



## Tech in Sustainability Series

### Navigating Asia Pacific's ESG landscape with data-driven technologies

In recent years, the Asia Pacific (APAC) region has increasingly seen companies place sustainability at the core of their business practice. Regulators, investors and consumers now expect companies to disclose their Environmental, Social and Governance (ESG) data transparently and accurately. In response to increasingly stringent ESG regulations and demands for transparency, companies are turning to technology-enabled reporting tools to ensure accuracy and transparency in reporting their sustainability performance.

Forecasts suggest that ESG reporting software sales are expected to accelerate especially with the heightened need for transparency – with an estimated compound annual growth rate (CAGR) ranging from 13% to 30% over the next five years<sup>1</sup>. Deloitte predicts that the tipping point for ESG software sales will be reached in 2024, with growth accelerating to over 30% and revenue climbing to over US\$1 billion<sup>2</sup>.

This report examines the ever-evolving landscape of ESG reporting in APAC and explores how companies can leverage emerging technologies to navigate the increasing demands for transparency and disclosure of ESG information. It also outlines a roadmap for companies to be equipped with the right tools and strategies, empowering them to embark on their digital sustainability journey.

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<sup>1</sup> <https://www.verdantix.com/report/market-size-and-forecast-esg-reporting-software-solutions-2021-2027-global>

<sup>2</sup> <https://www2.deloitte.com/xe/en/insights/industry/technology/technology-media-and-telecom-predictions/2024/esg-reporting-software-growth-prediction.html>

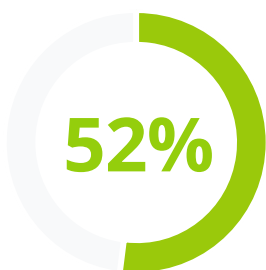




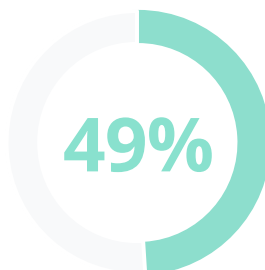
# Drivers of ESG Reporting in Asia Pacific

The growing importance of ESG is influencing preferences across a broad range of stakeholder groups and reshaping business models around the world. Consumers across APAC are showing higher levels of motivation, willingness, and eco-consciousness, which is driving the private sector to provide people with goods and services that enable them to put their eco values into practice. In particular, consumers across the region are increasingly prioritising sustainability in their purchasing decisions.

According to a Deloitte survey<sup>3</sup>:



52% of respondents from APAC have transformed their purchasing behaviours to respond to climate concerns



49% expressed support for new regulations aimed at climate protection

<sup>3</sup> <https://www2.deloitte.com/my/en/pages/about-deloitte/articles/new-deloitte-insight-eco-consciousness-in-asia-pacific-on-the-rise-urging-accelerated-adoption-of-sustainable-products-and-system-level-solutions.html>

Within the business community, market leaders are advancing ESG principles by setting new standards and expectations for transparency for their value chain partners. At the same time, regulators are mandating stricter and more comprehensive ESG disclosure

requirements. The shifting expectations across these stakeholders act as key drivers for companies to turn these growing concerns into areas of opportunity to enhance their transparency and sustainability performance.

Figure 1. Drivers of ESG Reporting



Source: Deloitte analysis

**Figure 2. Recent ESG Reporting Developments in APAC**

<b>Australia</b>		Implementation of ISSB-aligned reporting with a 'climate first' focus initially, is planned to commence from 2025. Australian Accounting Standards Board (AASB) has published the Australian Sustainability Reporting Standard (ASRS) Exposure Draft
<b>Mainland China</b>		China's three major stock markets announced new sustainability reporting guidelines for listed companies with requirements for larger cap and dual-listed issuers to begin mandatory disclosure on ESG topics in 2026
<b>Hong Kong SAR</b>		The Hong Kong Stock Exchange (HKEX) launched a public consultation in 2023, proposing mandates on ISSB-aligned reporting as early as 2025
<b>India</b>		Business Responsibility Sustainability Reporting (BRSR) mandatory for the top 1,000 listed companies. Vetting ISSB requirements for local applicability
<b>Japan</b>		Companies listed on the Prime Market should collect and analyse climate-related risks & opportunities. The Sustainability Standards Board announced it will finalise sustainability disclosure requirements based on the ISSB standards by March 2025
<b>Korea</b>		The Financial Services Commission (FSC) is in the process of establishing ESG disclosure standards. In collaboration with the Korea Sustainability Standards Board (KSSB), a draft of these standards is planned to be released in March 2024. The final version is expected to be officially announced by June 2024
<b>Malaysia</b>		Qualitative Mandatory Reporting. In February 2024, an online public consultation was held to discuss the use of ISSB standards
<b>New Zealand</b>		Full mandatory climate-related reporting from 2023. The requirement will apply to large publicly listed companies, insurers, banks, non-bank deposit takers and investment managers
<b>Singapore</b>		Mandatory climate-related disclosures (CRD) on a phased approach. From FY2027, all listed and certain non-listed issuers will be required to report and file annual CRDs, using requirements aligned with the ISSB
<b>Taiwan (China)</b>		Phased approach for mandatory reporting. The Financial Supervisory Commission (FSC) has released a roadmap for Taiwan listed companies to align with ISSB standards

