



Harnessing technology for the IFRS sustainability disclosure standards

The role of generative AI and digital transformation



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Foreword

The introduction of the International Financial Reporting Standards (IFRS) sustainability disclosure standards marks a transformative shift in corporate reporting, integrating sustainability disclosures with financial performance. These standards demand transparency, granularity, and rigor, challenging organizations to rethink their reporting processes. Traditional methods—reliant on manual processes, siloed data, and fragmented systems—are no longer sufficient. Companies must embrace technology as a strategic enabler to meet these demands, with generative AI (GenAI) and advanced IT infrastructure leading the charge.

Sustainability reporting requires organizations to aggregate and report vast amounts of financial and non-financial data, often sourced from disparate systems. This complexity presents several critical challenges:



Data availability and integrity
Sustainability metrics, such as Scope 3 greenhouse gas (GHG) emissions, often span multiple departments, supply chains, and external sources, making data consolidation a considerable task.



Standardization issues
Unlike financial reporting, which follows established accounting principles established over many years, sustainability data, metrics and definitions lack uniformity across entities, complicating comparison and benchmarking.



Manual processes and compliance risks
Many organizations still rely on spreadsheets and manual inputs, increasing the risk of errors, inconsistencies, and non-compliance.

Addressing these challenges requires strategic investment in robust IT infrastructure and advanced technologies that streamline data collection, enhance accuracy, and support compliance. These complexities are further amplified when the reporting entity is a group comprising multiple subsidiaries across diverse industries and jurisdictions, each subject to distinct regulatory requirements.



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Building a digital backbone for compliance

A future-ready IT infrastructure is essential for integrating sustainability reporting (measure to report) with financial reporting (record to report). At the core of this integration are centralized data platforms, which serve as a single source of information by consolidating financial and sustainability data. These platforms enable real-time data sharing between sustainability and finance teams, support multi-dimensional reporting aligned with relevant standards, and ensure robust data governance to maintain integrity and compliance.

Advanced analytics and automation further streamline processes and reduce manual effort. Automation tools, such as Internet-of-Things (IoT) sensors and application programming interfaces (APIs), collect real-time data from operational systems, supply chains, and external sources. Predictive analytics powered by machine learning forecast sustainability metrics like emissions and energy use, assessing their financial impact. Meanwhile, workflow automation reduces inefficiencies by handling repetitive tasks such as data validation and report generation, improving accuracy and speed.

To enhance data integrity, blockchain technology creates immutable records of data transactions, ensuring transparency and traceability. It provides

stakeholders with a verifiable audit trail for sustainability and financial disclosures, simplifies the audit and assurance process by guaranteeing data accuracy, and enables real-time reporting through access to verified information.

Meanwhile cloud infrastructure offers the scalability, flexibility, and cost efficiency needed for an evolving reporting landscape. Cloud-based solutions support the growing volume of sustainability and financial data, enable real-time collaboration across geographies and functions, and reduce the costs associated with maintaining on-premises systems while improving accessibility. Together, these IT components create a foundation for seamless, reliable, and future-proof sustainability and financial reporting integration.



