KPMG

ESG Compliance for Technology



October 2025

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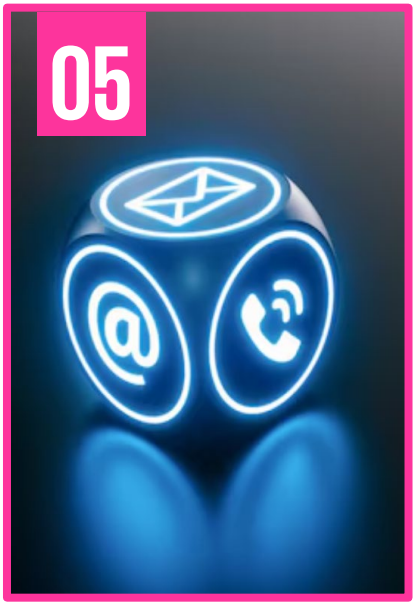
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The Concept of ESG: What It Means For Companies

In and sustainable corporate conduct, especially within the technology sector.

Environmental considerations now demand that companies manage their energy consumption more efficiently, particularly in data centers, while also addressing the growing challenge of electronic waste and reducing their carbon footprint across product lifecycles.

On the social front, technology firms are increasingly expected to uphold human rights, champion diversity and inclusion across their global workforce, protect user data privacy, and engage meaningfully with the communities in which they operate.

Governance excellence is equally critical, requiring ethical leadership, transparency in reporting, proactive cybersecurity strategies, and strict adherence to compliance and regulatory frameworks.

Understanding these ESG pillars is essential for technology companies



Environmental (E)

- **Sustainable practices**: Implementing energy-efficient data centers, reducing e-waste, and promoting sustainable supply chain practices.
- Carbon footprint: Measuring and reducing greenhouse gas emissions from operations and supply chains



Social (S)

- **Diversity and inclusion:** Fostering a diverse and inclusive workplace culture, promoting equal opportunities, and addressing bias in AI systems.
- **Data privacy and security**: Protecting user data, ensuring transparency, and complying with data protection regulations



Governance (G)

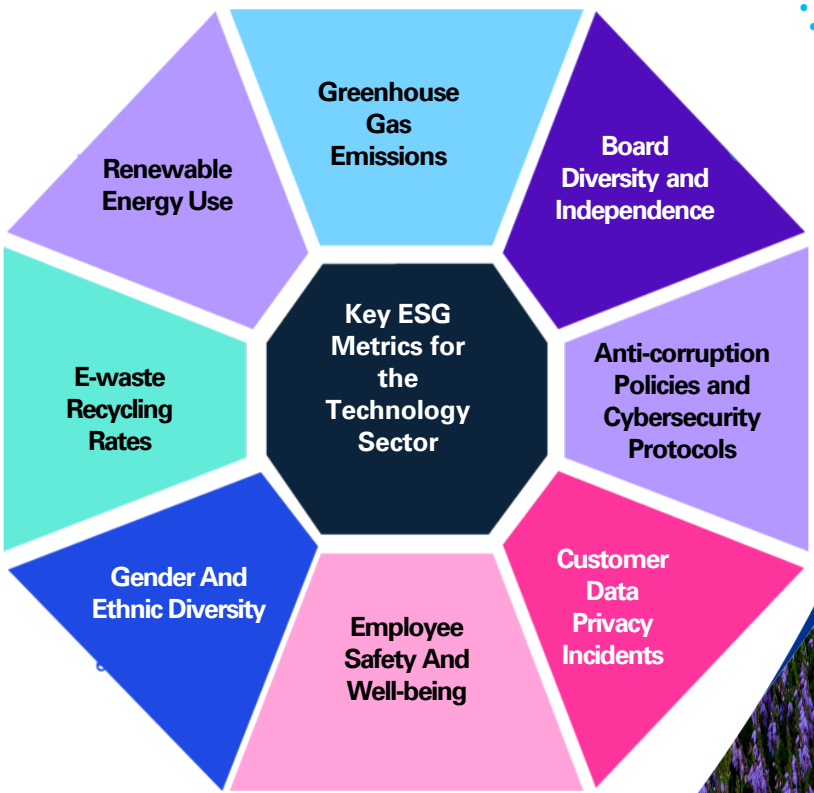
- **Board composition**: Ensuring diverse and independent board members, with relevant expertise.
- **Executive compensation**: Aligning executive pay with ESG performance and long-term sustainability.
- **Risk management:** Identifying and managing ESG-related risks, including cybersecurity threats.