Source: Deloitte analysis

APAC has seen changes in the development of ESG reporting frameworks which is strongly influenced by developments in the global ESG landscape. Sustainability reporting standards such as the newly launched International Sustainability Standards Board (ISSB) IFRS S1 and S2, as well as regulations from other regions such as the EU's Corporate Sustainability Reporting Directive (CSRD) and finalised climate disclosure rules by the US Securities and Exchange Commission (SEC), are gradually impacting companies across APAC. These new developments will introduce more stringent and comprehensive ESG reporting requirements. For example, companies should

anticipate the need to disclose Scope 3 greenhouse gas emissions, considering how it is a key requirement by the CSRD and ISSB's global sustainability disclosure standard. Companies will likely also need external assurance in the foreseeable future, followed by reasonable assurance in the long term, as required by the CSRD. Despite differences in these frameworks, a common throughline among all three is the need for reporting high-quality, granular ESG data in a manner that is accurate, verifiable and actionable<sup>4</sup>. However, meeting the necessary disclosure requirements and achieving quality disclosure still remains a challenge for companies in the region.

<sup>4</sup> <https://www2.deloitte.com/us/en/insights/environmental-social-governance/integrating-sustainability-into-business-strategy.html>





# Challenges faced in ESG Reporting

Despite APAC companies recognising the need for comprehensive and accurate disclosures, many struggle to achieve it. According to a Deloitte survey, 35% of executives expressed that the biggest challenge for companies in generating high-quality ESG reports is the accuracy and completeness of data, and 25% reported that the biggest challenge is access to quality data<sup>5</sup>. Further, a recent poll by Deloitte revealed that 60% of participants expressed that their organisations are still at a foundational level when it comes to ESG data management (see Figure 3) - relying on desktop tools like spreadsheets to support their ESG reporting

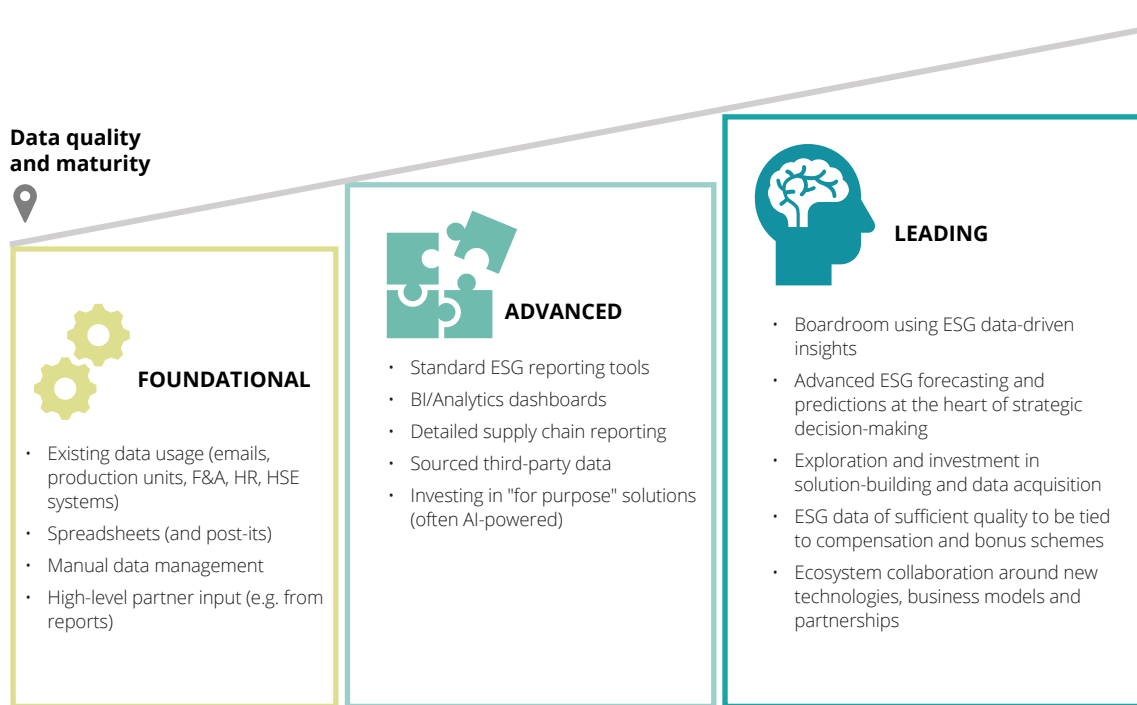
and data collection<sup>6</sup>. However, this trend is rapidly transforming as companies across the world are embedding ESG across their organisations, with more C-suite and senior management executives recognising that additional resources like technology are required to generate disclosures that satisfy the needs of key stakeholders and to better align with disclosure requirements. ESG data is evolving from static and backward-looking to dynamic and forward-looking, harnessing the digital revolution.

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<sup>5</sup> <https://www2.deloitte.com/content/dam/Deloitte/us/Documents/audit/us-survey-findings-on-esg-disclosure-and-preparedness.pdf>

<sup>6</sup> <https://deloitte.wsj.com/sustainable-business/build-a-platform-for-managing-reporting-on-esg-01647458153>

