Sustainability regulations: A gateway to new digital opportunities

As companies prepare for the complexity of sustainability regulations, anchoring on digital actions could result in not just compliance, but can also create new pathways to profit.
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Over the next three years, companies are expected to comply with a spate of domestic and international sustainability regulations (Figure 1) that stem from the Paris Agreement of 2015. These mandates will likely transform the way business is done. These regulations may impact some or all of greenhouse gas emissions, human rights, equity, waste, water management, nature, and biodiversity (see details in Appendix). While different regulatory bodies with different goals and political priorities developed these regulatory mandates, most are at least directionally in alignment with frameworks defined by the Task Force on Climate-related Financial Disclosures (TCFD). Several countries are endorsing or adopting emerging International Sustainability Standards Board (ISSB) standards, but most countries are making their own decisions about how to implement these standards, resulting in nuances including differing enforcement timelines, and varying companies in scope of the regulations.

As companies navigate the systemic changes required in this new regulatory environment, they will likely need to develop an understanding of “new” topics ranging from enterprise emissions footprints, reliable supply chain visibility and traceability, robust Environmental, Social, and Governance (ESG) data management, controls, and reporting capabilities (including new and innovative mechanisms of both communicating efforts with stakeholders and embedding actionable insights from ESG data across the governance of the organization). More importantly, the mandates and policies will likely have significant implications for companies in terms of transition risks and cost pressures. Several of these notable mandates will go into effect between 2024 and 2026—and companies should prepare today.

For most large companies, digital processes and systems will likely need to succeed manually-driven approaches for sustainability reporting (with medium and small companies to follow in subsequent years). At the same time, many enterprise software companies and hyperscalers are releasing new offerings to help address this need, adding to the mass of niche and bespoke offerings in the marketplace. This can be confusing and frustrating, and may add to the pressure leaders across the C-suite are facing with the time-box of regulatory compliance looming. Yet, if executives look at the opportunities presented by the digitization that these regulations require, they may discover that as opposed to a compliance burden, this regulatory wave opens new avenues of profit and value generation for their companies.

In this report, Deloitte explores the digital transformation needs arising from major ESG regulations and how they can result in improving profitability and value along with regulatory compliance.
Figure 1.1

New global ESG-related standards continue to emerge...

Even country-level regulations can be far reaching and applicable to companies across the globe.

Mandates announced:  ● AMER: North, Central, and South America  ● EMEA: Europe, Middle East, and Africa  ● APAC: Asia Pacific

- The ISSB is taking over the monitoring responsibilities of the TCFD from 2024, starting with the IFRS S1 and IFRS S2 disclosure requirements, which are consistent with TCFD but in some cases, require additional disclosures.
- Regulation is proposed, not finalized

Source: Deloitte analysis
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...As regulatory compliance pressure is creating a sense of urgency for digital change

Timelines to implement will vary by mandate, which can create complexity

- Estimated timeline to prepare for mandate
- Mandate is active
- Globally-relevant mandate

**Sustainability mandates are coming for nearly all Deloitte clients...**

### Business Responsibility and Sustainability Report (BRSR)
- Pre-2023: Mandated for top-1000 listed firms by market share
- 2024: New ESG metrics added for mandatory disclosures
- 2025 and Beyond: First BRSR reports due from the top-1000 listed Indian firms

### Taskforce for Climate related Financial Disclosures (TCFD)-aligned and International Sustainability Standards Board (ISSB – S1, S2)-aligned
- TCFD recommendations (published 2017) endorsed globally
- ISSB finalized two standards (IFRS S1 and IFRS S2) and TCFD announces transition of monitoring responsibilities to ISSB
- Standards go into effect
- First reports prepared in accordance with ISSB-aligned frameworks, based on jurisdictional adoption

### Supply chain due diligence act (SCCDA)
- Mandate already active for German enterprises (or foreign branches in Germany >= 3,000 employees)
- Mandate active for German enterprises (or foreign branches in Germany > 1000 employees)

### Securities and Exchange Commission (SEC) Climate Disclosure Rules (note – proposed, not final, timeline is estimated)
- Final actions on climate disclosure rules by SEC(i)
- All disclosures required for large accelerated filers (excl. Scope 3)

### Corporate Sustainability Reporting Directive (CSRD)
- EU Member States adopt the EU Directive into law
- Disclosures required for large EU companies
- European Commission to adopt specific standards for sectors, listed SMEs, and non-EU orgs.
- Disclosure required for non-EU orgs. (based on size threshold) from 2028

### Corporate Sustainability Due Diligence Directive (CSDDD)
- EU Council and European Parliament reached a provisional agreement on the directive
- After being transposed into law in the EU member states, companies with net turnover in the EU of €150M+ will need to align their business model and operations to a goal of <1.5C in warming (among other requirements)

### Ecodesign for Sustainable Products Regulation (and other Digital Product Passport-relevant regulations incl. EU Battery Regulation)
- EU working on finalizing individual mandates and implementation plans across 30+ product groups through 2024
- Adoption will occur 2024-2030 starting with batteries, textiles, and consumer electronics – will vary by product group

### Green Claims Directive (note – proposed, not final, timeline is estimated)
- Directive passed by EU parliament and the European Council
- Start up of the directive mandated for all firms targeting EU consumers

