How can the CIO solve the E+S+G equation?

Turning ESG data into a competitive advantage

EY

Building a better
working world

INTRODUCTION

The intersection of ESG and the IT organization

Social responsibility and environmental stewardship have been part of corporate integrity messaging for decades. It began with a philanthropic and a social responsibility focus but has evolved into being embedded in strategy and fiduciary duty.

Today, many management teams are examining their controls and reporting mechanisms around **environmental, social and governance (ESG)** factors, setting sustainability goals and establishing benchmarks against industry peers. These concerns are largely driven by investor influence, external stakeholders and societal expectations wherein transparency is expected.

"

These changes mean that the information technology (IT) role will not only expand to report against the needs of the market, but **IT leaders** also have a unique opportunity to help their companies unlock new value from sustainability and ESG data.

Marsha Reppy
EY Americas Sustainability and ESG Technology Leader

Organizations are leading the way by:

1
Taking an enterprise-wide approach to sustainability and ESG

2
Accelerating operational decarbonization

3
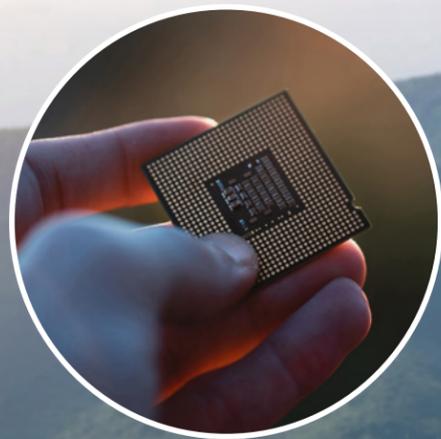**Establishing trust and transparency in data to influence key reporting**

ESG for technology leaders

Click here to read more.

CONTENTS

01 | UNDERSTANDING EACH ASPECT OF ESG

E

While ESG data requirements are still evolving, the expectation is that companies will be able to provide investors with climate-related reports and other nonfinancial performance data.

Because many organizations approach ESG from different angles across an array of activities and various functions, a holistic ESG assessment is the first step to prepare for the next wave of ESG data reporting expectations. It becomes the job of IT leaders, such as the CIO, to establish the data set under the larger ESG umbrella and enable visibility and transparency regarding the company's efforts. This also lets companies review their efforts against peers, do due diligence about their suppliers, assess their own benchmarks, and discover where they can improve efficiency and utilization.

Environmental criteria consider actions a company can take to perform as a steward of nature and the planet.

What it is

This includes action on climate change, greenhouse gas (GHG) emissions and reductions, the sustainable use and protection of water and marine resources, the transition to a circular economy, pollution prevention and conservation, and restoration of biodiversity and ecosystems.

What it looks like

This considers all emissions across a company's value chain: vehicles and facilities, purchased utilities, purchased goods and services, upstream and downstream transportation, processing and end-of-life treatment of sold products, etc.

How can the circular economy move your company forward?
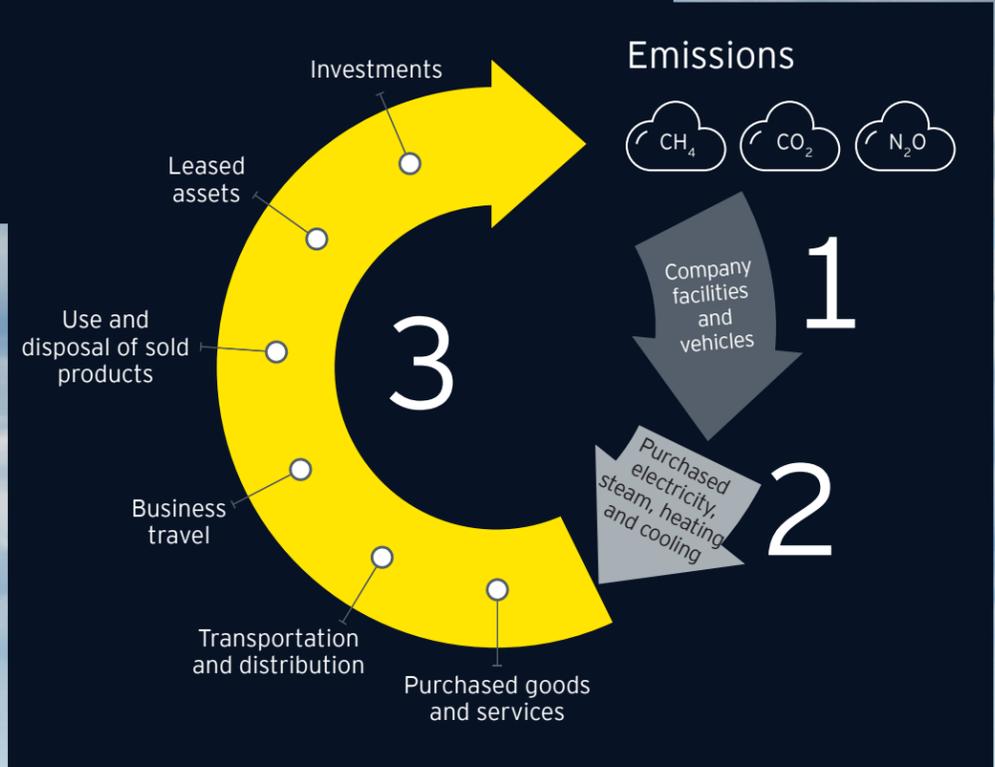
Read more on this topic.