**Figure 3 : Many companies in APAC are still at a foundational level with regards to ESG data management.**

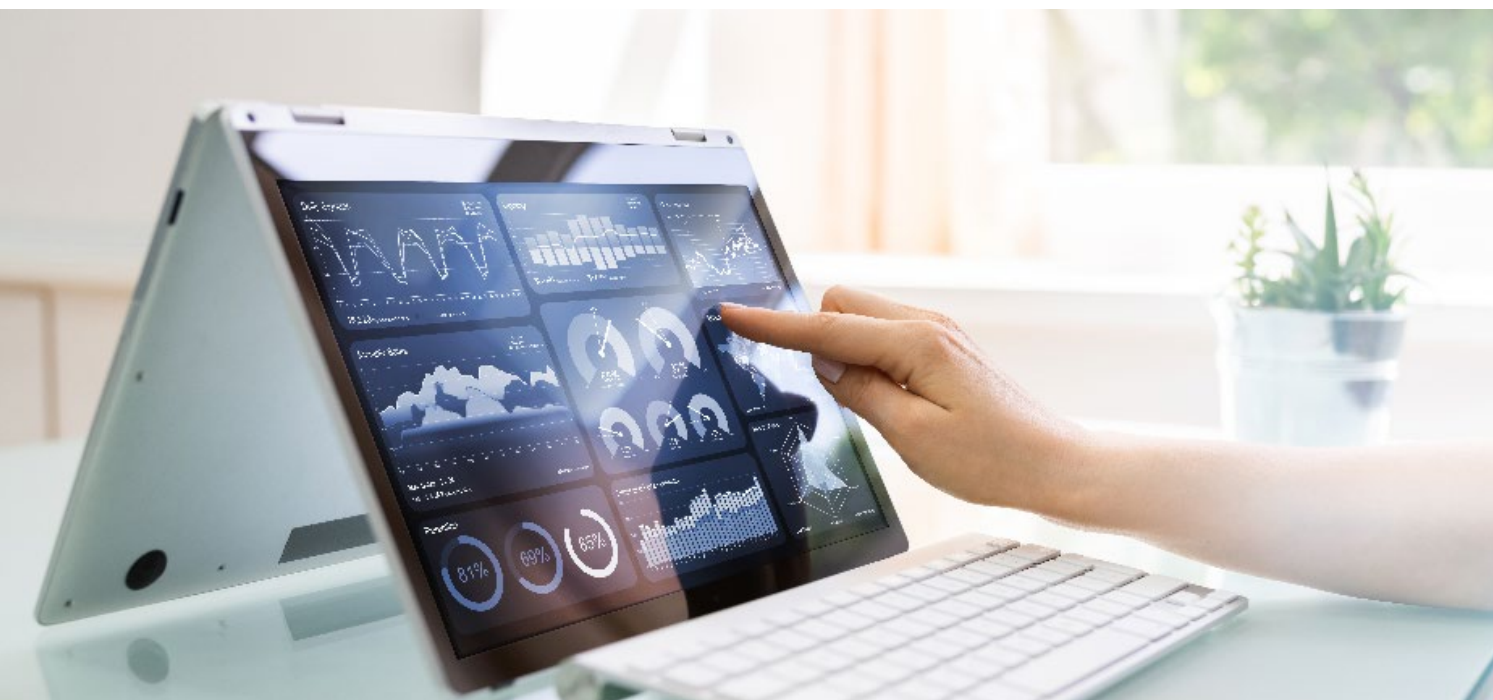


Source: Deloitte analysis

The need to adopt more sophisticated ESG technologies is accentuated by examining the status quo of ESG data management. Currently, ESG data is often sourced from multiple departments and stakeholders without standardisation, leading to data being high in volume, disparate and unverifiable. Collecting it with basic technologies such as spreadsheets becomes increasingly challenging and time-consuming as the organisation grows. This manual approach also increases the likelihood of errors. Report generation is often a tedious process and fails to represent the data in an impactful manner, that keeps the audience in mind, leading to key insights

being overlooked. Inaccurate data collection and reporting pose a significant risk, potentially resulting in regulatory compliance issues and allegations of greenwashing. Greenwashing has gained increased attention in recent times, with an increasing number of companies facing intense scrutiny for sustainability claims that lack sufficient backing and regulators are increasingly cracking down on ESG credentials<sup>7</sup>. Such situations not only jeopardise organisational credibility but also underscore the pressing need for robust and transparent practices in the realm of sustainability reporting and data management.

<sup>7</sup> <https://www2.deloitte.com/sg/en/pages/audit/articles/greenwashing-of-fin-products.html>