Key ESG Metrics for the Technology Sector

As the demand for ethical and sustainable business practices intensifies, companies are increasingly measured not just by financial performance but by how well they align with ESG standards. ESG metrics serve as critical benchmarks that help stakeholders evaluate how effectively a company manages environmental risks, promotes social responsibility, and upholds strong governance structures.

Across industries where rapid innovation, global reach, and complex digital ecosystems are the norm, these metrics provide insight into how a company's operations impact the environment, how it supports people and communities, and how transparently and ethically it is governed.

Establishing clear, reliable ESG indicators is essential not only for compliance but also for building stakeholder trust, attracting responsible investment, and securing long-term resilience in an increasingly regulated and conscious market.



ENVIRONMENTAL

1

AI & IoT for Emission Tracking

Artificial Intelligence (AI) and the Internet of Things (IoT) are transforming how we monitor and reduce carbon emissions. IoT sensors, deployed across factories, vehicles, and cities, collect real-time data on pollutants and energy use. AI analyses this data to uncover emission patterns, forecast future trends, and suggest actionable strategies to minimize environmental impact. These insights enable organizations to boost operational efficiency, comply with environmental regulations, and meet sustainability targets.

Smart Grids for Energy Efficiency

Smart grids modernize traditional energy systems by integrating digital communication, AI, and IoT technologies. These intelligent networks dynamically balance electricity supply and demand, improving energy efficiency and grid reliability. AI algorithms optimize distribution based on usage patterns, while IoT sensors enable real-time adjustments. This leads to reduced energy waste, lower reliance on fossil fuels, and more effective integration of renewable energy sources

Predictive Analytics for Waste Reduction

Predictive analytics empowers industries to minimize waste and optimize resource utilization. By leveraging AI to analyze data from production lines, inventory systems, and consumer behavior, businesses can forecast demand, streamline operations, and prevent overproduction. This proactive approach reduces material waste, food spoilage, and emissions, supporting both sustainability goals and cost savings.



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2

SOCIAL

Smart Wearables & Sensors for Worker Safety

Wearable technology and IoT-enabled sensors are revolutionizing workplace safety by enabling real-time monitoring of environmental hazards and worker health. Smart helmets and vests can detect threats such as gas leaks, heat stress, and fatigue, while IoT sensors track temperature and humidity

Mobile Platforms for Community Engagement

Mobile platforms are transforming community engagement by opening new ways for people to participate in social development and local governance. Through social apps and messaging platforms, citizens can connect with local governments, advocacy groups, and social services.

Digital Education for Underserved Areas

Edtech is helping close the education gap by providing accessible and flexible learning opportunities to remote and underserved communities. E-learning platforms offer free or low-cost courses and certifications, making skill development more attainable.

AI-Driven Inclusive Hiring

AI is transforming recruitment by promoting fairness and minimizing unconscious bias, leading to more diverse and inclusive hiring practices. Through unbiased resume screening, candidates are evaluated based on their qualifications rather than personal characteristics.

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GOVERNANCE

3

Automated Reporting for Data Transparency

Automated reporting tools use AI to collect, process, and validate ESG data across operations, generating real-time reports on emissions, labor practices, and compliance. By standardizing metrics to meet regulatory and global frameworks, they enhance transparency and provide stakeholders with reliable, verified information..

Cybersecurity Solutions for ESG Data Protection

As ESG data becomes more valuable and regulated, strong cybersecurity is essential. Secure storage, encryption, and access controls help protect data integrity and prevent cyberattacks. Blockchain can further enhance authenticity and build stakeholder trust.



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Positive and Negative Use Cases of ESG

Environmental, Social, and Governance (ESG) compliance is increasingly vital as organizations deepen their reliance on digital infrastructure. With rising expectations from regulators, investors, and consumers, companies must now balance innovation with sustainability, ethics, and accountability.

This section outlines three (3) key ESG use cases across the three pillars: Environmental, Social, and Governance, highlighting the challenges and opportunities shaping both global and local technology landscapes.

01 Greenhouse Gas Emissions

02 Customer Data Privacy Incidents

03 Board Diversity and Independence

(ESG) considerations have evolved from a compliance exercise to a fundamental governance priority. Organizations can no longer treat ESG as a standalone reporting function it must be deeply embedded in corporate strategy, risk management, and operational decision-making. Effective governance requires oversight of ESG risks and opportunities, ensuring alignment with stakeholder expectations, regulatory demands, and long-term business resilience.