Scopes 1, 2 and 3 emissions

Scope 1
emissions are the emissions produced directly through owned or controlled sources.

Scope 2
emissions are indirect emissions generated from energy that is purchased.

Note: Scopes 1 and 2 combined account for only about 10%–20% of total emissions, depending on the sector. The other 80%–90% of emissions fall under Scope 3, which are all indirect emissions that occur within the value chain, upstream and downstream.

Scope 3
data extends into multiple categories for which organizations can determine what data to collect, such as employee commuting, transportation and distribution of assets, and the use and disposal of products. Scope 3 is most often simply divided into upstream and downstream categories: upstream categories being the indirect emissions related to purchased or acquired goods and services, downstream categories being the indirect emissions related to sold goods and services.

How corporations can establish a true net-zero carbon footprint policy

Learn more.

Investments

Leased assets

Use and disposal of sold products

Business travel

Transportation and distribution

Purchased goods and services

Emissions

CH_4 CO_2 N_2O

Company facilities and vehicles

Purchased electricity, steam, heating and cooling

3

1

2

Materiality is also at the heart of varying approaches to emission reporting and measuring environmental impact. Many organizations at the start of their sustainability journey will perform what is called a materiality assessment. This is a process that looks across stakeholders to identify the key ESG topics that are likely to have a material impact on their business or consolidated financial statements over the short, medium and long term. Carbon emissions reporting and carbon credits and offsets are a primary focus, but companies are also setting targets around water use, natural resources and the responsible use of raw materials.

How companies are committing to action

In order to achieve enhanced sustainability, leading companies are designing facilities and logistics with sustainability in mind, using energy-efficient technologies, sustainable materials and sourcing and seeking low-emission alternatives. Some have pledged net-zero carbon-emissions targets and carbon offsets. Others are incorporating ESG metrics into leadership remuneration.

Client example

E: Developing a sustainability certificate digital ecosystem

Project purpose
‣ Develop a sustainability certificate program for a large multinational chemical company

What the EY team did
‣ Building a certification solution with a common data service as the underlying data model
‣ Providing a blockchain solution, reducing the timeline and cost to a fully tokenized, public blockchain solution
‣ Developing an agile solution that works well within the client's complex IT infrastructure

Value delivered
‣ Improved reporting and forecasting capabilities
‣ Avoiding manual entry of data between systems
‣ Enabling selling with automated shipping and invoicing of certificates together with the certified materials
‣ Completing necessary calculations and showcasing data integration across key applications
‣ Automated generation of required intercompany and interdivisional sales

S

Social criteria examine how an organization manages relationships with employees, suppliers, customers and the communities where it operates.

What it is

This includes labor standards, health and safety performance, and the way a company treats clients and customers, as well as verifying that workforce and suppliers represent the communities and customers being served.

What it looks like

▸ Preparing the talent pipeline through STEM (science, technology, engineering, math) education programs and hiring and cross-training for future skills and diversity

▸ Using pretax profit to fund community efforts

▸ Working to decrease the digital divide

▸ Providing employee resource groups

▸ Creating jobs in a community

How companies are committing to action

The pandemic and increased calls social justice gave many companies reason to examine their commitments to society and the people in their communities. Companies have turned their efforts to address diversity, equity and inclusion (DEI) initiatives; health equity concerns; and other systemic inequalities.

