Foreword

Data and technology initiatives related to ESG are the latest disruptors in the market. One of the key success factors in defining and executing an efficient ESG strategy is the availability of relevant information across the enterprise at the right place, right time and in the accurate format. While organisations are taking multiple initiatives for ESG compliance, IT is constantly improvising data management processes that will support these initiatives. It is important to establish appropriate data governance processes that will support the successful alignment of ESG initiatives. Data governance can act as an enabler for organisations to lay the foundation for appropriate data models, good quality data and relevant data management processes to support them in their ESG journey. This paper discusses some of the key concerns related to ESG which could be addressed by establishing governance processes around enterprise data.

ESG and its relevance

Businesses today are adapting to a changing world where the success of a company is no longer solely determined by its financial results. Increasing importance is being given to non-financial metrics, and this is where ESG comes into picture. ESG, at its core, is a means by which companies can integrate sustainability into their business strategy to create long-term value and identify potential risks to the business. ESG comprises a set of factors used to measure the non-financial impacts on the wider stakeholders consisting of customers, employees, regulators, investors, partners and society at large.

Environment

The environmental aspect focuses on a company's environmental impact and management practices. It covers aspects like carbon emissions, renewable energy, biodiversity and land use, waste taxes, plastic taxes, etc.

Social

The social pillar of ESG describes the relationship between a company and its stakeholders, which include employees, supply chain partners and the communities in which the company operates.

Governance

Governance entails accurate and transparent accounting methods, pursuit of integrity and diversity in selecting leadership and accountability to shareholders, shareholder rights, types of internal controls for tax transparency, business ethic, etc.
Why are organisations considering ESG?

The business landscape has transformed significantly in recent years, with more and more importance being given to the way in which companies carry out their business. It is becoming increasingly apparent that there is a clear preference among stakeholders to be associated with an organisation that carries out business in a responsible manner. Initially the drivers for ESG strategy across organisations came only with compliance requirements but this approach is gradually changing to focus more towards optimisation and efficiency. A common example of companies adapting ESG into their business goals across various sectors is the net zero ambition.

This change in perspective has been driven by a number of factors:

- **Changing expectations**: Both employees and customers are becoming increasingly aware of sustainability-related issues and have made it clear that they expect the organisations to meet ESG commitments and conduct business responsibly. The proof or validity of this expectation is fulfilled through various reports for which qualitative and quantitative data plays a vital role.

- **Investor priorities**: Investors recognise that ESG is a differentiator that assures better returns on investment while building resilience against business disruption. This has led investors to encourage their investees to integrate ESG into their businesses. While integrating existing processes with ESG, organisations have to consider data governance because inaccurate and inconsistent data will not be helpful for conveying the right message.

- **Regulatory action**: In-keeping with global efforts to address issues like climate change and sustainability, there is increased scrutiny from regulators and heightened ESG disclosure requirements. For various reporting requirements, organisations spend a lot of time in analytics and reconciliations. This can be avoided by having right governance controls in place to support the overall value of data.

- **Need for innovation**: According to the recent directives given by governments of various countries and regulatory bodies, many organisations have declared their target of reaching net zero by 2030. This calls for innovation in the current business processes as things need to be done differently to reduce the emissions and achieve this target. Any innovation needs data-driven assessment of the current state and progress monitoring.
Data management and governance as an enabler for addressing ESG needs

Businesses across sectors are intertwined with environmental, social and governance issues. Addressing these issues requires a comprehensive approach. Doing so will allow companies to address these problem areas adequately and will pave the way for value creation in the long term. Some examples of measures businesses have taken to align their activities to ESG goals are given below:

- Improving waste management to reduce its impact on health and environment, by adopting measures such as recycling, increased digitisation (barcode for product usage instructions) and life cycle assessments of products. A central repository of waste information and real-time updation of records will help to optimise the waste reduction.
- To achieve the net zero target, organisations are putting effort into creating a carbon lake which acts as a hub for the emissions data along with an overarching data governance framework for defining the required policies and processes. It ensures data availability, traceability and accuracy in regulatory reporting to develop innovative ways to reduce carbon emission in the long run.
- Organisations are facing issues with data archival and data availability to support the business functions and integrate ESG in the credit risk appraisal process in order to measure a company’s resilience to identify industry-material ESG risks and to be able to make informed decisions while evaluating borrowers.
- Companies are promoting transparency throughout their supply chain, source products/materials from ethical suppliers and address concerns around product safety and quality to ensure good governance across all stakeholders. Building a central repository of product/material master and managing the lifecycle is critical to enable these initiatives.

