



Get your Data & Tech ready for the CSRD

Understanding the CSRD

June 2024



The sustainability data challenge

Organizations are increasingly grappling with the EU's Corporate Sustainability Reporting Directive (CSRD) regulations and standards, which aim to enhance transparency in environmental, social, and governance (ESG) performance. This aligns with the EU's ambition to combat climate change and address the most pressing social issues. The directive seeks to modernize and amplify corporate sustainability reporting, prompting more companies to concentrate on refining their ESG disclosures.

Not providing reliable data for companies to steer their sustainability performance and business agenda's, can potentially lead to reputational damage to firms and their leaders, as well as legal repercussions from inaccurate reporting or allegations of greenwashing. Chief Information Officers, data stewards, and sustainability teams must proactively address the 'sustainability data challenge.' Initiating this endeavor necessitates precise measures to forge a reliable and transparent approach to sustainability reporting. Selecting the appropriate technology and data solutions is essential for meeting the demands of both external and internal ESG reporting. The chosen technology should streamline the integration of diverse ESG data sources and enhance the accuracy and lucidity of the reports.

Our expertise offers a strategic, solution-focused method to ensure your sustainability data meets regulatory requirements and fulfills stakeholder expectations. Our goal is to guide you toward comprehensive, credible, and integrated ESG data and technology foundation. This will pave the way for solid and good quality sustainability reporting and enable companies to steer on ESG performance impact supporting us to build a responsible and sustainable future.

Improve data quality for both internal and external data

Gain more granular insights to steer on ESG performance and for external disclosures

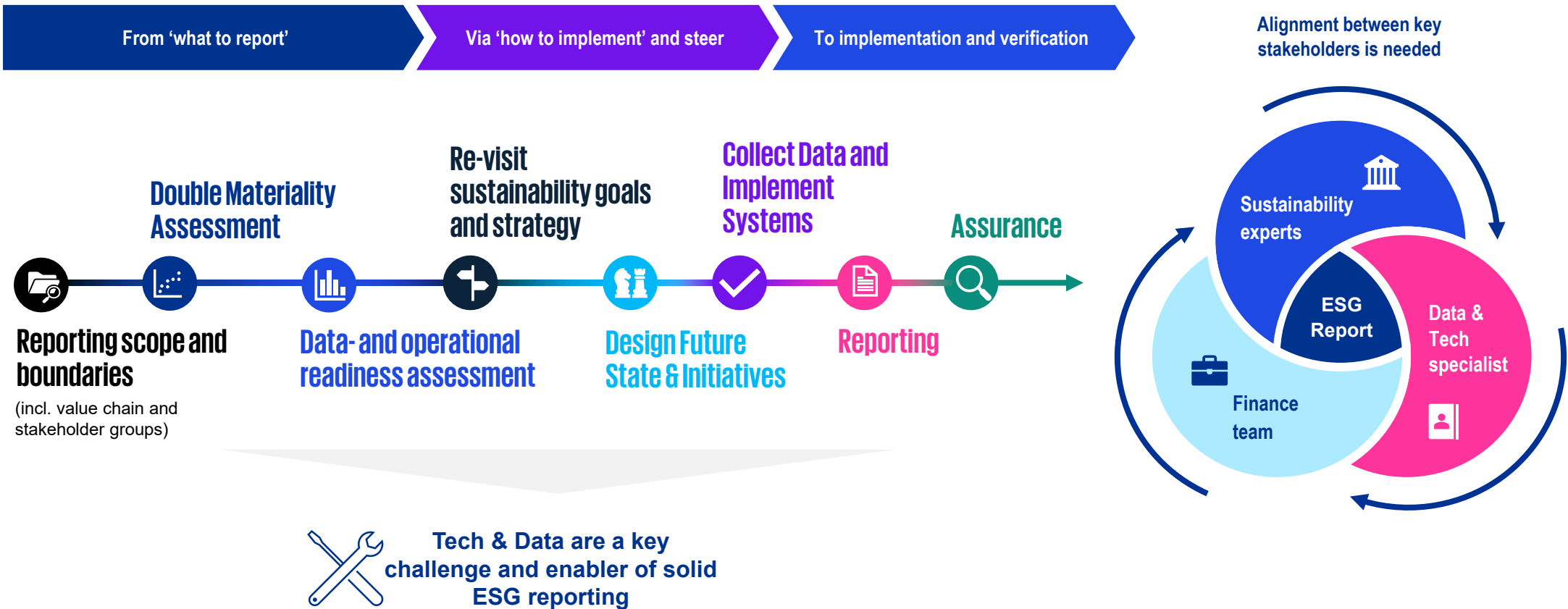
Achieve more efficient and automated processes for ESG reporting to reduce manual effort

Implement supporting technology to enable data collection and complex ESG calculations

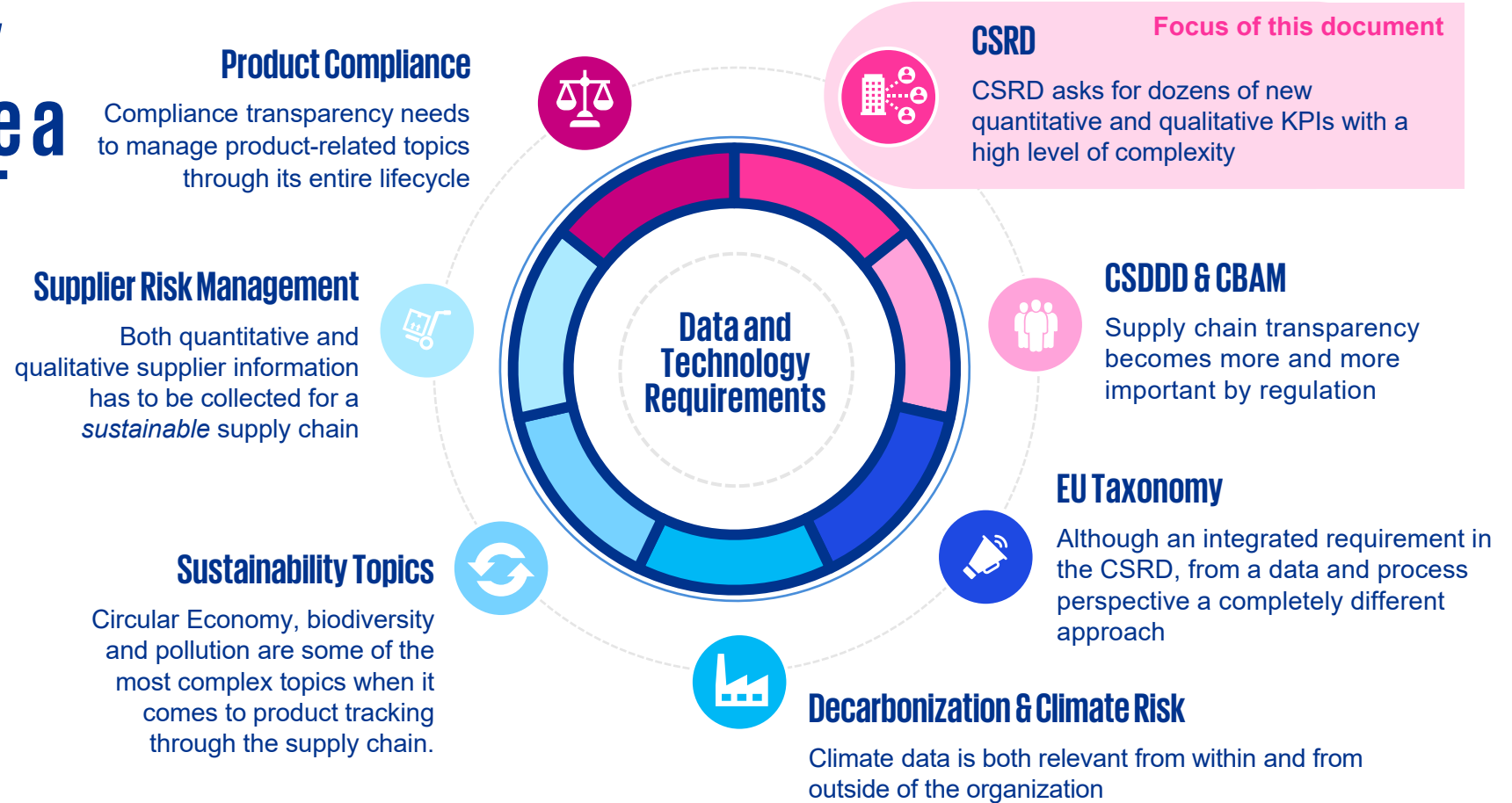
Maintaining security and auditability to meet compliance requirements

A simplified view on the implementation of CSRD

The implementation of CSRD is far from simple. It requires the collaboration of various stakeholders, including the finance team, risk, data specialists, IT professionals, and sustainability experts. As there is no progress without reliable data, the focus of many companies is on how to get this right. This publication aims to provide an overview and also to simplify key data and technology considerations so all stakeholders can understand, fostering alignment and clear priority-setting.