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POSITIVE USE CASES

Greenhouse Gas Emissions

A leading consumer goods company continues to chart a decisive course toward its 2040 net zero ambition, having already reduced its Scope 1 and 2 emissions by 31 percent since 2010. Its commitment to sustainability is further underscored by a full transition to renewable electricity across its major operations, marking clear progress in its climate journey

Customer Data Privacy Incidents

A prominent financial institution has reinforced its cybersecurity posture by investing in real-time monitoring systems, comprehensive staff training, and strict adherence to regulatory standards. These efforts have not only strengthened its defenses but also ensured alignment with key data protection and financial compliance frameworks



Board Diversity and Independence

A leading regional bank has deepened its ESG governance by adopting internationally recognized frameworks such as TCFD and GRI, achieving 50 percent female representation on its board, and publishing independently audited sustainability reports. These actions reflect a strong commitment to transparency and alignment with evolving global standards, including IFRS S1 and S2.

NEGATIVE USE CASES

Greenhouse Gas Emissions

A major manufacturing company is facing growing scrutiny over its environmental sustainability efforts, as its Scope 2 emissions have risen by 42.75 percent. The continued reliance on non-renewable energy sources such as natural gas and diesel raises concerns about the pace and effectiveness of its transition to cleaner, more sustainable alternatives.

Customer Data Privacy Incidents

A major telecommunications provider recently experienced a cybersecurity breach that compromised customer data across multiple countries. The incident highlights the growing risk of systemic data leaks in the telecom sector, especially when intrusion detection systems are weak and core infrastructure is not adequately secured

Board Diversity and Independence

A major agribusiness firm's board includes only one woman among five independent directors, revealing a gap in gender diversity. This raises concerns about governance strength and ESG commitment. A more inclusive board could improve decision-making and align with global standards.

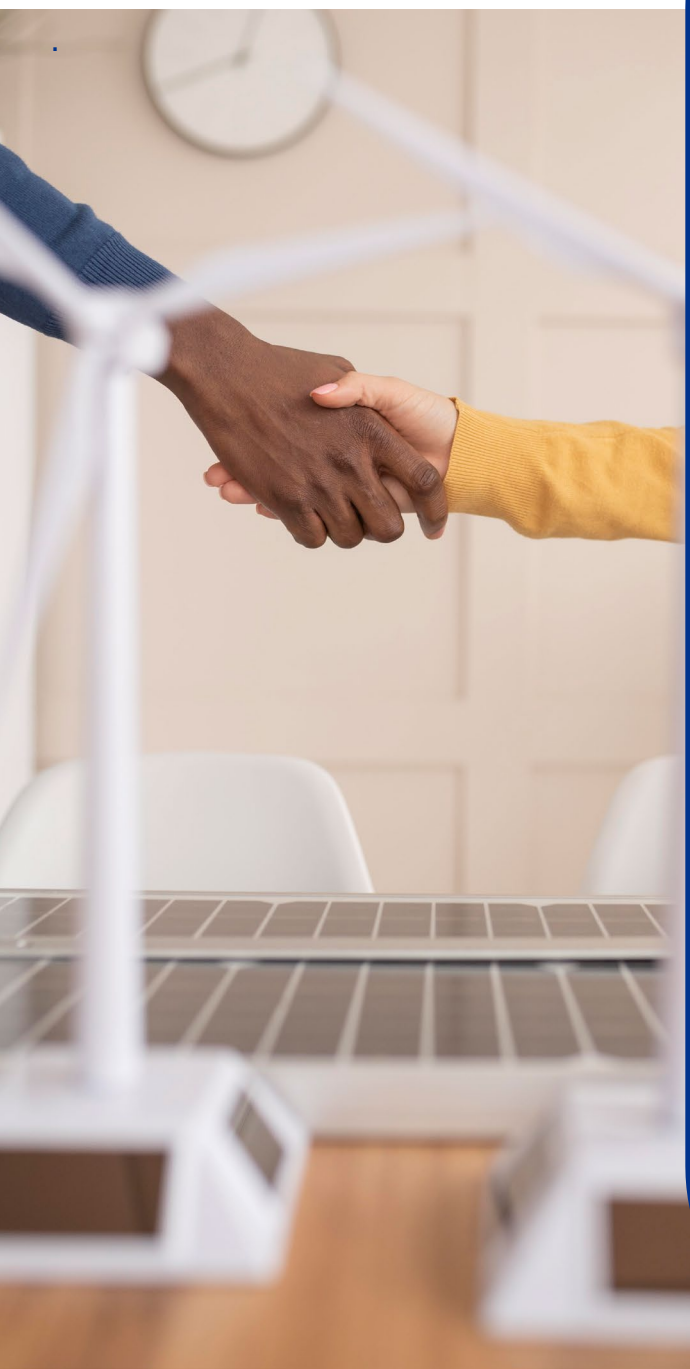
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How KPMG Tech Risk Can Help
Driving ESG Objectives and Transformation