How real-time data improved diversity and inclusion policies

Read the full story.

Client example

## S: Empowering employees to support their own wellbeing

Project purpose

▸ A global consumer products and retail company wants to implement a holistic approach to managing the wellbeing and productivity of its people by collecting and synthesizing global employee data.

What the EY team did

▸ All employees were surveyed, measuring engagement and wellbeing of the workforce. This was followed by targeted interventions designed to empower employees to support their own wellbeing (including physical and mental health, workplace health, personal finances, and family/community support), as well as that of their colleagues and the organization.

▸ The program is in its fourth iteration at this agency, allowing comparisons over time and the return on investment (ROI) of wellbeing initiatives to be assessed.

Value delivered

▸ The delivery was assessed to have reduced annual sick leave on average by two days per employee across the organization.

▸ The organization has also replaced its overall engagement survey with this framework to assess a holistic model of wellbeing, engagement and productivity.
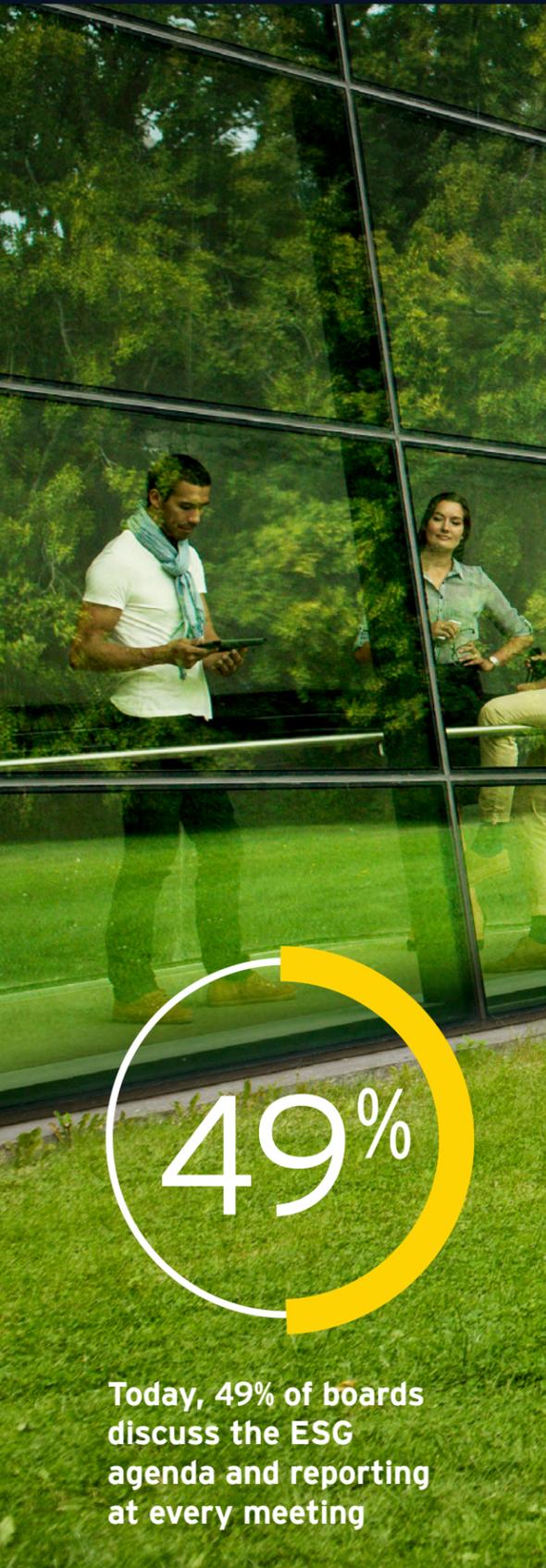
G

Governance criteria examine a company's leadership, executive pay, audits, internal controls and shareholder rights.

What it is

Governance includes anti-corruption measures and ethical business practices, regulatory compliance, tax transparency, and how decisions are made across the executive board.

What it looks like

▸ Data governance and AI governance strategies

▸ Risk management strategies

▸ Reliable, objective and consistent environmental reports

▸ Fair and transparent compensation and disciplinary policies

▸ Board diversity, structure and compensation

How companies are committing to action

The amount of time that boards devote to ESG topics has increased significantly. Two years ago, only 15% would discuss the ESG agenda and reporting at every meeting. Today, 49% do so, with another 33% discussing these issues frequently.