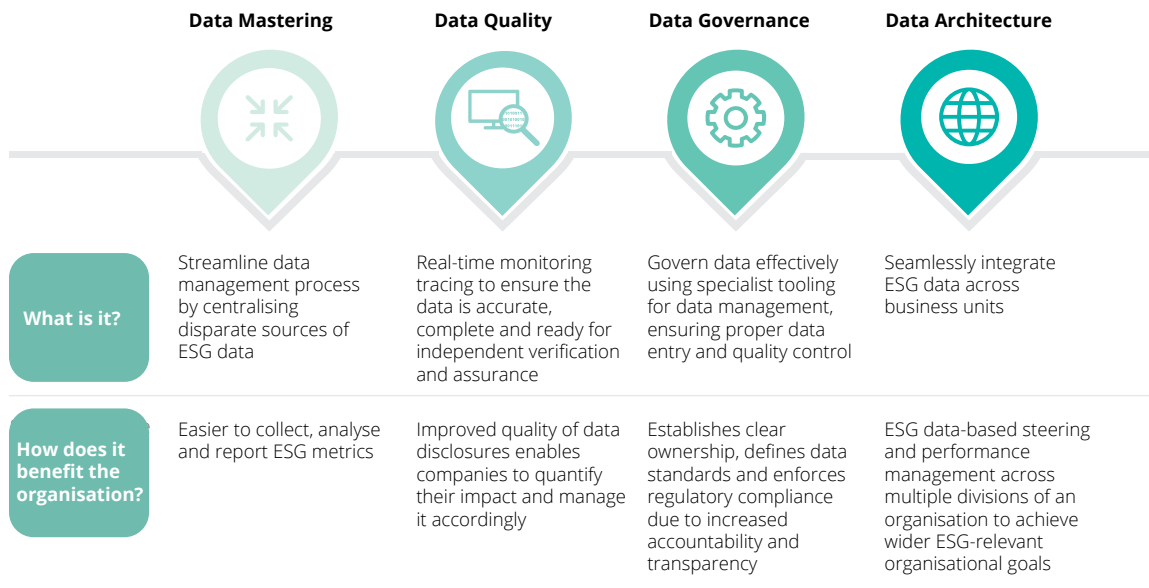


# The Role of Technology in ESG Reporting

Companies can address some of the aforementioned challenges in ESG reporting by harnessing new technologies and digital solutions to improve the data collection process, enhance accuracy, and communicate ESG data to stakeholders to enable

informed decision-making in a more effective manner. Figure 4 illustrates how technology can help organisations tackle common data management and reporting issues.



**Figure 4. How technology can transform ESG reporting**

Source: Deloitte analysis

A tech-enabled ESG reporting system not only simplifies the ESG reporting process but improves company-wide decision making. Figure 5 highlights

how technology can enhance multiple areas of the ESG reporting process – making it a valuable tool for organisations.

**Figure 5. Technology can support companies throughout the entire ESG reporting journey**

Data collection	Automation/Standardisation	ESG Value Chain	Reporting and KPIs
<ul style="list-style-type: none"> <li>Ease of internal data collection through input screens, formats and permitted ranges and automated calculation (e.g. emissions factors)</li> <li>ESG data collection from clients – similar ease of input and error checking</li> </ul>	<ul style="list-style-type: none"> <li>Automate data collection – make data collection standardised and comparable across clients (enforced standards &amp; metrics. E.g. XBRL sustainability data standards)</li> <li>Aggregate and analyse data to derive benchmarking indicators as a product for clients (with client consent)</li> </ul>	<ul style="list-style-type: none"> <li>Extend data collection to new areas of ESG reporting, e.g.:               <ul style="list-style-type: none"> <li>value chain emissions and supplier information,</li> <li>stress testing calculations,</li> <li>scenario planning impact assessment,</li> <li>internal carbon pricing costs,</li> <li>carbon market prices and indicators</li> </ul> </li> <li>Stand-alone IT solutions for clients, e.g. modelling tools</li> </ul>	<ul style="list-style-type: none"> <li>Enable real-time and automated periodic updates of information</li> <li>Report generation and ease of viewing results – graphic dashboards for material sustainability KPIs</li> <li>Reports highlighting areas of high risk or poor performance</li> <li>Drill-down and deeper tracking and analysis of information sources, traceability, and transparency of assumptions and risks</li> </ul>

Source: Deloitte analysis

Countries across APAC are becoming cognisant of the potential of technology in enabling countries to meet the new ESG regulatory requirements in their respective jurisdictions.

## India

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**Pratiq Shah**  
Partner, Sustainability &  
Climate  
Deloitte India

“With the new Business Responsibility and Sustainability Report (BRSR) Core disclosures and assurance requirements for the top 1,000 listed entities in India by market capitalisation, regulators seek comparable rigour for ESG data as they do for financial information. Technology can be a key enabler for companies in meeting the necessary requirements and demands for quality ESG data<sup>8</sup>.”

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## Australia

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**Jacquie Fegent-McGeachie**  
Partner, Sustainability &  
Climate  
Deloitte Australia

“The Australian government is committed to implementing standardised, internationally aligned reporting requirements based on the final standards issued by the ISSB. With mandatory climate-related financial reporting set to commence under the Australian Sustainability Reporting Standards, organisations need to move from retrospective data sets in spreadsheets, to utilising digital solutions and technology to connect climate-related data with financial information to enable business decisions making. This is significant change to corporate reporting and collaboration across the organisations will be needed to enable compliance, and for organisations to capitalise on opportunities presented<sup>9</sup>.”

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<sup>8</sup> [https://www2.deloitte.com/content/dam/Deloitte/in/Documents/audit/in-audit-Business-Responsibility-and-Sustainability-Report-Core\\_10-11-2023.pdf](https://www2.deloitte.com/content/dam/Deloitte/in/Documents/audit/in-audit-Business-Responsibility-and-Sustainability-Report-Core_10-11-2023.pdf)

<sup>9</sup> <https://www.deloitte.com/content/dam/assets-zone1/au/en/docs/services/audit-assurance/2023/mandatory-climate-related-disclosures-2024-2025.pdf>