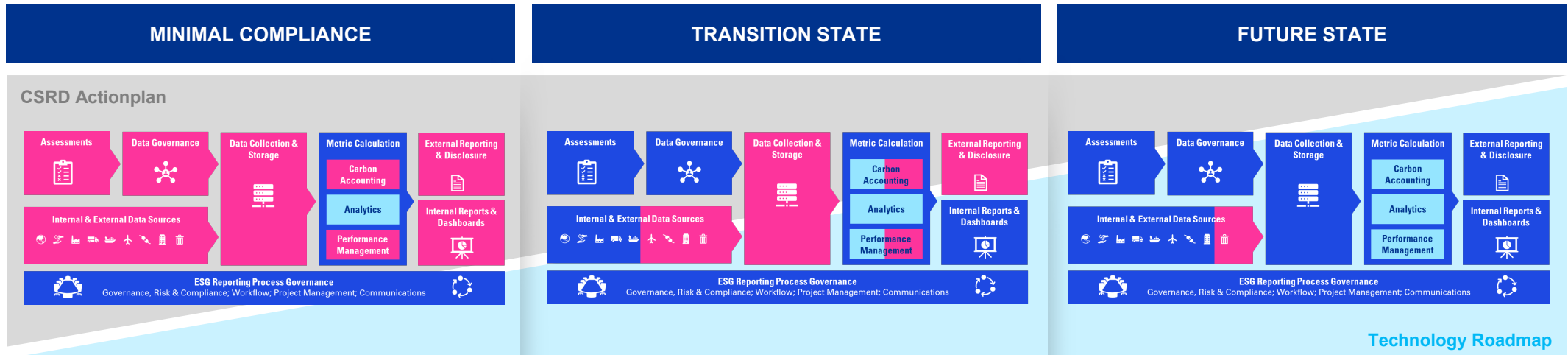
Upcoming ESG regulations and Sustainability topics, require a future state IT architecture landscape!



The different maturity levels in the CSRD journey

The ESG reporting journey has only just started and many organizations are in the midst of the transformation to get ready for the first CSRD reporting wave. However with the increasing number of complex Sustainability topics and corresponding qualitative and quantitative data points, organizations are developing transition and future-state scenarios for their technology enabled ESG reporting landscape with automated processes, data collection and controls.

ESG Technology architecture Scenarios



Typical characteristics

- **Standards and frameworks are still in development** that require manual and interpretation effort
- **Highly Excel-based, Mostly manual data collection/entries and manual metric calculations** leading to data quality challenges
- **Low data availability** and limited confidence in data accuracy and annually available

- **Some level of standardized ESG standards** and policies in place
- **Gather and store external data** and from source systems more **automated**
- **Implement workflow automation** to streamline data collection and **configure solutions to** enable basic metric calculation and reporting automation

- **ESG reporting is integrated in business as usual** for external reporting and internal business steering with reporting process and controls and fully automated audit trail
- **Data is more granular** (e.g. client, product level) and made available in a centralized ESG data model as single source of truth and real-time available
- **Automated calculation** engines fully embedded in IT architecture

Manual Automated

The key ESG and Technology challenges related to CSRD implementation

Available and accurate ESG data

1 DATA READINESS AND STANDARDIZATION

1.1 How can you identify your current data gaps with regards to CSRD?

2 ESG DATA MANAGEMENT

2.1 How can you ensure the quality of sustainability data and what data governance and ownership do you need to have in place?

2.2 How can a data foundation help in the (limited) assurance on your CSRD report?

3 DATA AVAILABILITY AND 3RD PARTY DATA

3.1 What different data sourcing options should you consider?

3.2 How do you make (CSRD) data readily available?

Robust technology & data foundation

4 TECH & DATA ARCHITECTURE / FOUNDATION FOR CSRD

4.1 Why does a tech and data architecture matter for CSRD?

4.2 What technology and data capabilities do you need for ESG reporting?

5 SUSTAINABLE IT

5.1 How can Sustainable IT practices be integrated to minimize the environmental impact of our technology infrastructure and operations?

6 CYBER SECURITY & PRIVACY

6.1 How can cyber security and data privacy support your ESG goals?

6.2 How can Privacy and Cyber Security improve and/or impact ESG reporting?

Reliable insights in your CSRD report

7 BUILDING THE ACTUAL CSRD REPORT

7.1 What does a good last mile reporting tech solution look like for effective CSRD reporting?

8 ESG REPORTING CONTROL READINESS

8.1 How do you integrate the right controls in your CSRD report?

9 ESG INSIGHTS FOR STRATEGIC BUSINESS STEERING

9.1 How can I use my CSRD report to steer ESG performance improvement?

10 ESG AND AI

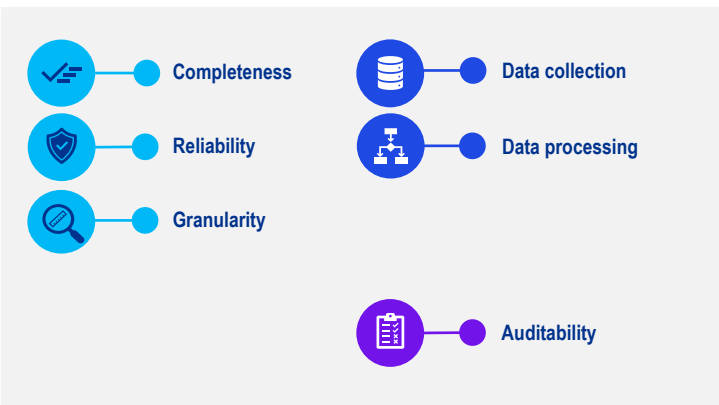
10.1 How can AI and data science help you in your ESG transformation journey?

1.1 How can you identify your current data gaps with regards to CSRD?

One challenge for CSDR reporting is accessing the data needed to construct your CSRD report. That is why a solid **data readiness scan** is a critical and we see clients working towards a solution that can be leveraged to further accelerate and partly automate the assessment of data readiness over the full scope of your CSRD material topics. With this Data Readiness scan organizations can get direct insights in the current state of their ESG and CSRD related data. We identify 3 key steps to be taken in order to identify the data gaps and understand how data 'flows' through the organization.

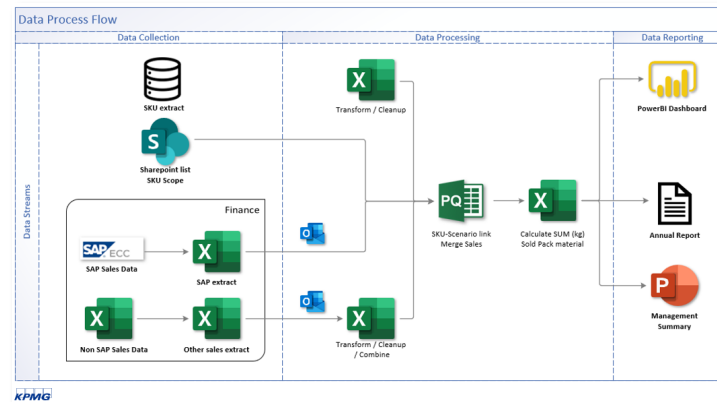
01 Data readiness assessment

An important step in the data readiness assessment is to identify the ESG data sources. These sources can potentially contain various data elements with different interpretations, levels of granularity, and definitions. KPMG's Data Readiness solution aids in effectively identifying these data elements by scoring the data points on six essential criteria.



02 Define current data flows

Conduct interviews with the company's data owners and topical experts to gain a deeper understanding of the data flow. This will help you identify prepotential gaps in the data or processes and highlight any auditability risks. The outcome will be a flow showing how data is sourced, transformed, and reported.



03 Report data readiness

Based on the data readiness assessment and an understanding of the data flows, compile the findings into a comprehensive report. This report will highlight the identified gaps, outline a roadmap for closing these gaps, and help prioritize tasks to efficiently work towards data compliance.

Percentages of (quantitative) data for the metrics available

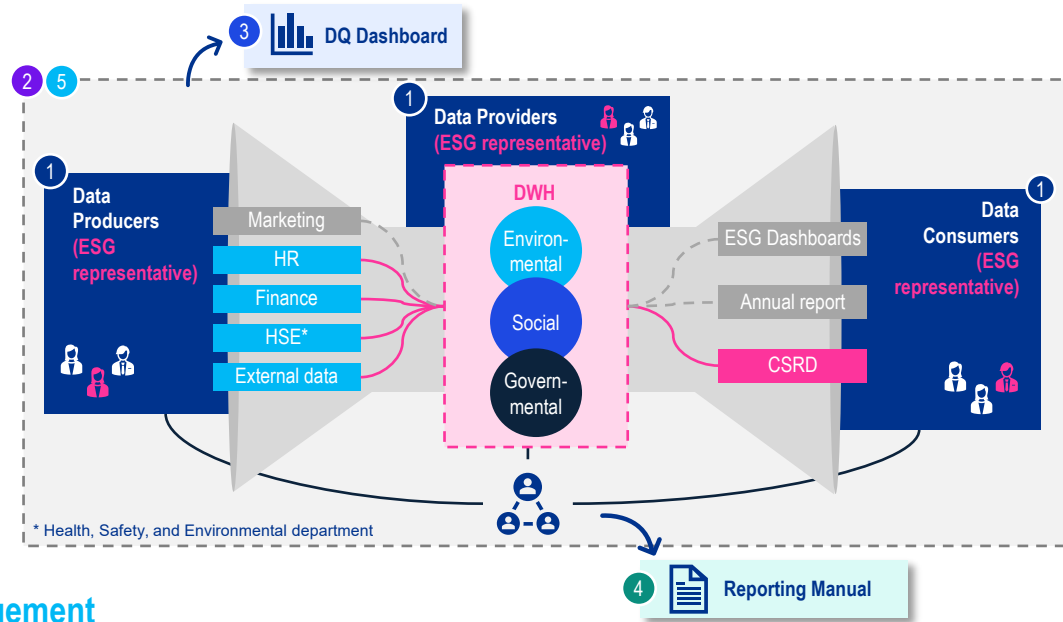
Topic	Corporate level	OpCo 1	OpCo 2	OpCo 3
Climate Change		21% E1-5, E1-6, E1-8, E1-9	20% E1-5, E1-6, E1-8, E1-9	55% E1-5, E1-6, E1-8, E1-9
Pollution		25% E2-4	22% E2-4, E2-5	52% E2-4, E2-5
Water			23% E3-4	6% E3-4
Biodiversity and ecosystems		12% E4-5		0% E4-5
Resource use and circular economy				9% E5-4, E5-5
Waste		0% E5-5	100% E5-5	100% E5-5
Working conditions of own workforce	88% S1-6, S1-7, S1-8, S1-9, S1-10, S1-15	89% S1-6, S1-7, S1-8, S1-9, S1-10		
Equal treatment and opportunities for own workforce	0% S1-13, S1-16	0% S1-13, S1-16	10% S1-13, S1-16	10% S1-13, S1-16
Health & Safety	10% S1-14	0% S1-14		
Business conduct		83% G1-4	100% G1-4	
Supply Chain Management and Risk	100% G1-6	58% G1-6		0% G1-6

Double Materiality: Material topic, Immaterial topic
Data gap: Big gap (< 25%), Medium gap (25% - 67%), Small gap (> 67%)
 Data gap percentages represent the amount of available quantitative metrics compared to the total material quantitative metrics.