KPMG Tech Risk plays a vital role in advancing ESG objectives by integrating risk management, governance, and compliance with sustainability priorities. As organizations face increasing regulatory scrutiny and stakeholder expectations, KPMG Tech Risk ensures that technology and data are aligned with evolving ESG standards. By strengthening data governance strategies, we support the accuracy, traceability, and auditability of ESG-related data used in reporting and strategic decision-making.

Through comprehensive risk assessments and enhancements to internal controls, KPMG Tech Risk helps organizations identify and mitigate ESG-related risks such as climate impact, data transparency, and ethical supply chain practices.

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ESG Analytics Portal:

A centralized, self-service dashboarding platform can help, by allowing different stakeholders to experience and dissect all relevant ESG data.

Real-time Monitoring:

Technology enables continuous monitoring of ESG performance, allowing companies to track progress and identify areas for improvement. Our team can automate compliance monitoring and reporting, reducing the risk of penalties and reputational damage. We can develop bots to track near real time ESG performance across the company enabling senior management to monitor is progress in achieving ESG goals.

Standardized Reporting:

With our vast experience in data analytics and visualization, our Tech Risk team can assist in development and automation of reports that meet specific regulatory requirements and international standards, ensuring consistency and comparability.

How KPMG Tech Risk Can Help
Driving ESG Objectives and Transformation

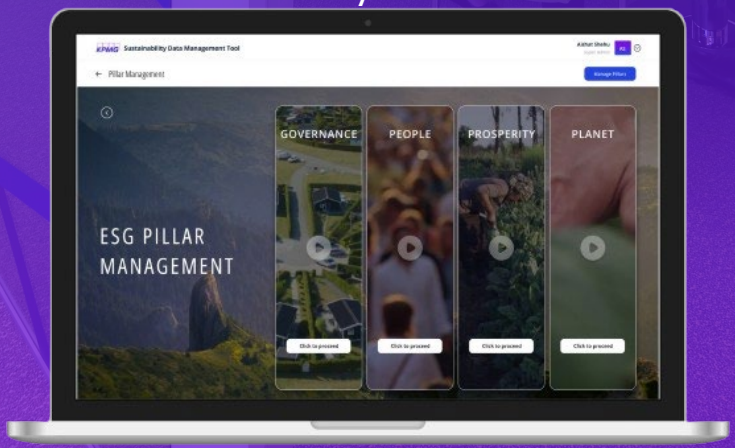
KMPG has developed a Sustainability Data Management Tool

Client Challenge

- Adapting to rapidly changing ESG regulations.
- Identifying actionable insights from complex ESG metrics.
- Managing and verifying large volumes of ESG data.
- Ensuring data quality and consistency across departments.
- Aligning ESG initiatives with operational and financial goals.