## Singapore

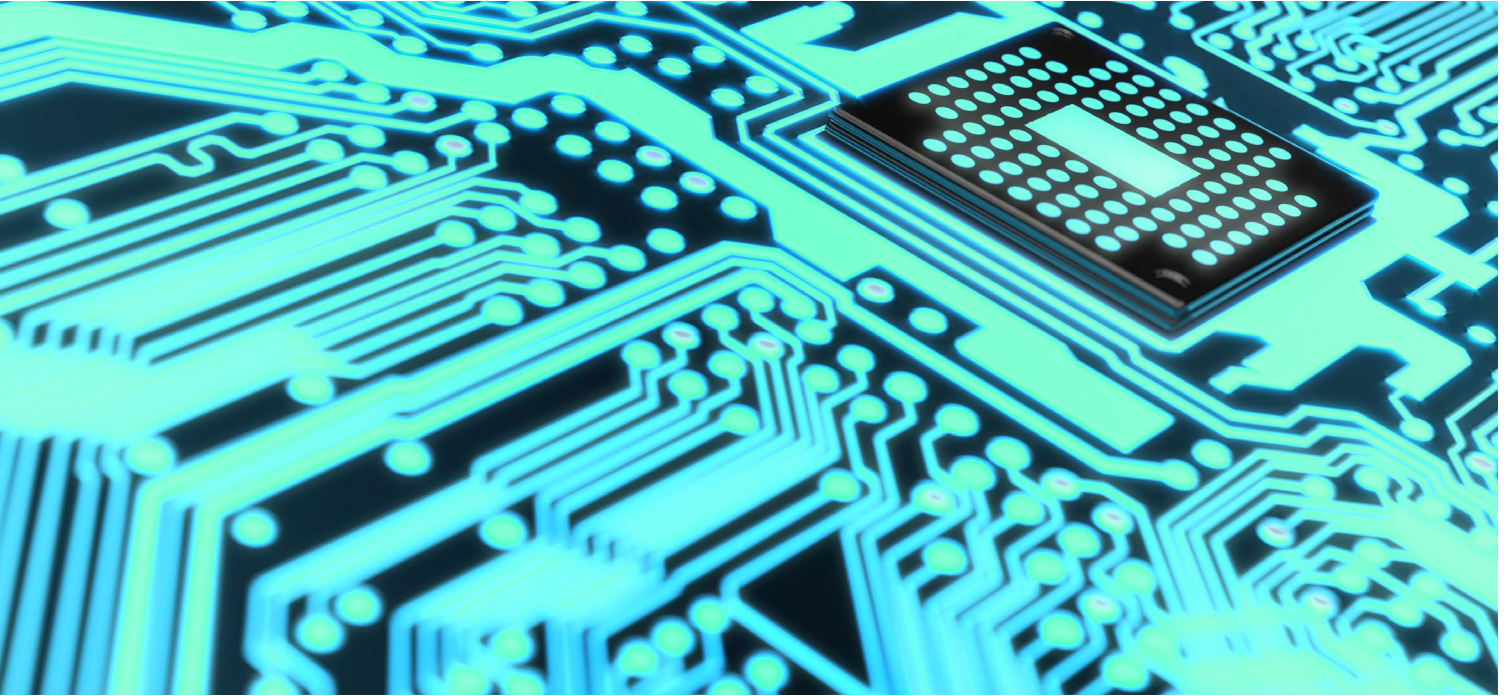
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**Josette Soh**  
Sustainability & Climate  
Assurance Leader  
Deloitte Southeast Asia

“Singapore will implement mandatory climate reporting for listed companies starting in FY2025, followed by non-listed companies from FY2027. Technology is an important catalyst in facilitating and equipping all companies for this transition, enabling the establishment of a more efficient and precise data collation process that enhances the accountability and accuracy of climate reporting.”

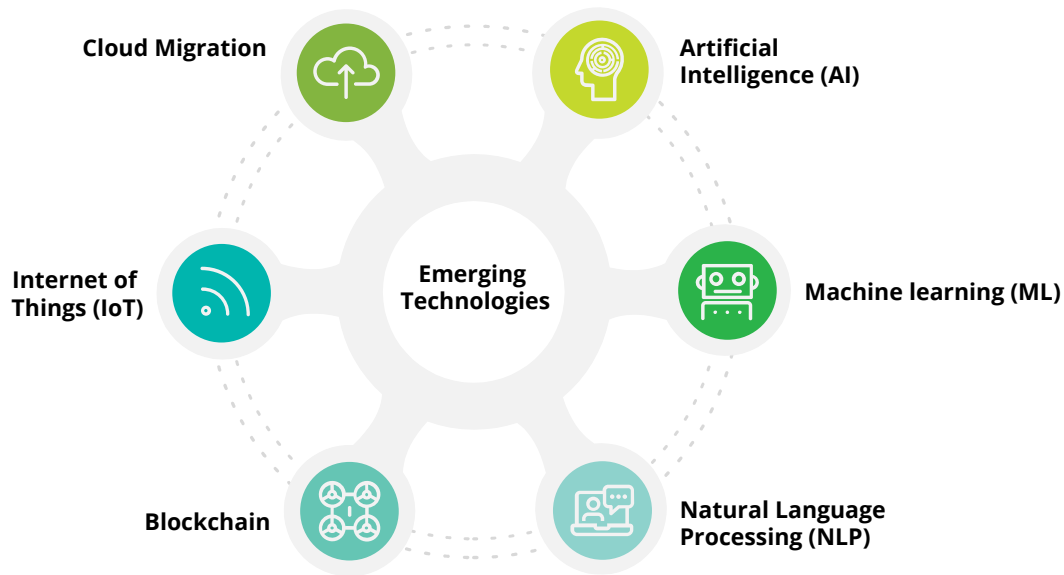




# Emerging technologies to support the ESG reporting process

With the growing emphasis on ESG data, the ecosystem of solution-providers has expanded correspondingly. Over the past decade, new technologies have emerged and can serve as a key enabler in supporting the rapidly evolving sustainability reporting landscape. For companies confronted with uncertainty in meeting new disclosure requirements,

the emergence of advanced technological solutions in the marketplace equipped with a range of features such as artificial intelligence (AI), machine learning (ML) and natural language processing (NLP) can help to meet the growing demands for high-quality reporting and supporting data-driven insights to improve sustainability performance.