2.1

How can you ensure the quality of sustainability data and what data governance and ownership do you need to have in place?

The efficiency and accuracy of CSRD reporting largely depends on the quality of the data required. For effective and accurate CSRD reporting it is therefore vital to ensure the right quality of data and to establish clear ownership of data within the organization. A clear data ownership and supporting data governance processes become even more important with CSRD reporting, due to the fact that data within the ESG data domain resides in multiple systems and is created within different functional domains.



To improve the data quality, establish the right data definitions of data points and to create clear ownership, KPMG proposes to create an overarching data governance for the ESG data domain. In this data governance, you look from a data producers (the people 'creating' the data), data providers (the people making the data readily available) and from a data consumers perspective (the people using the data) and realize clear and transparent end-to-end data flows, with controls included. Creating those data flows and focusing on the 5 key topics within Data Management, will help in improving the data quality, establishing correct data ownership and increasing data auditability.

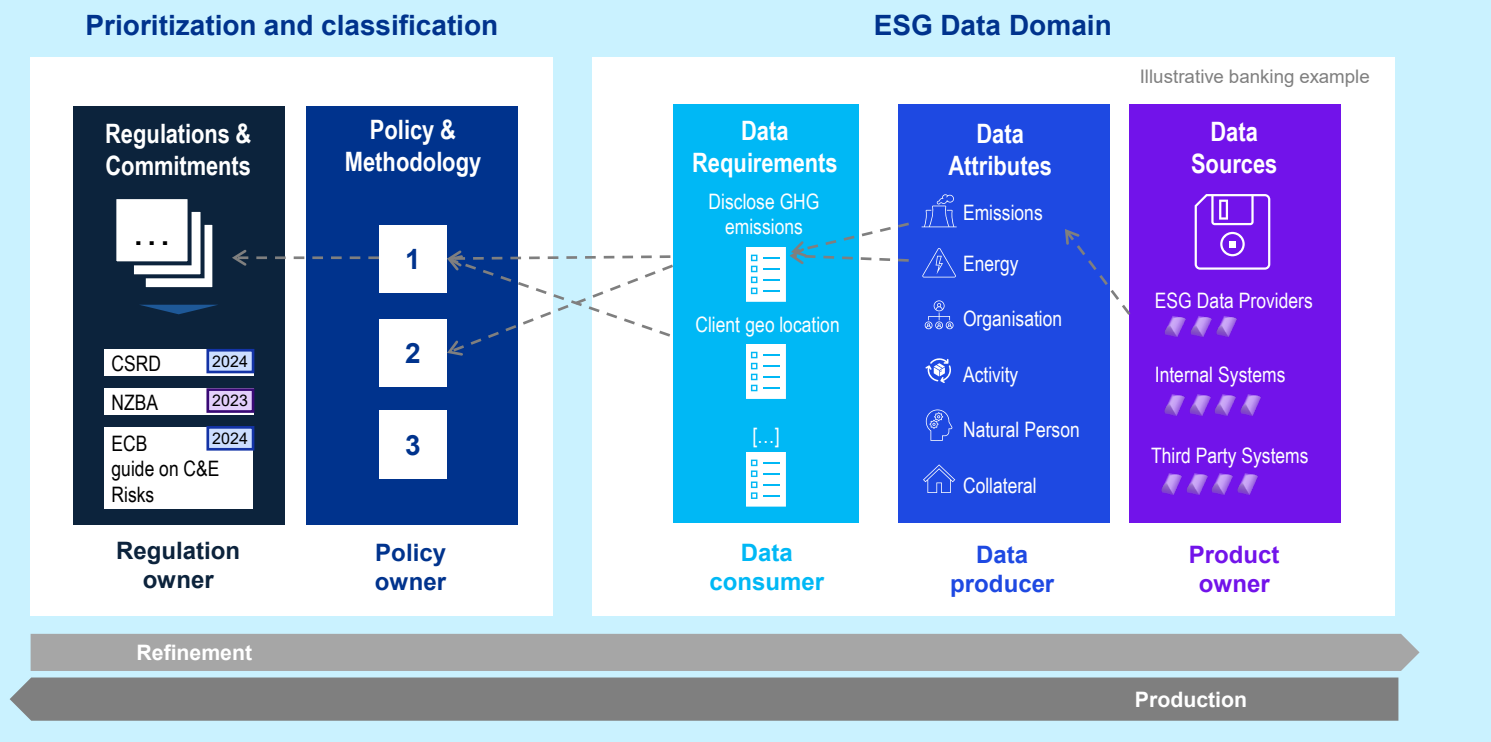
5 top priorities for ESG Data Management

- 1 Define ESG data domain**
 Creating a clear view on (the responsibilities of) all participants that produce, provide and consume ESG data within the data domain.
- 2 Realize Master Data Management**
 Ensuring consistency across systems by managing unique and accurate ESG-related master data as a single source of truth.
- 3 Establish Metadata & data quality**
 Documenting characteristics of ESG data and ensuring its completeness, consistency, accuracy, timeliness, and relevance.
- 4 Define Data governance and definitions**
 Defining clear data definitions and creating policies, procedures, and guidelines to govern ESG data collection, management and usage.
- 5 Implement Processes & controls**
 Implementing ESG data controls and clear data validation processes to ensure transparency and auditability of the CSRD related data.

2.2 How can a data foundation help in the (limited) assurance on your CSRD report?

To ensure (regulatory) lineage throughout the implementation of CSRD and other regulations/commitments to (data) requirements and -attributes an organization wide ESG Data Foundation, containing a data repository, a mapping process and data governance should be realized. The ESG Data Foundation connects the refinement process to data management practices and the data model to ensure interconnectedness of activities in the implementation process.

Simplified illustration of an organizations ESG Data Foundation



Purpose of an ESG Data Foundation

1. By providing a consistent visualization, we can **increase transparency** and promote comprehension of the **ESG data domain** and required changes of the data model
2. **Demonstrate regulatory compliance and data lineage** by mapping regulations and commitments to data points and -attributes
3. **Effective change management** of the ESG data domain or model driven by new or updated regulations or commitments
4. Drive efficiency by **reducing complexity and duplications** in the ESG data domain and implementation activities

3.1 What different data sourcing options should you consider?

The data collection strategy is a balance of data availability and other factors like cost and required quality

On the right-hand side, different data sourcing options are illustrated, each suitable for different data strategies based on the type of data needed, cost considerations, and data quality requirements. The main challenge organizations face is data availability. This frequently leads to sourcing data from their clients/suppliers, commercial or public data providers.

External data providers bring specific challenges and benefits. For instance, data from commercial providers can be challenging for obtaining client-specific data. However, client-specific data is often limited to what is published, with methodologies that may lack transparency and availability that may suffer from time-lags.

A specific example of the need for ESG external data is EPC data to determine emissions for financed real estate, which may be needed for calculating the Gross Scope 3 greenhouse gas emissions (CSRD KPI E1-6 51). [More examples.](#)

Directly derived client and assets data

Reported data

- Reports published by clients
- EU Initiative ESG Database

Customer data

- Customer data that is queried directly in the customer process

Unstructured data

- Generation of ESG data e.g. by web crawling or image recognition

External data

- Commercial data providers
- Publicly available data

Derived data

- Commercial data providers or market studies
- Internal proxies



Low maturity of ESG data

ESG data is still in its nascent stages of development. ESG metrics are varied, often subjective, and subject to evolving standards. In such a landscape, relying solely on a single data source can be limiting.



Enriching and contextualizing internal data

Sourcing data from external sources, including third parties, is essential for enriching and contextualizing internal datasets. In many cases, certain data elements are necessary solely for the purpose of linking disparate data sources together. For instance, when connecting publicly available building ESG ratings to client profiles, specific unique identifiers may be required.