49%

Today, 49% of boards discuss the ESG agenda and reporting at every meeting

How can boards strengthen governance to accelerate their ESG journeys?

Learn more.

Client example

G: Climate risk training to a banking client

Project purpose

▸ With the growing attention on climate risk disclosures, a leading bank identified the need for the design, development and delivery of climate risk training for its board members and management committee to improve their awareness and understanding implications for their business.

What the EY team did

▸ Designed, developed and delivered a 90-minute virtual training session for the management committee and members of the board with optional 1:1 mentoring sessions

Value delivered

▸ The design and development of the training involved:

  ▸ Accelerated design and development workshops

  ▸ End-to-end walk-throughs on their delivery platform

▸ Collateral for the training included:

  ▸ Reading and training materials

  ▸ Facilitation of slides

  ▸ Facilitator guide

  ▸ Post-session 1:1 mentoring

02 | AT ITS CORE, ESG IS A DATA PROBLEM

Overarching ESG challenges require trust among people, processes, technology and data.

ESG disclosures for investors are under development, and these reports will be closely scrutinized, increasing the need for robust measurement and transparency. To measure change and accelerate transformation in areas such as sustainability, emissions and DEI, organizations need access to internal and external data, but exactly what they need to collect is either not clear or hard to find.

The vast data sets that make up ESG reporting are typically housed within disparate functions within an organization, often making them hard to obtain. Adding to the confusion are the sheer number of data owners and the lack of clear ownership over the ESG function. Without a single, end-to-end view of data, organizations often use multiple efforts to fulfill their ESG data needs.

For example, to become carbon-neutral, organizations will need to understand not only their own emissions metrics but also metrics across their entire value chain (scopes 1, 2 and 3). Not only does an organization have to determine what to measure and how to access the information, but also how to ascertain that the third-party information is accurate and not just telling the story that the outside group wants to tell? From the perspective of third parties and suppliers, there is little incentive for them to voluntarily feed their data into another party's enterprise resource planning system.

This web of dependencies makes true climate accounting a formidable challenge. The bottom line is that organizations will need to understand the ESG metrics across their value chain, and it won't be easy.

The data questions go beyond just the data and what to measure

How do you get access to third-party data in a decentralized operating model?

How do you trust that the information is accurate?

What role does technology play in establishing trust?

How do you achieve traceability, immutability and auditability of the data?

How can you generate new revenue models, such as exchanging carbon credits and developing circular economies?

Explore more insights, videos and services for ESG reporting

Learn more.
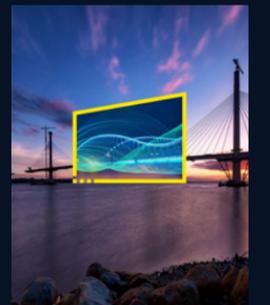
Trust is a key challenge to supply chain data sharing

Sharing systems and data can constitute significant exposure, which means that organizations need to have their data in order before opening themselves up to sharing. And it is essential for all parties to feel confident that their critical data is in safe hands, both from a commercial and cybersecurity standpoint.

Companies that take an enterprise-wide approach to sustainability and ESG are best positioned to protect and create long-term value from it. While data is a key to ESG strategy, many organizations are struggling to define a coherent sustainability system strategy for various reasons.

A few key challenges we see between business and IT include:

Highly manual data collection processes and multiple business intelligence (BI) reporting tools

High cost of reporting, with potential process and data integrity compliance issues

Difficulty in tracking value from sustainability initiatives to support value narrative to investors and stakeholders

Multiple leading applications and complex architecture, compared with a core platform approach with interoperability

Limited sustainability decision-support analytics to help the business drive the highest impact outcomes and ROI

Why green supply chains are the key to long-term value

Read more.

Five steps executive leadership teams and boards can take to drive integration between business strategy and ESG priorities

1 Understand changes across your stakeholder ecosystem

2 Refresh ESG strategy, success measures and governance models

3 Embed ESG initiatives into business strategy and risk management approaches and drive innovation across your value chain

4 Allocate required capital to deliver against ESG strategy

5 Measure progress against expected outcomes and adjust approach as needed using a technology roadmap that demonstrates the value of these efforts

Examining all issues from a sustainability perspective helps the organization put sustainability and data collection at the center of focus, rather than an afterthought. This lets companies present a clear and structured sustainability narrative for the long run, gaining buy-in from key stakeholders along the way.