The following sections talk about how some of these areas could be an organisation’s next data initiative for ESG.

Setting up data conduct

In order to identify relevant ESG issues for a particular sector or geography, organisations need to first understand the current state of emission, reuse, recyclability and clearly define the metrics and KPIs which will lay the foundation for collecting and calculating good quality data. It is important for any ESG initiative to define the underlying data and make it available for analysis.

Organisations need to conduct data discovery to establish data definitions across the enterprise. It has been observed that the first challenge many organisations are facing is to understand what data is required to drive the ESG initiative and whether they have that information available across the systems in the enterprise. The data discovery exercise will help them to take this first step and have a centralised business glossary with detailed definition of each business terms validations and the policies around it, which will set the organisation’s data standards as per regulatory reporting, public disclosures and other ESG data requirements.

Setting up a business glossary will help organisations standardise data terms as per the required critical data elements (CDEs). Metadata management programme offers creation of a KPI/CDE repository with consistent definitions and enrichment information, mapping technical and business data, etc. With an end-to-end programme in place, organisations will be aware of the critical KPIs/data elements, meaning (consistent across their ecosystem), schema, table, column where data is stored, etc.
The importance of data for valuable insights and powerful decision-making

It's critical for organisations to coordinate internally across departments and conduct regular internal audits wherein the data collected by one department is questioned, monitored and corrected as required, in order to ensure the highest quality data for ESG metrics. Good data governance is truly the foundation of quality data. As a part of data quality's best practices, organisations need to establish a data quality framework fit for their business model and future goals. With data quality programmes organisations will be able to increase the efficiency of ever-evolving data and provide deeper insights for decision-making.

Efficient data systems are important for companies, regardless of the stage of their ESG journey they are on. Monitoring end-to-end value chains for key processes like water recycling, water disposal, etc. requires management of the analytical landscape of the organisation. Companies that are beginning their ESG journey, usually lack robust metering systems. An absence of these systems make it important to have appropriate estimation and valuation techniques to optimally measure and manage their water resources. Larger companies with multiple units across geographies find it difficult to collate data for their various units. Master data management can help them standardise the process and enable uniform estimation systems which will ensure that the data collected is consistent and accurate.

The data for ESG is spread across the organisation and the challenge lies in the collation of data across departments to use it as a single source of truth. With a strong master data management one can develop a discipline to collate, unify and deduplicate the scattered data at a central repository. For example, a plant master will give the 360-degree view for all the emissions data of a plant or an asset master solution will help to provide the accurate picture of the process emissions from the assets installed in a manufacturing plant. Creating, managing and sharing this information across the enterprise's master data management services will provide a platform to enable business and IT to work together and support uniformity, accuracy, stewardship, semantic consistency and accountability of the enterprise's official shared master data assets.

Data for traceability

Retail and consumer companies are required to promote transparency throughout their supply chain, source products/materials from ethical suppliers and address concerns around product safety and quality to ensure good governance across all stakeholders. Companies should try and source data from reliable internal sources and turn to technology to enhance the coverage and reliability of value chain data from source to reporting systems along with data which spans beyond organisational boundaries.

Investors, too, must rely on data to ensure that the sustainable analysis of their portfolio holdings is robust. It is important to build trust in data by driving discovery, transparency and traceability of data (e.g. automated report to source traceability).

The right data lineage support can help organisations track errors, perform system migrations, bring data discovery and metadata closer together and implement process changes with less risk.