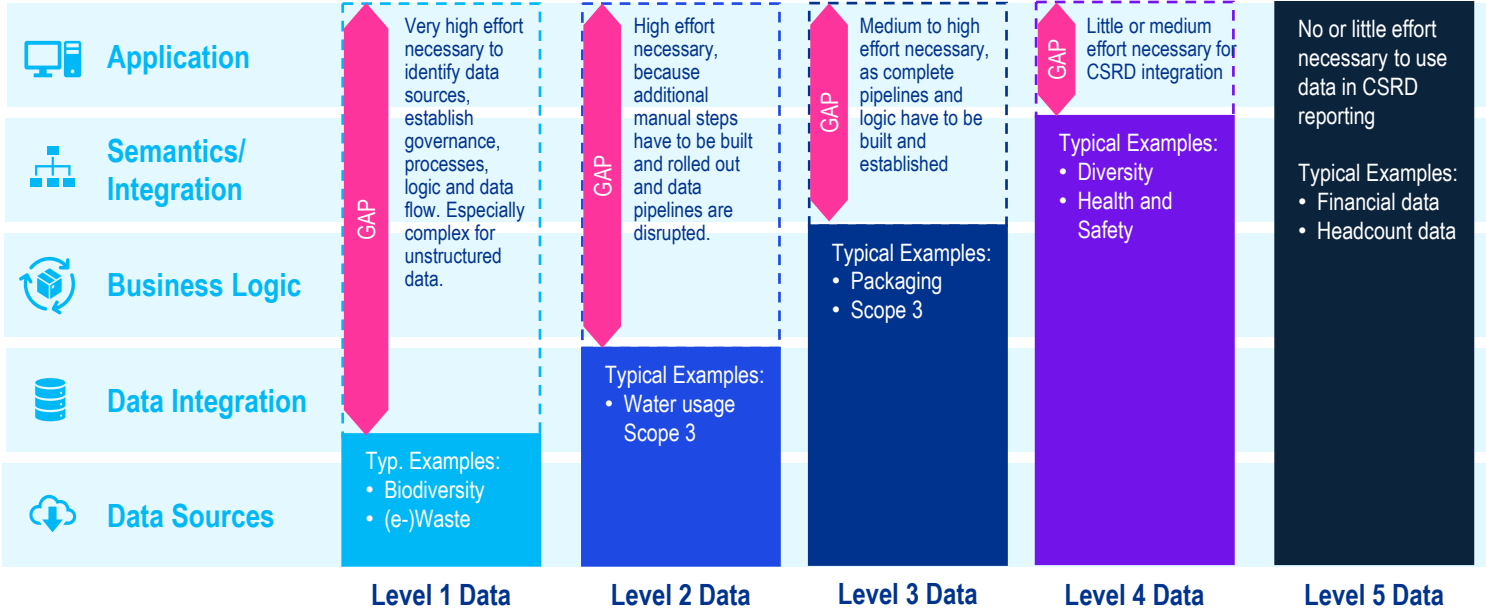
Validate accuracy and reliability by triangulation

Variances in methodologies, reporting standards, and data quality can pose challenges of data quality. Triangulating data from multiple sources serves as a powerful mechanism for validation. By cross-referencing information and identifying discrepancies, organizations can ascertain the reliability and accuracy of the data, enabling more accurate reporting and informed decision-making.

3.2 How do you make (CSRD) data readily available?

The effort to make data available, depends on the maturity of your landscape and source system
The types of data and method of collecting can be structured along 5 levels, each requiring a different level of integration. To ensure effective CSRD reporting, it is important to evaluate the data integration needs for the required ESG data. This assessment helps with identifying the level of effort needed to reach the desired future state of your data landscape.

Level of integration



Standardize the integration patterns

Standardizing integration patterns involves establishing a consistent framework and set of protocols for connecting disparate systems and sources of data within an organization's ecosystem. This will streamline data flows, reduce complexity, and enhance scalability across their infrastructure.

Ingest raw data

It's essential to ingest raw data before linking it to internal datasets because it allows for in-depth data analysis, traceability and auditing, flexibility and reproducibility. Raw data may contain sensitive or personal data. By capturing raw data first, organizations can implement appropriate data privacy and security measures before linking it to other datasets. This helps mitigate the risk of data breaches or unauthorized access.

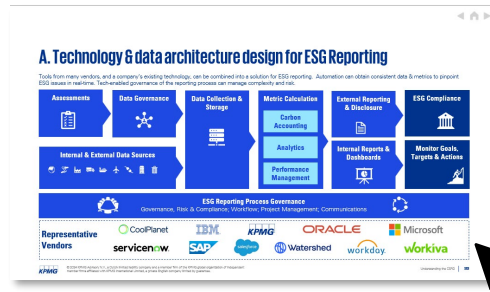
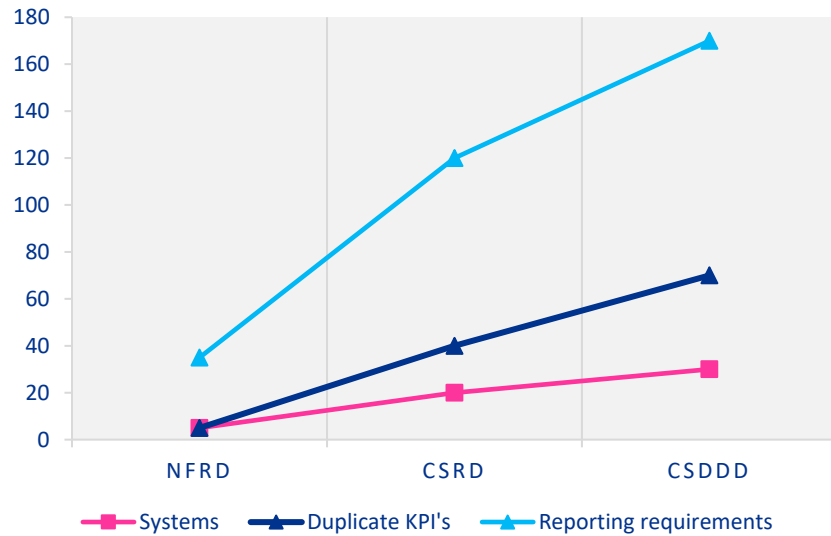
Implement data quality checks

Assessing the accuracy, completeness, and consistency of data, should be implemented early in the data flow. This is critical for identifying and addressing issues before they propagate through downstream processes. By detecting and resolving data quality issues at the outset, organizations can improve the reliability and credibility

4.1 Why does a tech and data architecture matter for CSRD?

ESG regulations and Sustainability transitions are complex and leads to increasing number of requirements... As shown below in concept, the increasing number of ESG regulations and reporting frameworks lead to an increases in reporting requirements, that often require the same KPI's. As result of this increase the complexity of both the data and application architecture grows

... and therefore requires a holistic approach on Tech & Data to define your future state ESG IT architecture



Click to view in detail

How to define your future state ESG IT architecture

1. ESG principles

Formulate guardrails for the further evolution of your (CSRD) architecture, by setting clear design principles, and mapping current and future regulatory requirements to the as-is.

2. Requirements Analysis

CSRD is heavily intertwined with existing organizational and IT capabilities and requires development of new capabilities and (technical requirements). Therefore it is important to start with a capability mapping to assess what parts of the organization will be impacted.

3. Mapping on as-is architecture

Create overview of your current tech and data landscape, by mapping the current applications and data sources to these capabilities.

4. To-be architecture

Using the design principles, identify opportunities and solutions for the future state. In parallel, set up a clear change governance and architecture management function to ensure adherence to these principles and remain aligned to regulatory developments.

4.2 What technology and data capabilities do you need for ESG reporting?

CSRD workflow and reporting capabilities

The large platform players are developing end-to-end ESG platforms to enable, automate and simplify the CSRD reporting process. It includes capabilities such as CSRD workflow management, controls, assessment (e.g. DMA) and data integration. Also there is a growing number of external reporting solutions to assist you in producing the CSRD report (last mile reporting).

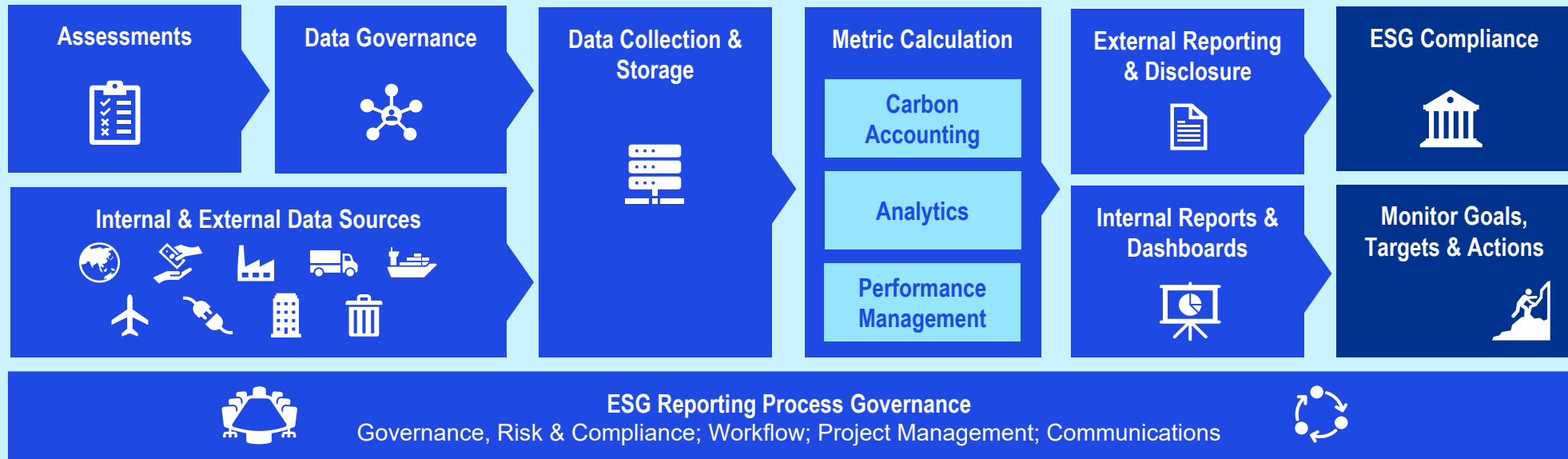
Specific ESG capabilities

ESG regulations and the Sustainability transitions of companies (e.g. Decarbonization) require specific data & technology capabilities. For example to calculate Carbon Emissions across the value chain or to measure circularity of products. There is a wide range of niche solutions for specific ESG topics, and also the large platform players are integrating this into their ESG platforms

Data management capabilities

ESG reporting requires high volume of both internal and external data and therefore supporting technology for proper data management is need to collect, store and transform ESG data. Examples are data platform, data dictionary/repository and data visualization capabilities.

ESG Technology Capability Framework



There is also significant impact on core operational and transactional systems due to new requirements for ESG reporting.

5.1 How can Sustainable IT practices be integrated to minimize the environmental impact of your technology infrastructure and operations?