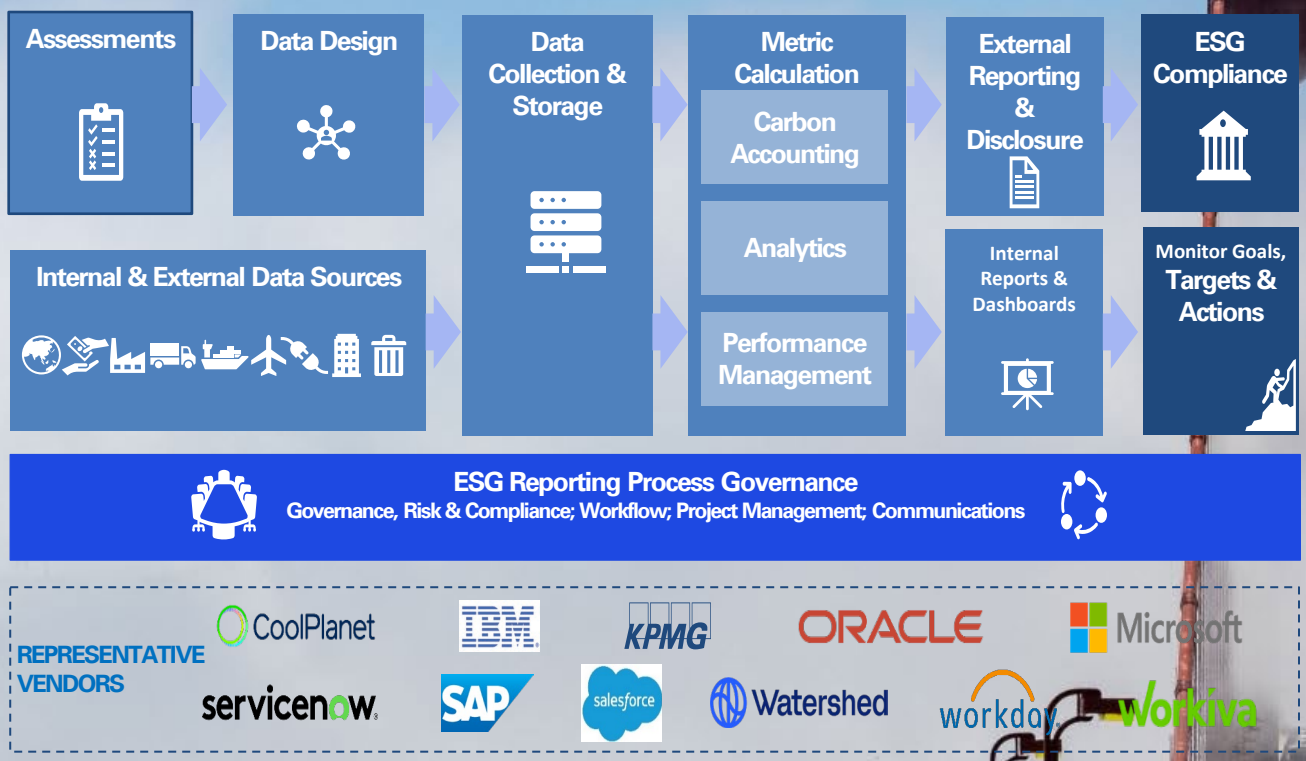
Benefits of the Platform

- Helps organizations identify and proactively address ESG risks to safeguard their reputation and ensure long-term resilience.
- Identifies opportunities to optimize resources, reduce waste, and achieve cost savings, contributing to more sustainable operations.
- Supports businesses in navigating complex ESG regulations, reducing the risk of penalties and maintaining compliance with evolving standards.
- Strengthens relationships with customers, employees, and communities by showcasing transparency and a strong commitment to ESG values.
- Builds investor confidence by demonstrating a commitment to sustainability, improving access to capital and securing favorable financing term
- Differentiates organizations in the market by aligning business practices with ESG priorities, appealing to customers and partners who value sustainability.



Technology capabilities for ESG Reporting

Tools from many vendors, and a company's existing technology, can be combined into a solution for ESG reporting. Automation can obtain consistent data & metrics to pinpoint sustainability issues in real-time. Tech-enabled governance of the reporting process can manage complexity and risk.



REPRESENTATIVE VENDORS

CoolPlanet · IBM · KPMG · ORACLE · Microsoft · servicenow · SAP · salesforce · Watershed · workday · Workiva

Closing Thoughts

At KPMG, our commitment to excellence starts with a clear vision of the result towards delivery of a high-quality assurance opinion or conclusion over your sustainability reporting. From the outset of the engagement, we work closely with your team to thoroughly understand your business, the specific quantitative & qualitative metrics that are required to be reported or if your reporting is voluntary.

At KPMG, we have capabilities tailored to the level of maturity of your sustainability reporting framework, whether you are just starting to establish your required ESG & Sustainability disclosures or assessing the current state of your ESG and sustainability reporting capabilities to having multiple years of reporting and assurance behind you

As ESG shifts from aspiration to necessity, technology companies must go beyond compliance to embed sustainability, social responsibility, and ethical governance into every aspect of their operations. The tech sector's growing influence brings increased scrutiny, from managing data center emissions and reducing e-waste to ensuring data privacy, workforce diversity, and ethical AI.

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