GenAI: A transformative force in reporting

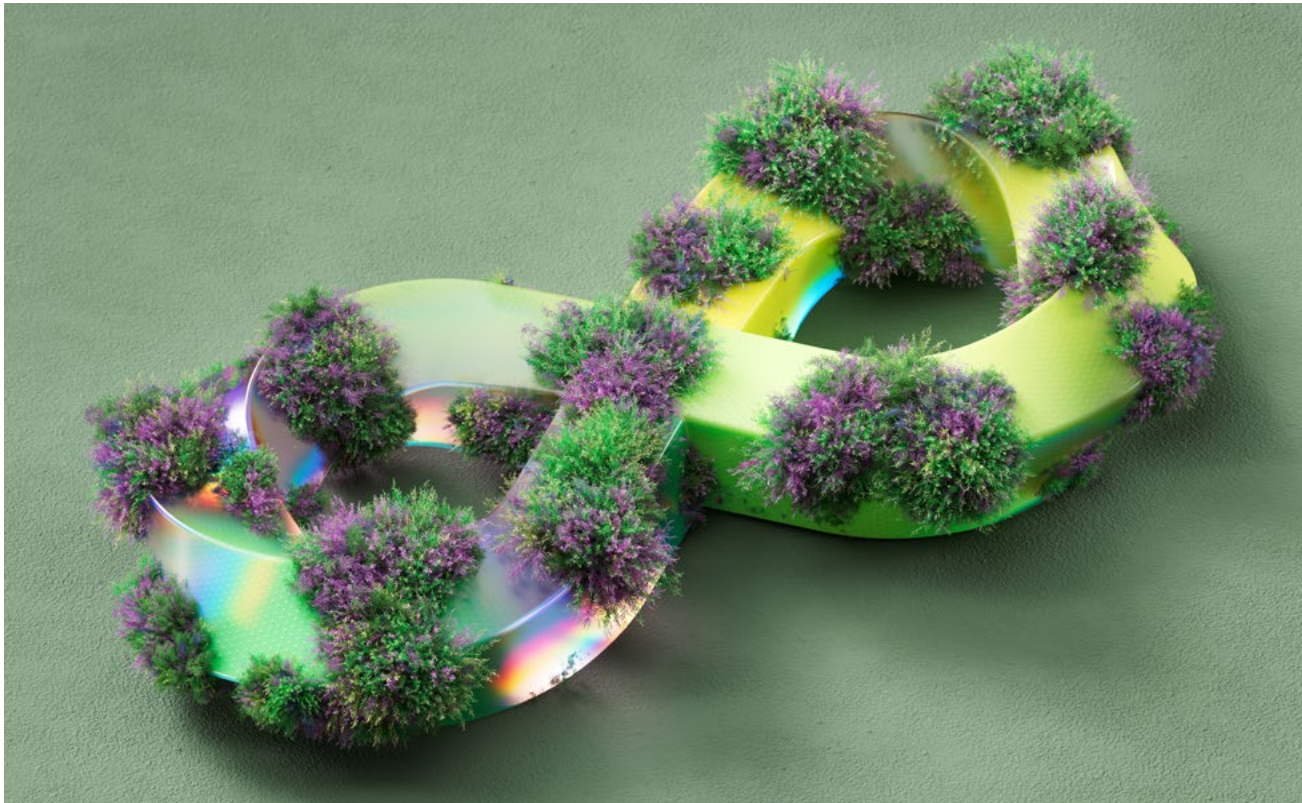
While traditional IT systems enhance reporting infrastructure, GenAI represents a transformative leap in sustainability reporting. One of its most significant contributions is automating data collection and validation, addressing one of the most labor-intensive aspects of reporting. GenAI extracts data from unstructured sources such as PDFs, emails, and reports, validates accuracy by cross-referencing historical trends and external benchmarks, and even predicts missing data using advanced modeling to ensure comprehensive reporting.

Beyond automation, GenAI enhances scenario analysis and risk modeling, which are crucial for assessing climate-related risks. By simulating complex scenarios—such as a 2°C warming trajectory or policy shifts—it provides more accurate projections. It also identifies hidden risks, including supply chain vulnerabilities and regulatory exposures, and generates actionable insights to help decision-makers prioritize mitigation strategies.

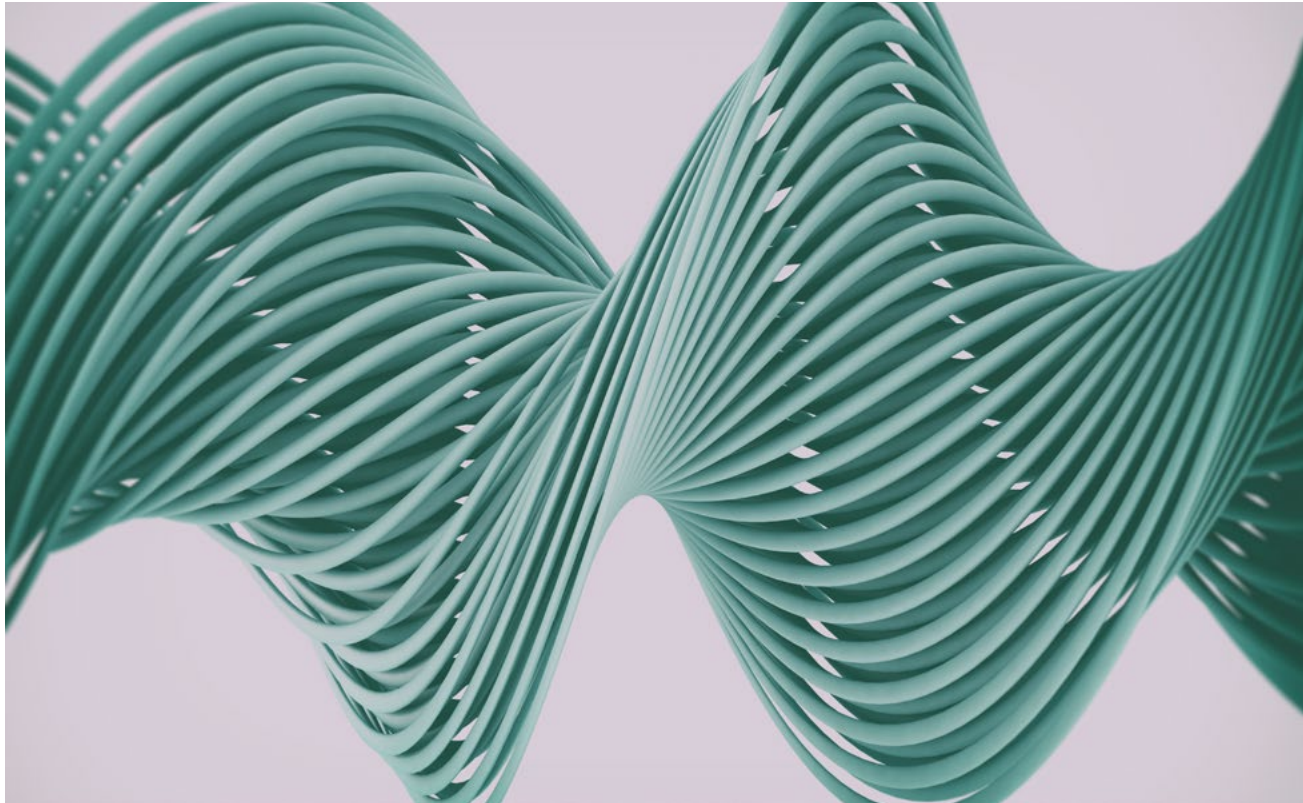
When it comes to disclosure reporting, GenAI streamlines the process by drafting content aligned with frameworks like IFRS and European Sustainability Reporting Standard (ESRS), ensuring compliance by cross-checking disclosures against regulatory