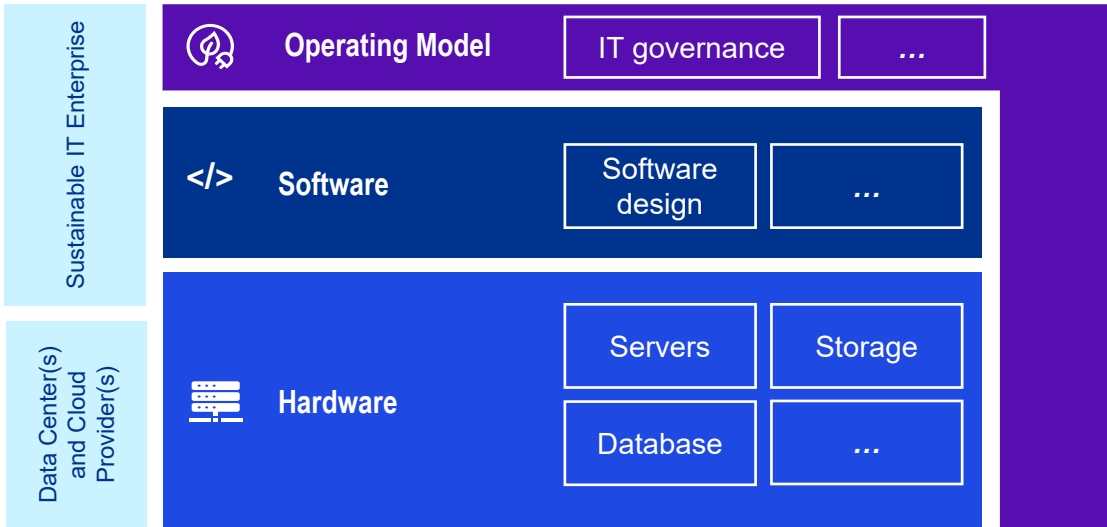
IT needs a seat at the CSRD table and plays a crucial role in your transformation. CSRD has significant requirements under its standards (e.g. E1 and S1 ESRS) that enterprise IT largely contributes to. Research finds that 5-10% of emissions of organizations are caused by Enterprise IT. Recognizing these opportunities is crucial to achieving ESG ambitions and goals, highlighting the importance of IT organizations in driving ESG transformation within an organization.



Identifying opportunities
IT can enable the drive ESG transformation through one of three ways: 1) by reducing an organization's footprint, 2) drive sustainability through digitization and innovation (handprint), 3) and fostering social responsibility by connecting digital ecosystems with societal needs (heartprint). Initiatives within these categories can significantly impact CSRD KPI's. For example, an initiative to adopting end-user devices can significantly impact the scope 2 and 3 emissions reported under CSRD standard E1.

EXAMPLE **FOOTPRINT**

Opportunities for reducing carbon emissions within the tech landscape
It's no surprise that a significant portion of the IT budget is allocated to the development, maintenance, and operation of software. Numerous initiatives can be considered to optimize your application portfolio, aiming to streamline, update, and transform your entire application landscape. Such initiatives include implementing well-architected frameworks in the enterprise architecture function, application Rationalization for sustainability, and implementing energy-efficient programming languages. This approach can lead to reduced total cost of ownership (TCO) and greenhouse gas (GHG)/carbon emissions.



6.1 How can cyber security and data privacy support your ESG goals?

The challenge

87% of consumers feel it is **important** that organisations use their data **ethically**. However, trust levels across several sectors are **below 50%**.

Effective data management - where you get it from, if you are (not) deleting it, sharing it, processing it and assuring the integrity, accuracy, and confidentiality of data – is a challenge for most businesses, particularly in the context of ESG reporting.

The opportunity



Consumer trust
When companies handle personal data ethically and transparently, stakeholders—including investors—perceive them more favorably.



High quality data
Ensuring high-quality data, supported by robust cybersecurity and privacy practices, offers an opportunity for companies to enhance customer trust, mitigate risks, improve operational efficiency, and drive innovation—all of which contribute to ESG performance.



Key take aways

Embedding strong cybersecurity practices enhances a company's ability to safeguard data privacy and security, thereby positively impacting its ESG performance. Here are our top considerations:

Privacy requirements should be incorporated at the outset of any new data processing. By doing so, organizations reduce the potential misuse or loss of personal data, which is good for legal compliance and customer trust.

Only data needed for legitimate data processing should be collected and maintained, reducing unnecessary data. More data means a greater carbon footprint and more social, as well as governance and security issues.



With cybersecurity and data privacy threats only continuing to grow in number and complexity, corporate leaders cannot afford to ignore implementing a pre-emptive response plan and being well prepared to respond and manage an incident.

Cybersecurity & Privacy is a critical aspect of risk management for companies. Failure to adequately address cybersecurity risks may lead to financial losses, reputational damage, and legal liabilities, all of which can impact a company's ESG performance and perception (trust).

6.2 How can Privacy and Cyber Security improve and/or impact ESG reporting?

The challenge

Although business are more connected, in order to bring together relevant data on environmental, economic, and social impact, and maintain data integrity for credible sustainability reports, business may struggle navigating complex stakeholder dynamics, and gathering all relevant data from across the business.

The opportunity



Collaborating towards shared objectives, breaking away from siloed work environments. This collaboration can lead to accurate, trustworthy reports. Furthermore, enhancing Privacy and Cyber Security measures can make ESG reporting more effective.



Key take aways

Cybersecurity is a critical factor in ensuring trustworthy ESG reporting. It works to protect data at its sources while being collected, in transit, and after it has been analyzed and reported. In addition, data privacy compliance is also required when personal data is processed in generating ESG reports.

An integrated approach between Privacy and Cyber Security and ESG reporting ensures not only the safety and privacy of data but also strengthens the foundation of ESG reporting. By prioritizing both Privacy and Cyber Security in ESG reporting, organizations can demonstrate their commitment to safeguarding stakeholder information, which, in turn, can enhance their ESG scores. This acts as an accelerator, improving overall strategic performance and building trust among stakeholders

- 1 Integrated Approach**
Fosters collaboration, clear communication, and optimizes processes, enhancing overall efficiency and effectiveness.
- 2 Effective Cyber & Privacy management**
Effective Cyber & Privacy management can be an accelerator for your ESG scores
- 3 Data integrity and accuracy**
Ensure the provision of credible, reliable, and verifiable information that underpins informed decision-making and stakeholder trust in sustainability performance..

7.1 What does a good last mile reporting tech solution look like for effective CSRD reporting?

The challenge

Multiple sources and also multiple outputs make up ESG reporting landscape. Building your CSRD report requires a large amount of data integration and data lineage can be challenging. Along with quantitative data, CSRD requires many qualitative disclosures, making up about 70% of disclosure requirements. Processing this data to the actual report requires a system that can handle the data migration and the ability to create and edit free text. Given the volume of qualitative disclosures, the challenge is to have traceability and controls over these narrations to ensure that internal and external stakeholders can engage and trust in the results of the CSRD report. Furthermore, it's also important to consider your final version and the requirements to meet external stakeholders' needs. Similarly to financial statements from FY25, the Dutch chamber of commerce requires XBRL tagging in your CSRD Report, therefore xHTML reporting format will be required.

The opportunity

Building a solid data foundation that enables a seamless flow of data to your last mile reporting tool.

Adopting a last mile reporting software that has controls and traceability on your narrations (qualitative disclosure requirements)

Consider your last mile reporting tool when developing data lineage and constructing your data management system

Engage with your internal auditors and external stakeholder to understand your final report requirements.

Engage with your internal



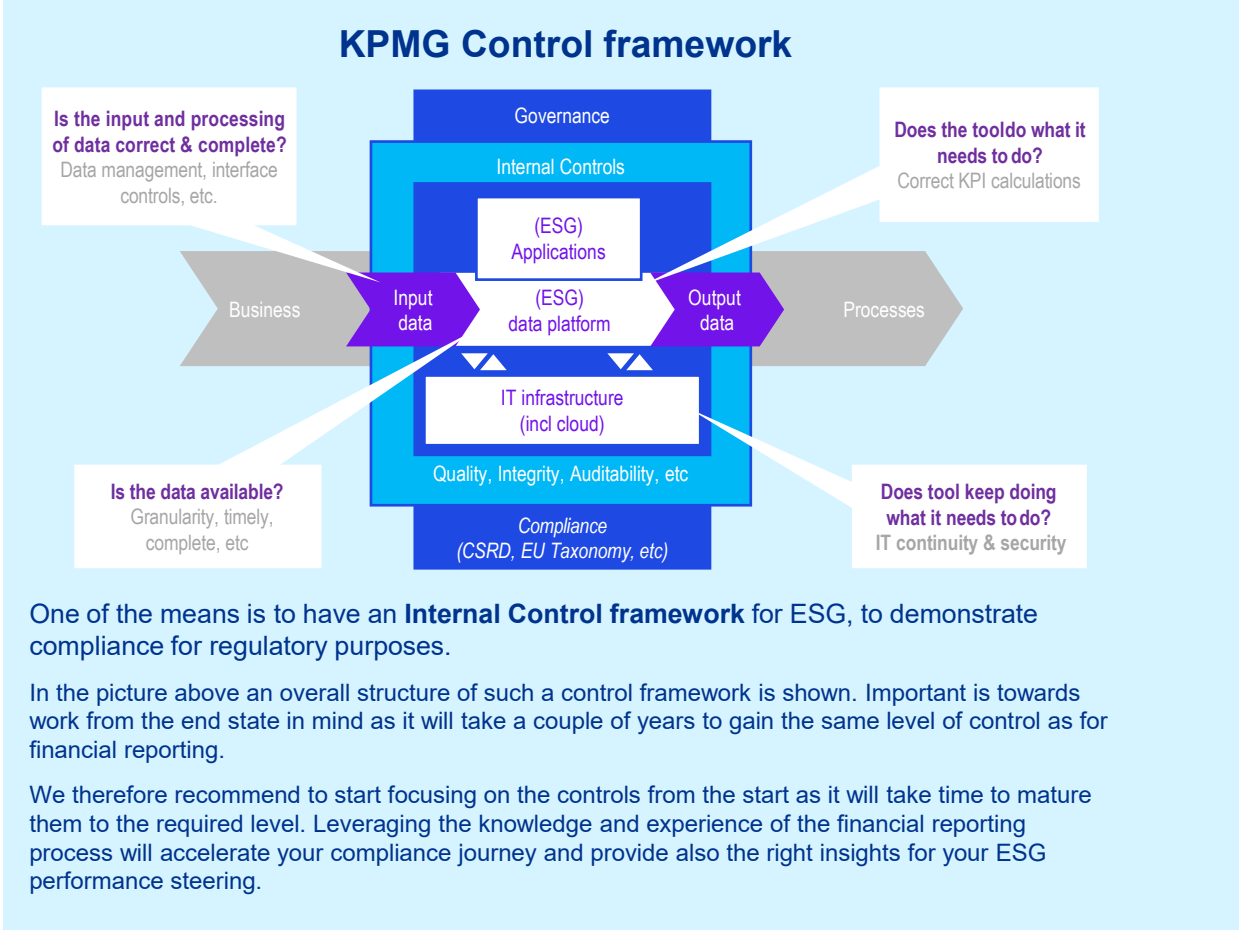
8.1 How do you integrate the right controls in your CSRD report?