**Figure 6. Emerging Technologies in the ESG Reporting Landscape**

Technology	Description
<b>Cloud computing, Internet of Things (IoT) and blockchain</b>	These include interconnected IoT sensors and monitors, data platforms hosted in the cloud, and tracking systems enabled by blockchain. Together, they have capabilities for measuring and monitoring environmental and social impact throughout value chains. Consequently, companies can enhance their management and investment decisions through data-driven insights, thereby improving their performance in alignment with ESG goals <sup>10</sup> .
<b>Artificial Intelligence (AI)</b>	Artificial Intelligence (AI) serves as a catalyst for advancing ESG reporting by streamlining data analysis, improving accuracy, and enhancing overall efficiency. AI-powered tools can automate the assessment of ESG indicators, providing real-time insights and enabling companies to respond proactively to emerging issues and take action <sup>11</sup> .
<b>Machine Learning (ML) and Natural Language Processing (NLP)</b>	<p>ML algorithms can automate the collection of ESG-related data from various sources, such as sensors, financial reports, and public databases. This reduces the reliance on manual data entry, minimises errors, and ensures a more consistent and timely flow of information<sup>12</sup>.</p> <p>Furthermore, ML models can be trained to identify and rectify inconsistencies or errors in ESG data. This improves the overall quality and accuracy of the reported information, providing stakeholders with reliable insights into an organisation's ESG performance.</p> <p>NLP can scan through multiple sources of unstructured data and identify themes and metrics needed for ESG reporting. This can then be mapped to regulatory standards to ensure they are aligned. This will ensure that companies remain compliant.</p>

Source: Deloitte analysis

<sup>10</sup> <https://www2.deloitte.com/ch/en/pages/innovation/articles/blockchain-accelerate-iot-adoption.html><sup>11</sup> <https://www2.deloitte.com/ch/en/pages/risk/articles/how-ai-can-drive-sustainability-by-revolutionizing-data-sourcing.html><sup>12</sup> <https://www2.deloitte.com/content/dam/Deloitte/lu/Documents/sustainable-dev/lu-fintech-enabler-of-luxembourg-sustainable-finance-strategy.pdf>

