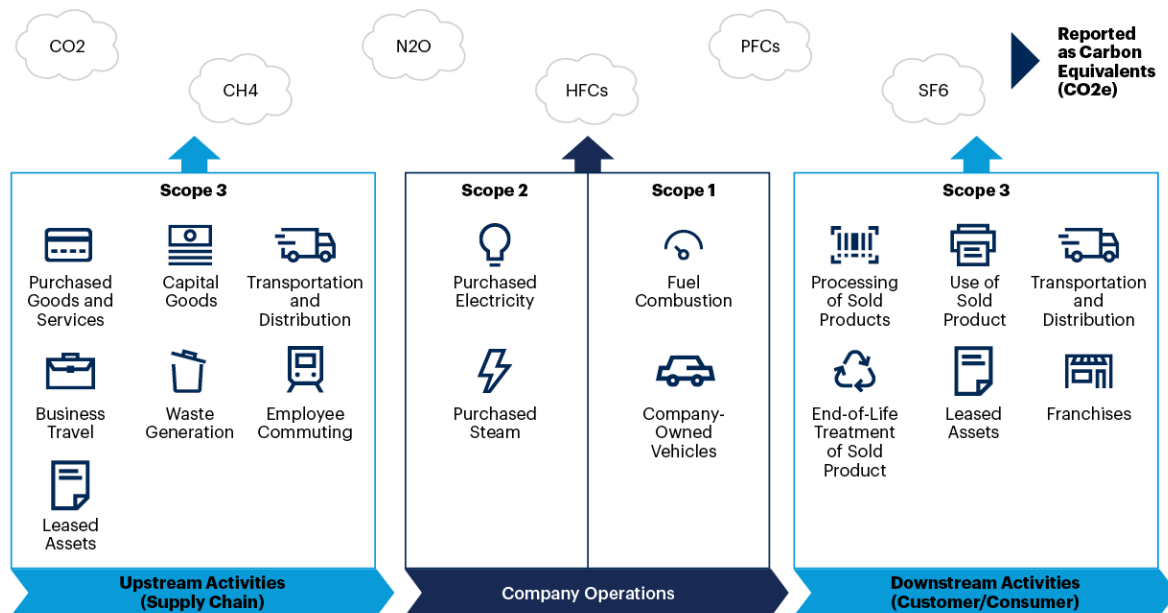
What Should Executive Leaders Know?

Energy sustainability is an increasingly urgent challenge, as governments search for ways to balance energy-intensive lifestyles and environmental impact — especially GHG emissions from fossil fuels (see [Industry Insights: Strategists Must Reduce Environmental Risk With Strong Greenhouse Gas Commitments](#)). CIOs play an important support role in sustainability initiatives because they are data-intensive, requiring smart technology to gather, analyze and strategically exploit that data from operations and the value chain (see [The Role of the CIO and Technology in the Enterprise Sustainability and ESG Endeavor](#)).

GHG Protocol defines three domains of scope for emissions. Scope 1 emissions come directly from company-owned-and-operated assets. Scope 2 emissions are not emitted by the firm, but are directly associated with the energy it procures to power its operations. Scope 3 emissions are associated with the business operations of other firms in upstream and downstream supply chains (see Figure 1).

Figure 1: GHG Emissions Scope

Defining GHG Emissions



Source: Gartner
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Gartner

In enterprises with corporate social responsibility (CSR) programs that focus on material issues to become sustainable, executive leaders must create a data platform to gather, analyze and report GHG emissions from Scopes 1, 2 and 3. For enterprises in sectors such as financial and professional services, executive leaders must reduce Scope 2 GHG emissions (related to electricity consumption) by working with the real estate and facilities management teams. This can be achieved by adopting a suitable renewable energy strategy, and implementing circular economy practices in partnership with vendors and partners to improve e-waste management practices; increase reuse, refurbishment and component harvesting; and reduce Scope 3 emissions.

What Should Executive Leaders Do?

There are three parts to running a successful GHG initiative.

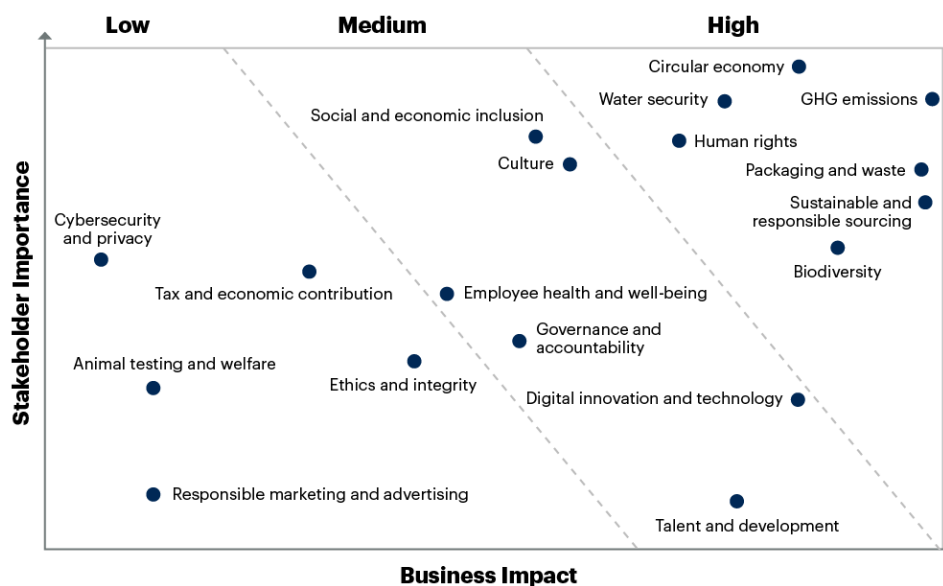
Determine How IT Can Contribute to Material Issues