Overall objective for CSRD, or ESG in general, is not only compliance, but also to have right and correct insight in ESG performance (management reporting for steering). This requires automated reporting capabilities like for financial reporting, including the right set of controls.

However, taking the limited assurance requirements into account, current management's attention for ESG controls is low, since 'controls' will be relevant when reasonable assurance is required.

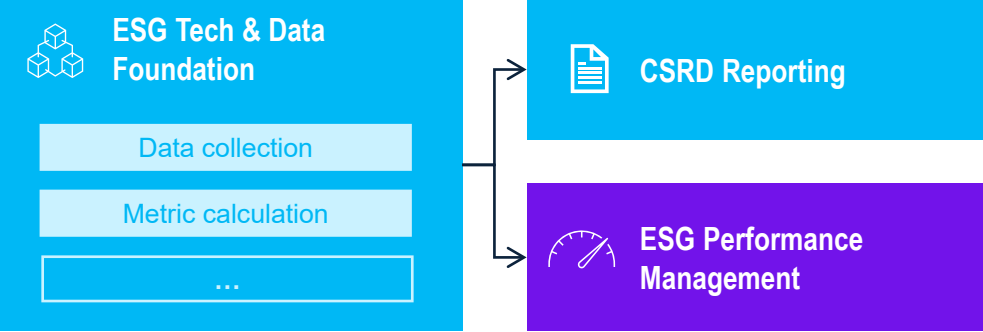
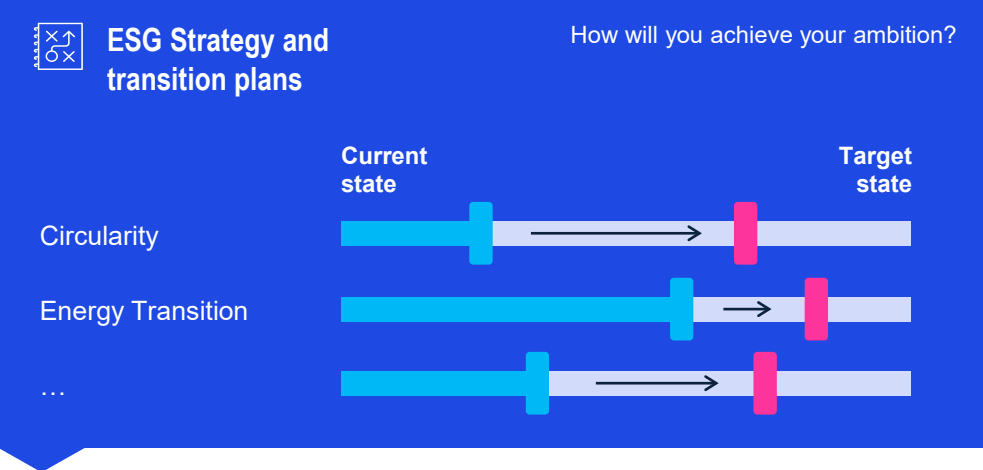
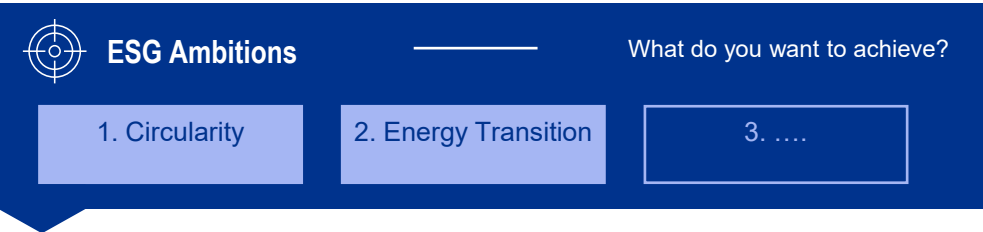
In your ESG transformation program, the opportunity is now to integrate the necessary ESG controls within organization's business processes, data & IT environments, etc. Quality Assurance reviews on the ESG transformation journey could help adherence to the **guiding principles**.

Controls Integration	Governance & Controls Integration is an important and is therefore an integrated part of the ESG tooling implementation program.
Leverage existing frameworks	Controls for ESG tooling is often an extension of existing control environments & frameworks.
Future proof architecture	Developing future proof data architecture is key for the foundation of controlling the ESG tooling and ESG reporting processes
Process controls	Identifying and implementing automated & manual controls in the data acquisition and reporting processes are basis for limited & (future) reasonable assurance.
Data & interface controls	Data input (internal & external sources), interfaces and calculations for KPIs require validation & plausibility controls.
Data management	Effective data management is and stays the fundament for internal and external reporting, including for ESG.
Embedding	Controlled ESG processes and technology require also right focus on awareness, embedding and organisational change management.



9.1

How can you use your CSRD report to steer ESG performance improvement?



- 1 More frequent and accurate data to steer ESG performance**

Internal and external drivers push organizations to define their ESG performance ambitions. To realize these ambitions, an ESG strategy is required that brings focus for the organization and sets clear goals. Defining an ambition and translating it to a strategy is heavily dependent on the information available to management. Access to correct and up-to-date data is crucial to monitor performance, adapt the strategy or if targets cannot be met, inform stakeholders.
- 2 Investing in data & tech capabilities for CSRD**

The maturity of the capabilities within your organization, especially on data and tech, affect the reliability of your CSRD reporting. Regulators require both quantitative and qualitative information, a.o. an assessments of the data quality used for reporting to contextualize the data in the report.
- 3 Implementing Performance management capabilities**

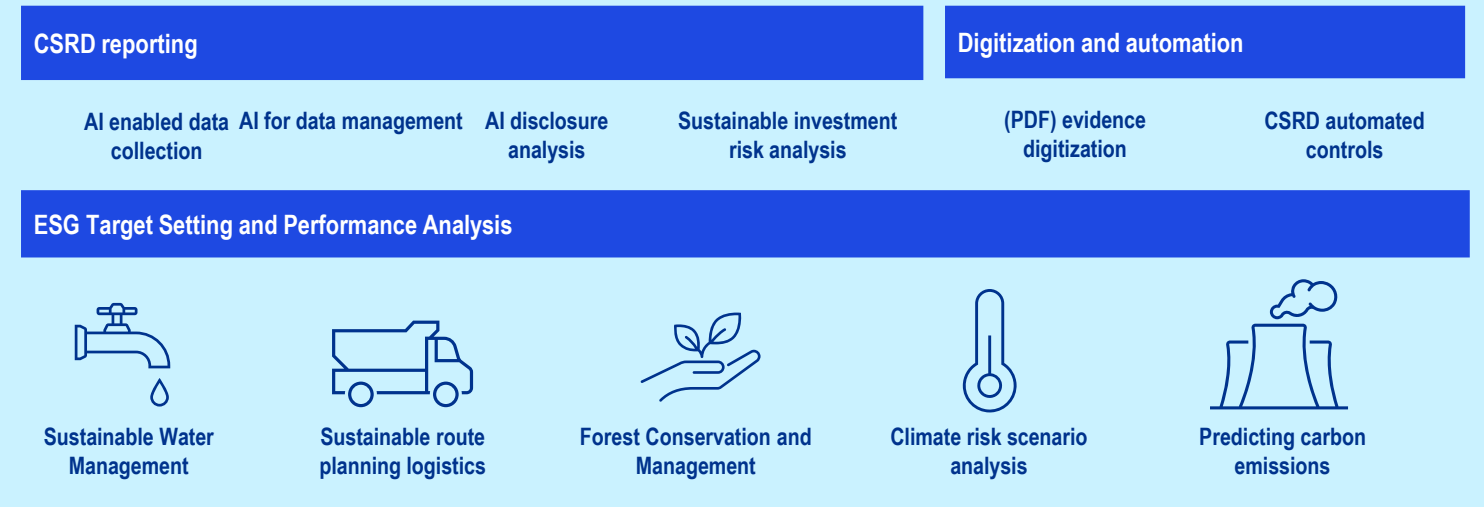
Performance management tooling should be in place to measure and track progress on ESG ambitions and strategy in parallel to the reporting obligations. The information flow for reporting should also be used for performance management and as such function as a feedback loop for management to track progress and adapt ambitions and strategy.