03 | THE ROLE OF IT

Integration with IT leadership

The role of IT leadership and chief information officer (CIO) is evolving to become a key advisor to the chief financial officer (CFO), chief sustainability officer (CSO) and other C-level executives and to help pull everyone together toward the shared vision. To do this successfully, IT executives must become data storytellers, using the lens of their audience to build trusted relationships across their extended ecosystem.

IT leadership must work with the chief supply chain officer (CSCO) and chief marketing officer (CMO) to influence commercial operations, sales and marketing to drive customer agendas, keeping in mind that the "customer" may refer to the person who buys the product or may be the end user. Don't underestimate interest in the details. Today's consumers want to know where a product was manufactured and how it arrived on the shelf. They are inspired to buy products that are ethically and sustainably sourced.

The CIO can offer the CSCO visibility across the entire supply chain to the point of sale and then determine the types of data and analytics that will enable the leaders' ESG visions and how the company can communicate and market that to customers.

How can CIOs build a coalition around ESG?

Take a deeper dive.

IT leadership executives can inform the CFO in terms of how ESG efforts can control costs; increase revenue; and manage assets, liabilities and the cost of capital. For instance, in a meeting with a large food corporation concerned about cost management, an EY team asked whether the company had visibility into the energy consumption of its vehicle fleet. An information officer who could provide that data, along with a comparison from a more energy-efficient model and a strategy for converting the current fleet, would then help the company tell a story about how the brand is reducing its carbon footprint and, in turn, saving money and enhancing the brand image.

The future workforce of a company aligned with ESG goals will need a different set of skills to tackle the business challenges that lie ahead. As IT leaders will be involved in driving the skill strategy and working with human resources to upskill the workforce, they must first help to define the skill sets they will need within the organization. These include data scientists and modelers to establish data quality and accessibility.

As for employees, people want to work for companies that are ethical and environmentally friendly. Regarding diversity, equity and inclusion initiatives, companies need to measure the demographics of their workforce, document their commitment to change and demonstrate progress.

IT's role in helping companies achieve their efforts

As expectations grow, IT's role will expand to not only collect and manage data for external reporting but also to drive operational changes within the organization by providing the tools, software, processes and technology to address these factors.

In the near term, there is an opportunity for technology functions to strengthen sustainability and ESG management through involvement in three focus areas:

1

Data and analytic insights
Creating a standard data model to support ESG reporting and associated systems

Key activities
▸ Assess current landscape for data and systems

▸ Conduct business-process mapping and identify key use cases

▸ Create a data governance plan

▸ Define analytic insights required for different audiences

2

Reporting enablement
Harmonizing and replacing manual processes for reporting

Key activities
▸ Map metrics for critical ESG disclosures to existing systems and business processes

▸ Analyze the organizational functions and personas interacting with each report

3

Traceability
Mechanisms for supporting traceability and the associate commercialization of data

Key activities
▸ Establish a prioritization for material data sets

▸ Confirm data gathering and calculation methodologies for prioritized data sets

The CIO Imperative: Is your technology moving fast enough to realize your ambitions?

Read the full report.

Technology infrastructure and data management practices to enable sustainability and ESG

Companies must also be thoughtful about how they organize ESG data within a standardized landscape for consumption. Their approach for addressing large ESG data challenges relies upon a strategy that encompasses the following aspects:

1. Operational data sources: The vast data sets that support sustainability and ESG reporting are typically housed within disparate functions, which often makes them hard to obtain. IT leaders have the opportunity to take the lead in mapping data and establishing a taxonomy that allows for:

a. Automated data sourcing where available

b. The ability to attach evidence to support data

c. Temporal aggregation before ingestion into enterprise systems

2. Common data models, processes and controls: A common data model provides a mechanism for data transformation and ingestion into an enterprise management platform. Processes and controls are layered upon the data model to support the standardization, accuracy and completeness of reported data.

3. Data management platform: An enterprise-wide platform improves efficiency of data collation, reduces the need for manual intervention and streamlines reporting, which in turn manages risk and allows key resources to be deployed to higher-value work.

Key criteria:

a. Calculation methods that are easily executable, auditable and maintainable

b. Versioned libraries of reference tables such as emission factors and unit conversions

c. Estimation and allocation practices to be accounted for within the methodologies

d. Data validation and approvals, governed by a workflow

4. Reporting and analysis tools: The IT function should strive to enable reporting that is integrated and aligned with company purpose, sustainability and ESG strategy, and desired outcomes.