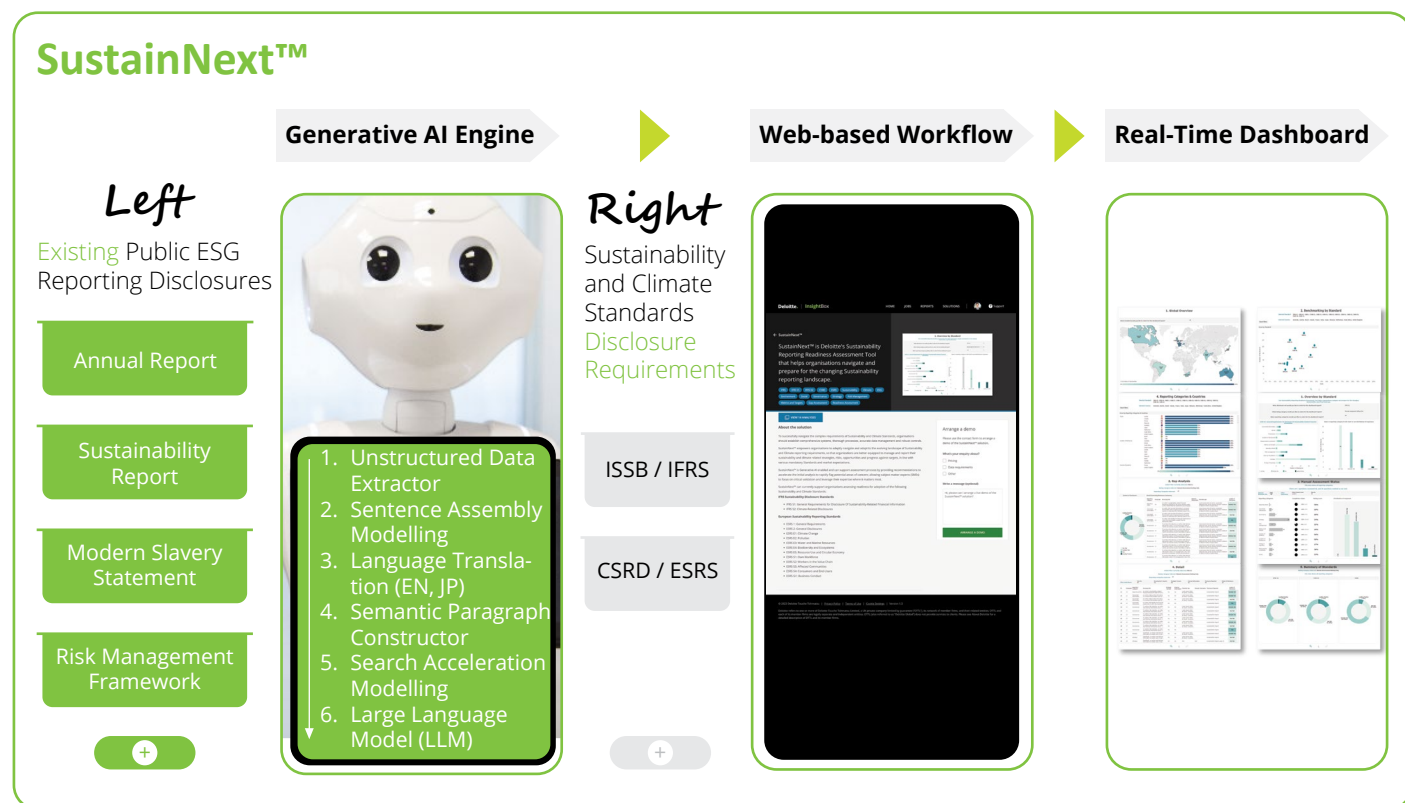


# How has Deloitte tapped into the power of technology to help clients?

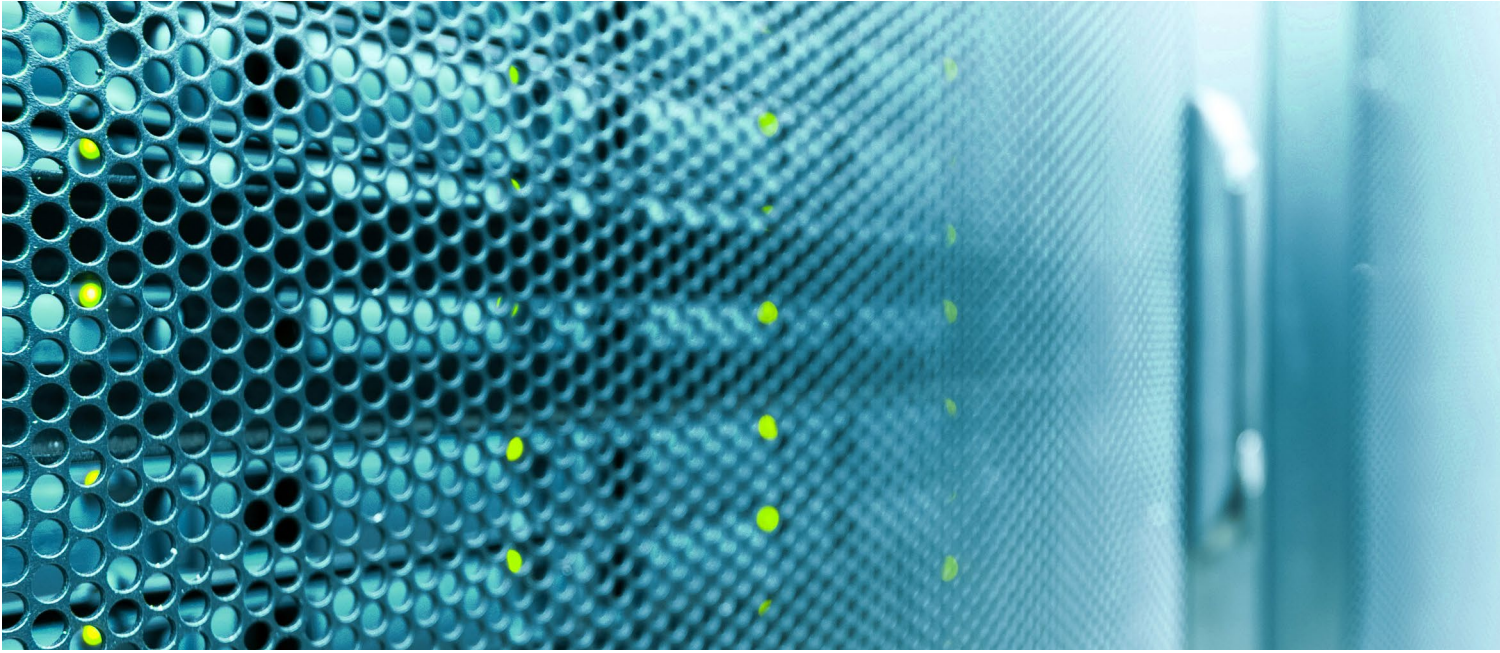
Recognising the role that technology can play in facilitating the sustainability reporting process and help companies keep up with the evolving reporting landscape, Deloitte's strategic approach involves harnessing technology across a diverse portfolio of assets and tools. These assets encompass a spectrum of digital solutions, data analytics, artificial intelligence, and other cutting-edge technologies to meet client needs. The aim is to empower organisations to better navigate the intricate landscape of ESG reporting efficiently and effectively.

For example, Deloitte has developed SustainNext™, a generative AI accelerator that seamlessly analyses public ESG disclosures against the reporting requirements of new standards such as ISSB and CSRD. It offers content suggestions, an intuitive web-based workflow, and visual summaries. Furthermore, it includes a Sustainability Reporting Readiness Assessment Tool to ensure Deloitte's clients are equipped with the appropriate systems, processes, data and controls to effectively meet various standards' requirements.

**Figure 7: SustainNext™ Sustainability Reporting Readiness Assessment Tool**



Find out more about SustainNext™ [here](#)