10.1 How can AI and data science help you in your ESG transformation journey?

With the rise of AI and Large Language Models solutions such as ChatGPT, there comes an enormous opportunity to leverage these technologies for the benefit of sustainability and CSRD reporting. AI solutions and data science models can help in optimizing the CSRD reporting proces, for example by conducting automated controls or digitizing attachments (physical documents or PDF's). Furthermore, within the broader ESG Transformation, AI models can help in various ways such as climate risks scenario analyses, optimizing water management, predicting carbon emissions footprint for newly developed products, optimal route planning for logistics and many other solutions.

Key for start using AI and realizing value adding models are 4 key components that KPMG identifies:

Examples of AI-cases for ESG:



4 key principles for leveraging AI within your ESG transformation

Value adding business case

Identify the key sustainability challenge(s) and ensure there is a value adding business case for leveraging AI

Prototyping

Start small to validate feasibility and added value. Prototyping also helps in identifying what you require from a technological perspective to put things in production at a later stage

Data quality

The effectiveness of AI models relies on the availability and quality of the data used. Ensure proper data quality management in order to have the best fitted models

Responsible AI

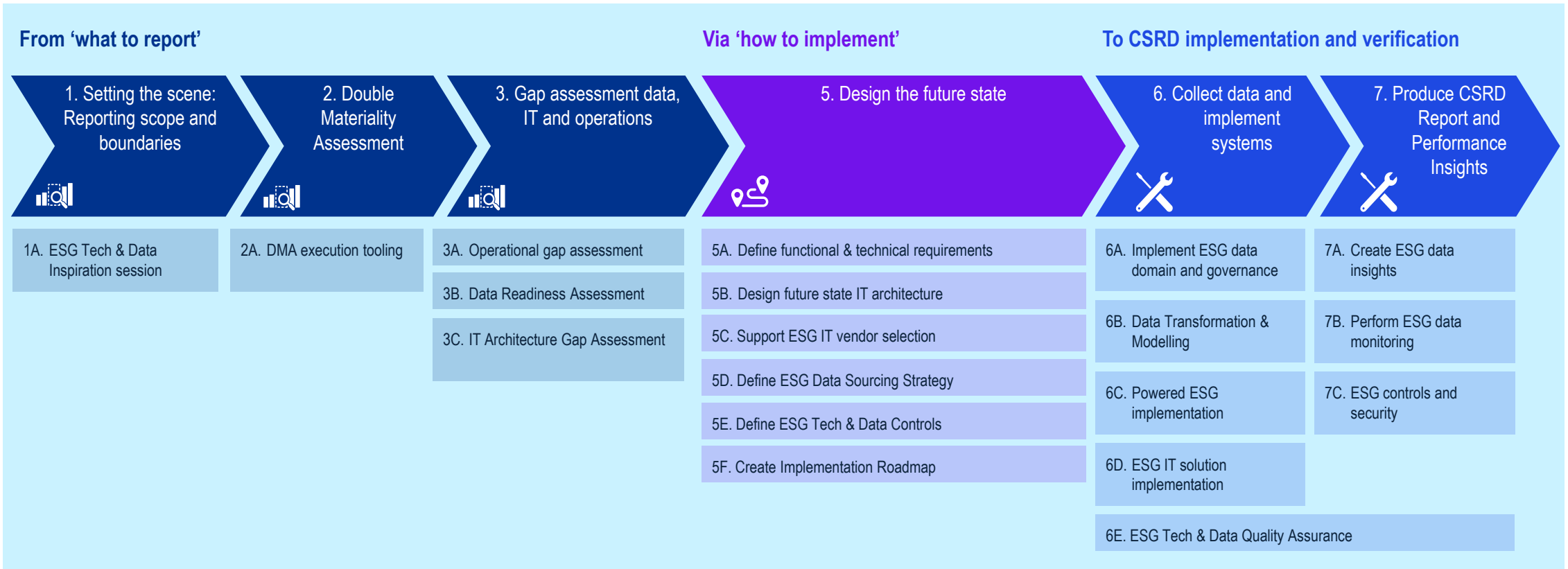
Validate the AI model(s) do not use privacy related data and have enough controls in place. Ensure transparency of the model and methods used to assure fairness and compliant usage



How KPMG can help

How we help clients on Technology & Data in ESG Reporting

In the journey towards CSRD compliance, each step requires specific technology and data-driven activities. KPMG can support in incorporating these technologies and managing data processes throughout the entire CSRD reporting lifecycle. This approach enables organizations to effectively address the complexities with CSRD compliance by implementing the right tools, technology, data and controls.



Supporting your sustainability goals with world class technology vendors

KPMG applies a vendor-neutral, client-centric approach. We prioritise our global partnerships where they have a compelling offering that fits your company specific sustainability goals. KPMG works closely and consistently with global providers of sustainability solutions, resulting in impactful improvements to benefit your sustainability goals. Besides the world class parties below KPMG has a vast selection of ESG-ready solutions to solve specific challenges.



Microsoft Sustainability manager is focused on managing and encouraging universal carbon standards, and allowing for automation to meet the scale challenge. **Cloud for Sustainability** is a common data model designed to form the basis to record, report, reduce carbon, water and waste.



Salesforce is driving sustainability reporting and actionable ESG data insights through its **genAI powered disclosure and compliance Hub** and its **ESG data platform Net Zero Cloud**. It calculates real-time ESG data, including carbon emissions and diversity & inclusion insights.



SAP's Cloud for Sustainable Enterprises harmonizes, allocates, and calculates granular sustainability KPIs according to established structures from finance, HR, and operations.

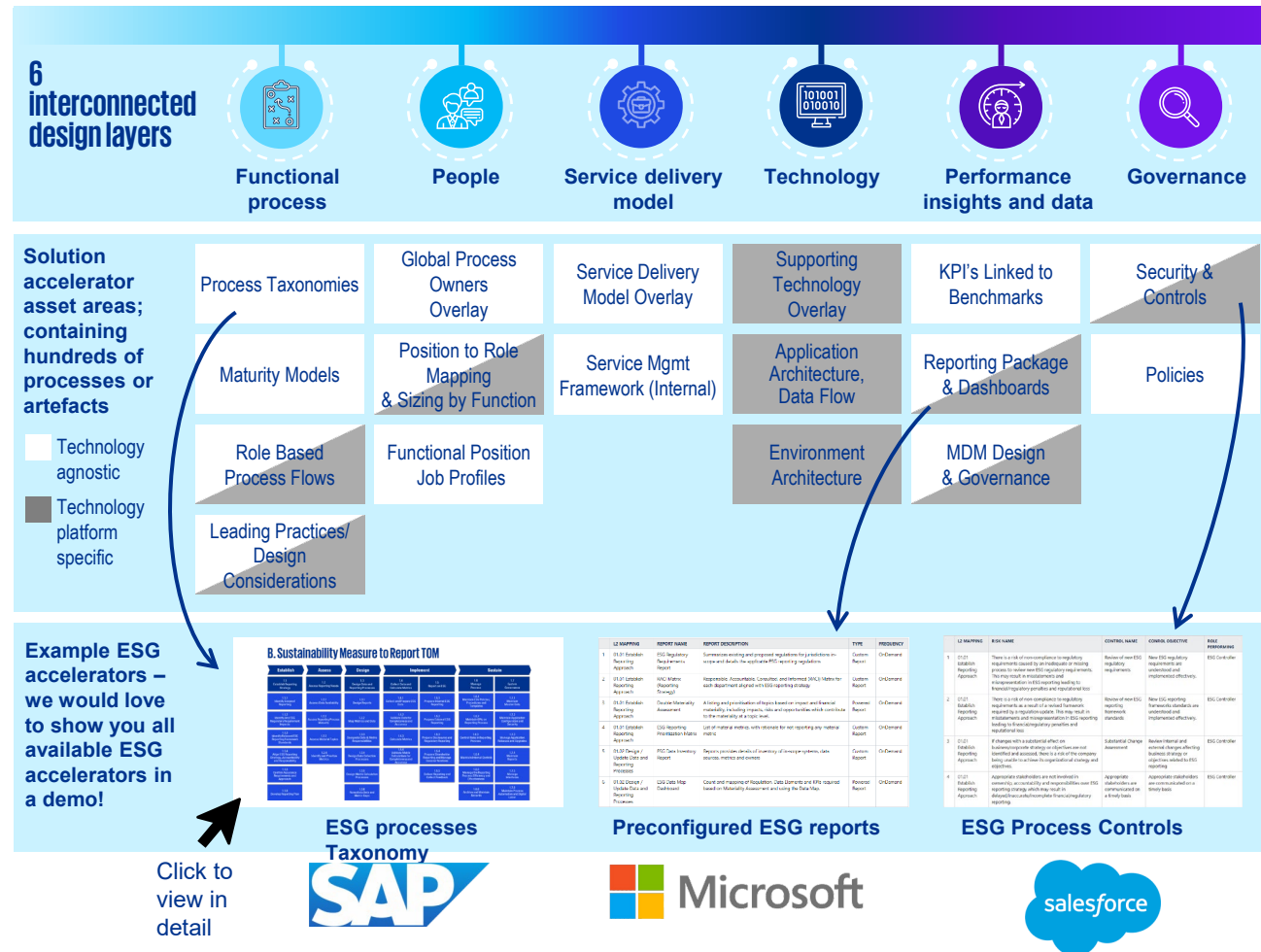


Workiva enables the Annual ESG Reporting Process. Workiva automates the organization of ESG data and publishes for SEC reporting.

KPMG Powered Sustainability is the platform pre-configured to reflect leading practice, enhanced with pre-built digital assets that incorporate AI and advanced automation, configurable on multiple technology platforms.



Powered Sustainability: our implementation approach



Our Powered approach

The KPMG approach helps to solve the immediate challenges associated with sustainability reporting with a detailed, consolidated readiness assessment, and a comprehensive data aggregation and analytics platform.