Strategic business decisions depend on data accuracy. Without good data lineage, it becomes challenging to track data processes and verify them. Data lineage enables users to visualise the complete flow of information from source to destination, making it easier to detect and fix anomalies.
Managing sensitive data

When social elements are taken into consideration, companies are required to collect and maintain data related to gender and racial balance, pay ratios, safe and inclusive working environment, employee growth and training programmes, etc. Most of the data for this purpose is categorised as sensitive personal data which requires consent and access management.

Using PwC’s data privacy and access framework will help in facilitating compliance with regulations such as the General Data Protection Regulation (GDPR), California Consumer Privacy Act (CCPA), Protection of Personal Information Act (POPI) and Personal Data Protection (PDP) bill. Organisations will be able to control data access by defining role-profile, attribute-based data access entitlement matrix and processes with predefined workflows. Designed policies on multiple data privacy and governance areas will establish governance controls and enforce ethical use of personal data. Operational roles such as data protection officer enforces compliance strategy across various business functions.
How data governance and management can help achieve ESG objectives

Businesses are facing several challenges due to the changing expectations from multiple stakeholders. Governments from across the globe are actively introducing new regulations and have announced upcoming compliance requirements.

PwC’s Enterprise ESG and Data Governance framework offers a comprehensive perspective to gauge the key ESG issues of an organisation with respect to its data governance capabilities and to design a comprehensive data governance roadmap that can fast-track adoption of standards and enable them to achieve synergies between growth and control.

PwC’s enterprise ESG and data governance (DG) framework

<table>
<thead>
<tr>
<th>Why to Govern?</th>
<th>ESG data program</th>
<th>ESG strategy and transformation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>ESG reporting</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Productivity</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How to Govern?</th>
<th>DG core areas block</th>
<th>Program management</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DG capability enabler</td>
<td>Data Stewardship</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lineage</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Access and ownership</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Innovation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>What to Govern?</th>
<th>DG foundation</th>
<th>Change management</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Data architecture</td>
<td>People and culture</td>
</tr>
<tr>
<td></td>
<td>Information lifecycle management</td>
<td>Policy, process and operating model</td>
</tr>
<tr>
<td></td>
<td>Acquisiton</td>
<td>Analysis</td>
</tr>
<tr>
<td></td>
<td>Structured</td>
<td>Apps and databases</td>
</tr>
<tr>
<td></td>
<td>Tools and technology</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sustainable value chain | Responsible investment | Control (efficiency) | Productivity | Trust | Brand equity | Performance | Lineage | Glossary | Master data | Metadata | Access and ownership | Quality | Security and privacy | People and culture | Policy, process and operating model | Tools and technology | Structured | Apps and databases | Master and reference data hub | carbon data lake | Unstructured
How data governance makes the overall ESG programme a success

Many organisations have mobilised their industry, clients and platform programmes to take action on ESG. They have also engaged in support plans to grow ESG-related business in their respective territories. There are ongoing efforts for consistent reporting, efficient ways of data collection, storage and governance. Furthermore, requirements to have an overall control and governance around data has also been observed.

While revamping the processes throughout the ESG journey, obstacles around data ownership, data quality, stakeholder roles and responsibilities, along with poor data visibility across systems have been observed. There is an overall challenge with data availability for reporting and analysis. With the pressure of committing to net zero, sharply lowering value chain emissions to alleviate unavoidable emissions via carbon offsets, it has become crucial to look into the foundation layers of which data governance is a key one.

We have partnered with various industry sectors for an end-to-end support on developing and designing their ESG report aligned with Global Reporting Initiative (GRI) data standards annually. We conducted assessments around supply chains, materiality, data definitions, data flow from source to reporting systems, etc. to determine a roadmap based on the gaps which have been identified. The expected outcomes provide a comprehensive ESG report, which impactfully articulates the client’s ESG story with supporting data for better audit and analytics. The report focuses on issues that investors are increasingly concerned with such as climate risk, diversity and inclusion, human rights and supply chain sustainability. The report has helped organisations to improve the client’s ESG ratings and score on various global platforms.

ESG is a driver for transformation for many organisations. Data governance will be a key enabler for managing this transformation well. PwC’s comprehensive data governance framework can help in making this a smooth journey.