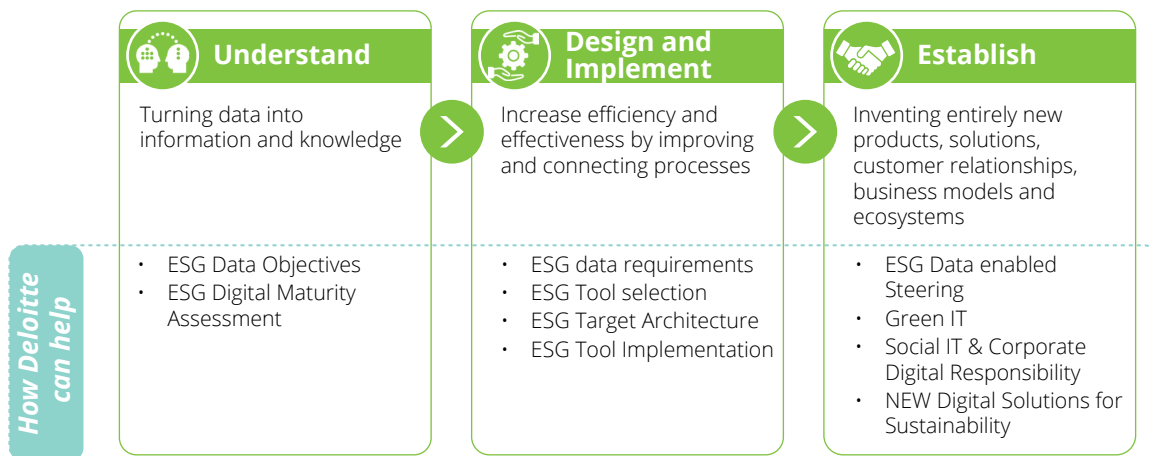


# How can companies in Asia Pacific get started?

Based on the organisational profile and stakeholder needs, companies need to evaluate which tools are most suited for their purposes. To fully assimilate ESG tech into the core of an organisation's IT architecture and strategy, organisations should embark on an

implementation roadmap. This is integral to ensure that the technology chosen is most suitable for the business needs, the new technology works in tandem with pre-established technologies and employees are equipped to use it effectively.

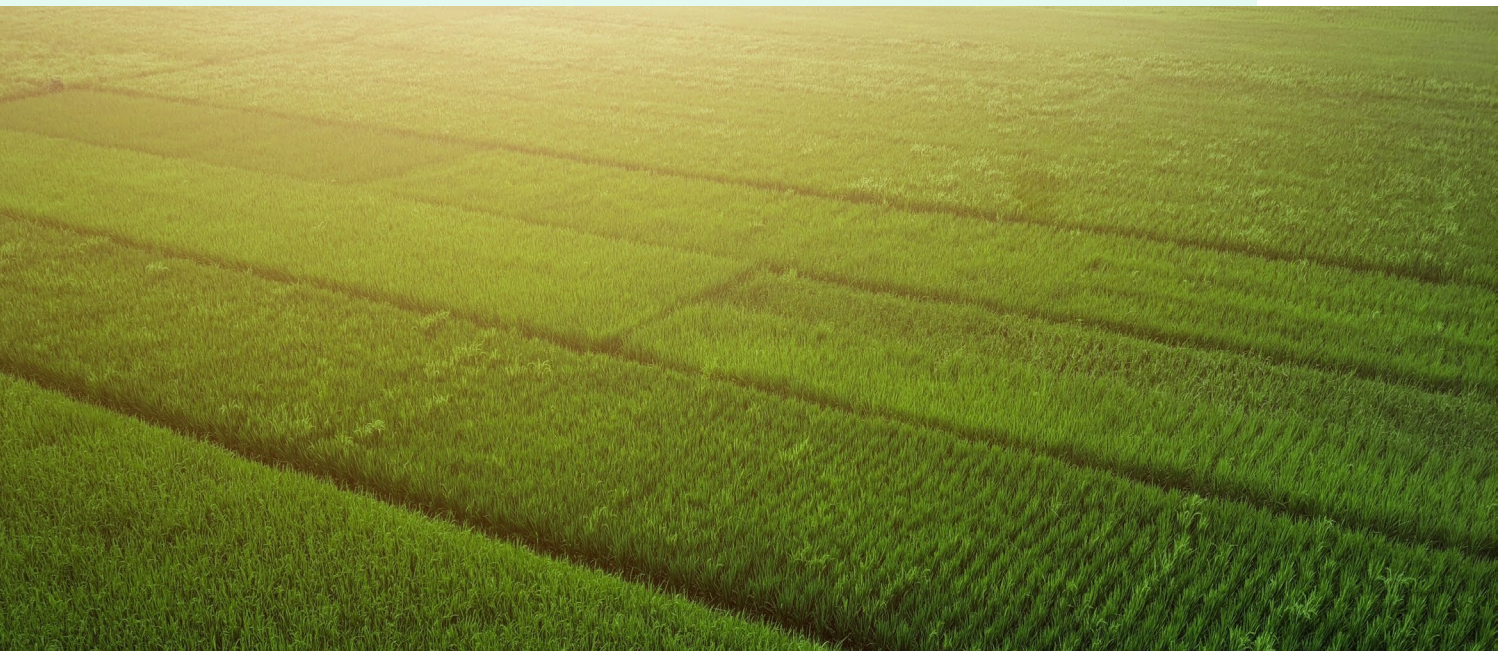
**Figure 8. Steps to achieve a digital sustainable transformation<sup>13</sup>**



<sup>13</sup> [https://www2.deloitte.com/content/dam/Deloitte/de/Documents/risk/Deloitte\\_Paper\\_Digitalisierung\\_und\\_Nachhaltigkeit.pdf](https://www2.deloitte.com/content/dam/Deloitte/de/Documents/risk/Deloitte_Paper_Digitalisierung_und_Nachhaltigkeit.pdf)



Technology can enable companies to stay ahead of the curve and ensure enhanced transparency and accuracy in their ESG disclosures. Deloitte has a vast network of sustainability leaders who can assist and drive sustainability conversations. Contact us below to learn more about how we can support your organisation in its digital sustainability transformation, ensuring that you meet stakeholder expectations and future-proof your business.



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