requirements, and personalizing stakeholder communication based on audience preferences. This significantly reduces the manual effort required while enhancing accuracy and relevance.

Finally, GenAI drives continuous improvement in sustainability reporting by monitoring key performance indicators in real time, providing early warnings, and generating insights for innovation—such as identifying new product opportunities or operational efficiencies. Moreover, its ability to enable dynamic reporting through interactive dashboards fosters greater stakeholder engagement, ensuring that sustainability efforts remain adaptive and forward-looking.



Mitigating challenges and paving the way for robust reporting



While the potential of GenAI and advanced IT solutions is immense, their integration into compliance frameworks is not without challenges:

- **Data privacy and security:** AI models require vast datasets, raising concerns about confidentiality and regulatory scrutiny.
- **Accuracy and bias risks:** AI must be carefully trained to prevent the generation of misleading or noncompliant disclosures and to mitigate the risk of greenwashing concerns
- **Integration with legacy systems:** Many organizations operate on outdated IT infrastructure, requiring phased adoption strategies.

To address these risks, companies should adopt a structured approach to digital transformation, starting with a readiness assessment and a phased implementation plan.

The adoption of IFRS sustainability disclosure standards is not merely a compliance exercise; it is a strategic opportunity to modernize corporate integrated reporting. Organizations that proactively leverage technology—especially GenAI and advanced IT infrastructure—will gain a competitive edge, enhancing both regulatory compliance and strategic decision-making. However, successful implementation requires more than just technology investment; it demands a cultural shift toward digital integration, data governance, and continuous innovation.

As the regulatory landscape evolves, companies that act now will be better positioned for sustainable growth in an increasingly transparent and data-driven world. Technology to support sustainability reporting is no longer a nice-to-have—it is the foundation upon which future-ready reporting will be built.

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KPMG serves the diverse needs of businesses, governments, public-sector agencies, not-for-profit organizations, and the capital markets.

Our commitment to quality and service excellence underpins everything we do. We strive to deliver to the highest standards for our stakeholders, building trust through our actions and behaviors, both professionally and personally.

Our values guide our day-to-day behavior, informing how we act, the decisions we make, and how we work with each other, our clients, and all our stakeholders. Integrity: We do what is right. Excellence: We never stop learning and improving. Courage: We think and act boldly. Together: We respect each other and draw strength from our differences. For Better: We do what matters.

Our purpose is to inspire confidence and empower change. By inspiring confidence in our people, clients and society, we help empower the change needed to solve the toughest challenges and lead the way forward.

KPMG’s Impact Plan guides our commitments to serving our clients, people and communities across four categories: Planet, People, Prosperity, and Governance. These four priority areas assist us in defining and managing our environmental, social, economic and governance impacts to create a more sustainable future. We aim to deliver growth with purpose. We unite the best of KPMG to help our clients fulfil their purpose and deliver against the United Nations Sustainable Development Goals, so all our communities can thrive and prosper.

We are dedicated to delivering growth with purpose, helping our clients achieve their goals, and advancing sustainable progress to ensure that all our communities thrive. Empowered by our values, and committed to our purpose, our people are our greatest strength. Together, we are building a values-led organization of the future. For better.

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