Materiality assessment identifies a prioritized list of sustainability issues that are most important to the company (see [Ignition Guide to Conducting a Materiality Assessment](#)). Executive leaders must obtain the enterprise materiality assessment results, sustainability goals, and KPIs to track and report. Executive leaders must also develop holistic strategic plans to reduce emissions and implement sustainable solutions, such as consolidated digital platforms, net-zero data centers, and energy cost and consumption monitoring.

To accomplish this, strategize with other executive leaders responsible for addressing the most material issues to identify the technologies that will have the greatest impact in achieving the required goals. Collaborate with the senior executive responsible for sustainability to establish an enterprisewide cross-discipline approach to sustainability, led by strategy and materiality, governed by members of the executive leadership committee (see Figure 2).

Figure 2: Materiality Assessment (Example)

Example of a Materiality Assessment Illustrative Example



Source: Gartner
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Gartner

Design and Build an Enterprisewide Data Platform to Report Progress

Executive leaders should develop and institute an information and data strategy for sustainability and environmental, social and governance (ESG) data. Deliver a set of analytical, reporting and business application tools that will provide the necessary hindsight, insight and foresight.

To accomplish this, align sustainable objectives with external ecosystems by selectively choosing technology providers with shared sustainability goals and publicly shared sustainability progress and measures to emulate (see [A Framework for Sustainable Technology](#)). Develop D&A skills and collaborate with D&A leaders to build a D&A platform to manage progress toward enterprise sustainability goals.

Take Steps Toward Sustainability Goals Within IT

Initiate the green IT program to address the energy and material efficiency of IT, increase utilization levels of IT assets, review how e-waste is managed and engage key suppliers to reduce overall environmental impact.

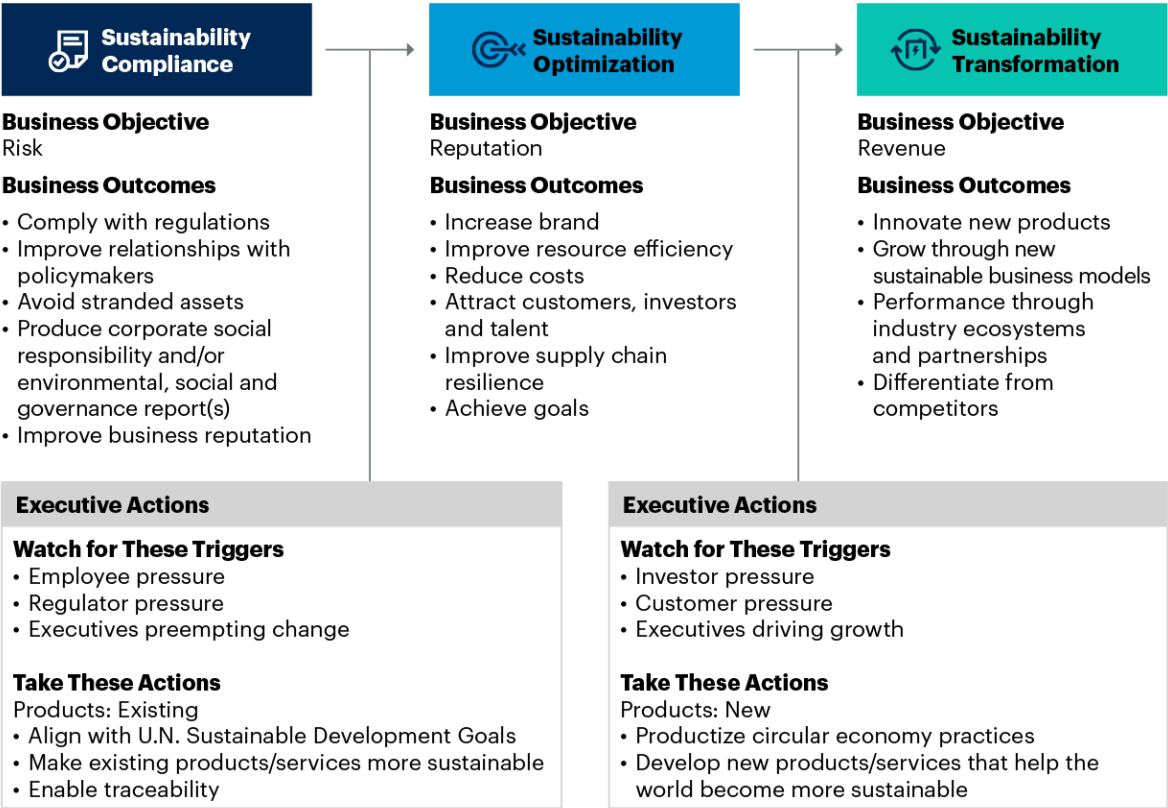
To accomplish this, baseline the IT energy footprint covering on-premises data centers, workplaces and Scope 3 emissions, including the cloud, outsourced data centers and network infrastructure. Then set targets for energy, water usage and waste generation including those from electronic devices such as desktops, notebook PCs, and smart and peripheral devices. Key technology vendors and partners should be engaged to understand risks, innovation opportunities and to obtain ongoing progress of their GHG initiatives. Develop detailed plans for the green IT program, including developing guidance for future sourcing strategies.