Key criteria:

a. Mapping between data points and reporting frameworks, enabling reporting automation

b. Consolidation of data at various levels up through the organization hierarchy

c. Reported numbers that are traceable back to calculation methodology and source data

d. Designed in a way to support a single "source of truth" for data

What are the business considerations for ESG reporting?

Read more.

New technology solutions are emerging to help organizations drive value across their sustainability and ESG agendas

1 Acceleration of blockchain technology to support carbon ledgers and reduction of plastic waste

2 Focus on **tracking emissions to the product batch level** to be able to specify emissions in B2B transactions and regulations

3 Improving **sensor and remote-monitoring technology** (e.g., aerial and satellite) to quantify direct emissions more accurately

4 Increasing focus on **supply chain tracking and management technology,** as reporting on scope 3 emissions becomes more prevalent and important

5 Embed **AI capabilities** into carbon management systems to accelerate operational decarbonizations

6 Significant investments in **physical and transition risk models and data provision** to support the style of reporting required by the Task Force on Climate-related Financial Disclosures

Sustainability and ESG in business

Explore the latest insights and trends.

04 | HOW EY TEAMS CAN HELP ACCELERATE YOUR JOURNEY

Comprehensive EY capabilities are ready to help accelerate your sustainability and ESG journey.

The EY organization's global, multidisciplinary footprint enables us to assemble the right teams, share leading practices from around the world and deliver the latest insights that allow us to address your sustainability and ESG needs.

EY services was recently recognized as a global leader in sustainability and ESG services, outpacing other firms in the 2022 Verdantix Consulting Green Quadrant.

The EY organization scored well across several categories, with highest scores in Strategy and Programs, Sustainability and ESG Target Setting, Climate Change Strategy and Risk, and Sustainability and ESG Due Diligence.

VERDANTIX
Green quadrant for ESG and sustainability consulting 2022

Capabilities (y-axis) vs Momentum (x-axis)

Innovators | Leaders
Challengers | Specialists

EY, ERM, PwC, Arcadis, WSP, Accenture, Bain, BCG, Deloitte, Jacobs, KPMG, McKinsey, AECOM, Infosys, Wipro

Source: Green quadrant: ESG and sustainability consulting
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25+ years of work on sustainability and ESG-related matters

150+ US clients served in the last two years on sustainability and ESG materiality, strategy and reporting

40+ US boards of directors engaged in the last year to support board education and present recommendations

250+ US professionals fully dedicated to serving sustainability clients

50+ client insight sessions delivered by our US team in the last six months

2,000+ global professionals fully dedicated to providing sustainability services

EY teams have worked with clients across industries to drive successful sustainability and ESG-driven IT transformations

Client

Information technology company – US$16b+

Areas of support

An EY team was engaged to assist with a process mapping and controls workstream for a comprehensive set of environmental metrics (scopes 1, 2 and 3 GHG emissions) across the organization's international operations. In addition, the EY team supported the organization to define its control governance framework over ESG reporting through mapping ESG controls against the Committee of Sponsoring Organizations (COSO) internal control framework and by assessing ESG governance maturity.

Outcomes

▸ ESG metrics identified and prioritized

▸ Process flowcharts and associated risks and controls developed for each metric leveraging the newly procured ESG reporting platform

Client

Oil and gas company – US$340b+

Areas of support

EY and Microsoft teams are working with the client to address end-to-end carbon management. Our work includes:

▸ Provide robust, near-real-time reporting sufficient to run the business from a carbon intensity perspective

▸ Leverage near-term investments to lay the foundation for transformational digital enablement

▸ Center solution development and infrastructure around the science

Outcomes

▸ An integrated carbon management solution that leverages a carbon data hub and carbon intensity meta-model and uses AI to suggest opportunities for improvements

Client

Petrochemicals company – US$50b+

Areas of support

EY and Microsoft teams engaged with the client to aid in the development of a solution to track the use of recycled feedstock, the use of renewable energy and the savings to target for other key outputs overtime through sustainability certification. Through this engagement, the EY team was able to leverage the Microsoft Power Platform and develop a certification validation system that legitimized the calculation and recording of the company's positive environmental impacts. This data subsequently supports the positioning and pricing of the client's premium green products.

Outcomes

▸ Align with the world's most stringent measure of sustainability for its products

▸ Establish certification solution across the client's preferred ecosystem

Keep reading

How EY teams can help

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