Powered Sustainability can help deliver a pre-defined Target Operating Model for ESG with KPMG leading practice across People & Culture, Process & Controls, Tech & Data, Governance, and Service Delivery Models, all pre-configured for the ESG technology platforms (e.g. Microsoft, Salesforce, SAP). It also contains integration with the widely used Workiva ESG financial reporting platform.

It's designed to help businesses get to 'best practice' quickly and securely, so that they can drive sustainable change and avoid a lot of the pitfalls that can come with traditional approaches.

Traditional implementation



KPMG Powered implementation



Define your path forward

See the future, today

Hybrid agile/waterfall approach

Ease into deployment with change adoption

Time savings

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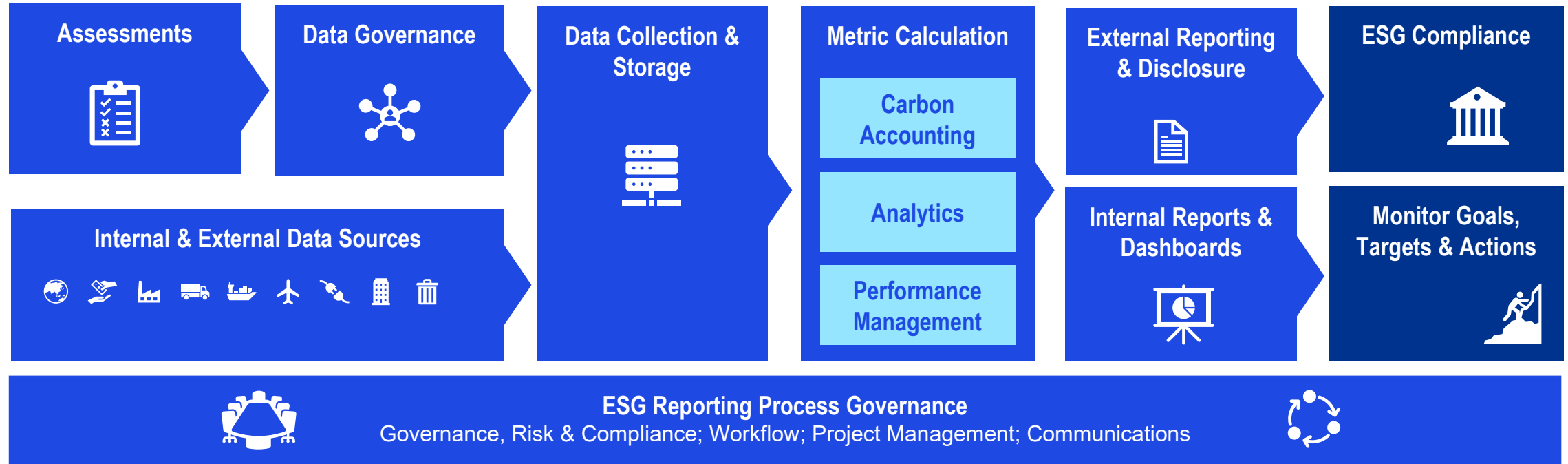


Appendix

- A. Example CSRD reporting architecture
- B. Example implementation approach
- C. Data sourcing options

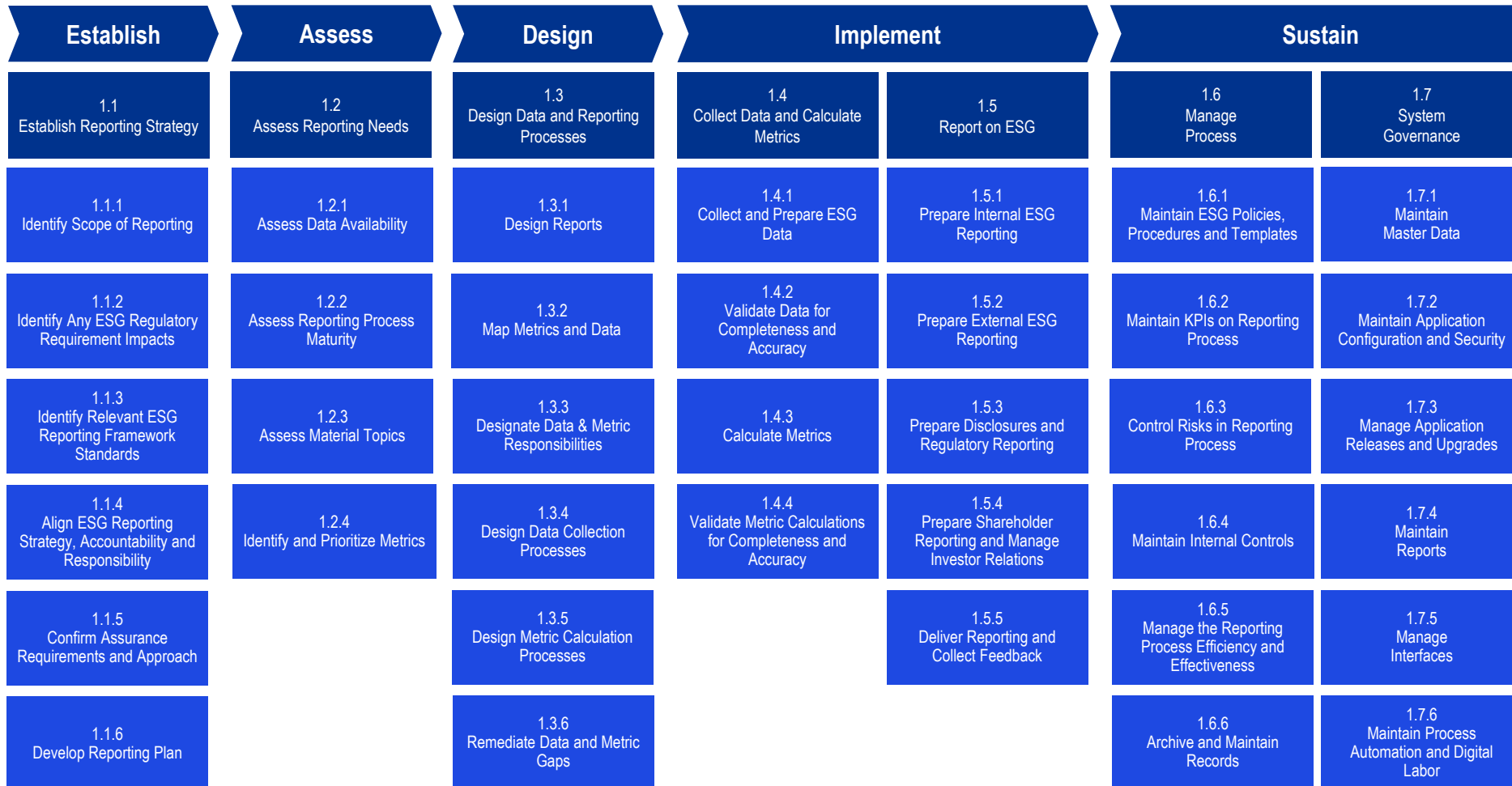
A. Technology & data architecture design for ESG Reporting

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 ESG issues in real-time. Tech-enabled governance of the reporting process can manage complexity and risk.



Representative Vendors

B. Sustainability Measure to Report TOM



The KPMG Target Operating Model (TOM) is a model answer, describing “**what good looks like.**”

The TOM is a comprehensive design framework for ESG Reporting including:

- People
- Process
- Technology
- Governance
- Service delivery model
- Performance insights and data

The [Sustainability Measure to Report TOM](#) assets include guidelines and executable materials (e.g., maturity assessments, process flows, leading practices considerations) for instances where KPMG is engaged to design, update, enhance or implement an organization's ESG reporting structure.

The Sustainability Measure to Report TOM covers ESG reporting, not other activities of an ESG program.

C. Data sourcing options

The choice of data sourcing is contingent upon the specific purpose at hand

Types of sources influence the value of the data, and should be considered in designing your data strategy

Source	Example	CSRD KPI	Pros	Cons
Internal systems	Milage of the vehicles owned/leased	E1-5 37 Total energy consumption related to own operations	<ul style="list-style-type: none"> ✓ Directly accessible and well integrated ✓ Up-to-date 	<ul style="list-style-type: none"> × Unvalidated
Supply chain partners	Product information of materials and production process	E5-5 36c The rates of recyclable content in products	<ul style="list-style-type: none"> ✓ Enables value-chain analysis ✓ Triangulation 	<ul style="list-style-type: none"> × Partnership agreements × Challenging integration
Clients (banking example)	Reported emissions (scope 1 and 2)	E1-6 51 Gross Scope 3 greenhouse gas emissions	<ul style="list-style-type: none"> ✓ Enables value-chain analysis ✓ Triangulation 	<ul style="list-style-type: none"> × Increased data protection measures × Challenging integration
(Semi-) governmental	BAG-data – Dutch buildings dataset as linking pin for real estate emissions	E1-6 51 Gross Scope 3 greenhouse gas emissions	<ul style="list-style-type: none"> ✓ Rich and reliable data ✓ Industry/market-wide consistency 	<ul style="list-style-type: none"> × Outdated, not frequently updated
Third party not-for profit	Global wage report per country	S1-10 70 Adequate wages per country	<ul style="list-style-type: none"> ✓ Low costs 	<ul style="list-style-type: none"> × Availability × Often limited scope of data
Third party commercial	Estimated EPC data to determine emissions for financed real estate	E1-6 51 Gross Scope 3 greenhouse gas emissions	<ul style="list-style-type: none"> ✓ Well structured and integrability ✓ Some level of validation 	<ul style="list-style-type: none"> × Costly
Scientific	CO2 equivalent expressed as GWP	E1-6 44 Gross Scopes 1, 2, 3 and Total GHG emissions	<ul style="list-style-type: none"> ✓ Reliable, validated, and credible data. 	<ul style="list-style-type: none"> × Complex structures × Possible limited access