What Else?

Sustainability initiatives fall into compliance, optimization and transformation (see Figure 3 and [Leading Sustainability Ambition, Goals and Technology in the 2020s](#)), and include additional IT activities (see Table 1 and [A CTO's Guide to Achieving Sustainability Leadership](#)) besides GHG emissions.

Figure 3: Sustainability Compliance, Optimization and Transformation

Sustainability Compliance, Optimization and Transformation



Source: Gartner
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Table 1: Examples of Sustainable Activities by IT

IT Group	Digital Innovation and Technology	Affordable and Clean Energy	Responsible Consumption and Production
Apps	Digital Accessibility, Virtual Workspaces	Sustainable Business Process Automation	Traceability Applications
Infrastructure and Operations	Digital Employee Experience (DEX) Management Tools, Cloud	Resource-Efficient Data Centers	Environmentally Friendly Asset Disposal, Green Asset Optimization
Security	Customer Privacy, Data Security	Risk Management, Disaster Recovery	Data Sanitization Software for Product Recycling
Data and Analytics	Reporting Transparency, Sustainability Analytics	Energy Data Analysis	Predictive Modeling in Recycling
Enterprise Architecture	Business Model Resilience, Diversity and Inclusion, Digital Ethics	Efficient Asset Utilization	Green Product Investment

Source: Gartner

Recommended by the Authors

[Define Sustainability and Leverage Materiality to Drive More Effective Strategy](#)

[A CTO's Guide to Achieving Sustainability Leadership](#)

[The Role of the CIO and Technology in the Enterprise Sustainability and ESG Endeavor](#)

[How to Set Strategic Ambition for Sustainable Business](#)

[Consumer Goods Trends: Environmental Sustainability](#)

[Apply Digital Business to Sustainability](#)

[Leading Sustainability Ambition, Goals and Technology in the 2020s](#)

[Quick Answer: What Does COP26 Mean for Businesses?](#)

[Industry Insights: Strategists Must Reduce Environmental Risk With Strong Greenhouse Gas Commitments](#)

[A Framework for Sustainable Technology](#)

Evidence

Company Pledges and Actions

[About The Climate Pledge](#), The Climate Pledge.

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[AT&T Commits to be Carbon Neutral by 2035](#), AT&T.

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[10 Tech Companies Setting Big Goals to Reduce Climate Change](#), CES, Consumer Technology Association.

[Toward a New Era of Shared Corporate Responsibility](#), Intel.

[Microsoft Will Be Carbon Negative by 2030](#), Microsoft.

[NTT Ltd Commits To Net Zero Emissions by 2040](#), Capacity Media.

[Qinhuai Data Group Released the Specific Implementation Path of Carbon Neutrality Target](#), Baidu. (Available in Chinese only.)

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[Xi Jinping: China Will Aim for Carbon Neutrality by 2060](#), Climate Home News.

[France Sets 2050 Carbon-Neutral Target With New Law](#), Reuters.

[COP26: India PM Narendra Modi Pledges Net Zero by 2070](#), BBC News.

[Japan Net Zero Emissions Pledge Puts Coal in the Spotlight](#), Climate Home News.

[How We're Moving to Net-Zero by 2050](#), U.S. Department of Energy.

Government and Company Use Cases

[Amazon Vows to be Carbon Neutral by 2040, Buying 100,000 Electric Vans](#), Reuters.

[Amazon Becomes the World's Largest Corporate Purchaser of Renewable Energy](#), Amazon News.

[France Passes Climate Law, but Critics Say It Falls Short](#), The New York Times. (Paid subscription required.)

[Huawei Digital Power Zero Carbon Network Solution Is Released, Helping Operators to Achieve Carbon Neutral Targets](#), Huawei News.

Role of Digital Leaders

[How CIOs Can Advance Company Sustainability Goals](#), InformationWeek.

[What Is Digital Decarbonization and Why Is it Important for CIOs?](#) Atos.

[NHSX Chief Information Officer Outlines Role of Tech in Achieving Net Zero Targets](#), Computer Weekly.

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