### Carbon Border Adjustment Mechanism (CBAM)
- The European Commission published an implementing regulation for CBAM-aligned reporting obligations
- Transitional period begins, reporting regulations applying to imports of limited items(ii)
- Scope extensions to include chemical and polymer products

(i). Timeline created based on estimated early 2024 final ruling | (ii). Items include iron and steel, cement, fertilizers, aluminium, electricity, and hydrogen

Source: Deloitte analysis
Sustainability and digital transformation: The path to longer-term benefits, beyond regulatory preparedness

Sustainability regulations are about more than reporting and compliance. They can be a catalyst for transformation. For example, if adopted, the proposed Green Claims Directive in the EU would impose rules around external branding of sustainable products, services, and actions. This could require a company to change and connect systems and processes across the enterprise, and even loop in the legal department of an organization to verify that all conditions have been met. Some regulations have overlapping information needs and may impact multiple functions such as supply chain, marketing, IT, finance, and not just risk and compliance.

In order to help unlock broader benefits that can arise from the digital change that accompanies sustainability regulation, it is important for leaders to develop a holistic enterprise-level view of sustainability regulations. Currently however, organizations are facing challenges in implementing the necessary systems and processes to even collect and use the right data. For example thirty-five percent of executives surveyed in a Deloitte report claimed that their greatest challenge is the accuracy and completeness of data, and another 25% cited access to quality data as the greatest challenge.

To help overcome these hurdles, companies should consider prioritizing a set of digital actions to elevate data quality, identify data interconnectedness, and improve efficiencies, which may in turn position an enterprise for compliance with several mandates in one fell swoop instead of trying to reactively address one mandate at a time. Companies can consider digital actions as a journey—from meeting basic reporting requirements to creating new value opportunities (Figure 2).

Foundational actions to comply today (digital enhancements companies should prioritize to measure and report baseline mandates):

- **Embed a greenhouse gas (GHG) emission framework into firmwide management and IT systems:** Using a standardized framework that helps measure, manage, and report emissions can add new data attributes across several management systems in the company across departments (most notably, supply chain, operations, finance, and marketing). Forward-thinking companies may also use insights from this cross-cutting emissions data to help guide governance decisions across the enterprise on their journey to net-zero.

- **Implement carbon accounting modules to comply with regulation and accelerate cost management:** Cross-functional teams including finance and IT stakeholders can measure and track dozens of emissions and sustainability data points. An example includes scope 1, 2 and 3 emissions, which can be tracked using cloud-based carbon...
accounting platforms. They can involve internal and external stakeholders in data entry and use Artificial Intelligence (AI) technologies for data integration. Further, companies can use predictive energy models that help assess the financial and economic impact of energy consumption on a real-time basis.

These initial actions may not only enable compliance with the most near-term regulatory mandates, but can also result in cost and time efficiencies, and improved transparency (Figure 3). In addition to these near-term, foundational regulations, several geographies are issuing mandates that are more nuanced and that cut across several parts of the organization (such as Germany’s Supply Chain Due Diligence Act and the EU’s Ecodesign for Sustainable Products Regulation). The digital actions to comply with these mandates will likely need a longer lead time.

Incremental actions that can be taken today to comply tomorrow (digital actions that help support wider reporting requirements):

- **Enhance supply chain data management system with new data attributes and orchestration capabilities**: The system should record detailed information about procurement, production, and supplier emission factors, employee health and safety, and human rights compliance. Imagine pulling up a bill of materials (BOM) and being able to digitally interrogate several more aspects of your suppliers and materials than you do today, allowing for confidence that the broader supply network is sourcing materials ethically while minimizing emissions.

- **Maintain digital passports of products**: Companies should explore embedding or enhancing digital identifiers to products and materials across vendor and product life cycle management systems, to be able to show that products and materials were sourced ethically and sustainably. Subsequently, maintain digital ledgers to store product-related data enabling secure and real-time access across systems.

- **Install real estate measurement systems**: Companies can track and quantify key sustainability metrics across a real estate portfolio, including energy usage, emissions, and water.

- **Adopt waste measurement systems**: Establish processes and platforms to quantify waste generated across the enterprise, including garbage and food waste, as well as disposal methods.

- **Embed “green IT” management systems**: Monitor the carbon footprint and energy usage of the IT organization, particularly data centers, and expand beyond to the emissions impact of cloud/Software as a service (SaaS) usage to help enable technology operations across the enterprise that are sustainable (and helps prevent these digital actions themselves from adding to your company’s carbon footprint). The organization should be aligned on sustainable technology choices and operations from the top-down, or digitally-driven efforts around sustainability risk being ineffective.

- **Enable interoperability dependencies between the various technology systems**: Develop the technology architecture in a manner that the information feeds from one department to the other and the organization has one single source of truth. For instance, the marketing department can integrate information from the digital ledger maintained by manufacturing with existing tech platforms to comply with the proposed Green Claims Directive (if adopted by the EU).

Such a digital infrastructure can create additional value (Figure 3, and Sidebar 1, for an example). Companies can eventually take additional digital actions to help capitalize on this base to develop new business models and activate additional areas of profit and growth.

**Transformational actions to help create value (new digital capabilities unlocked by foundational and incremental work):**

- **Drive the ability to “digitally twin” your organization**: Done right, the digital enhancements that climate regulations will drive unlock the ability to create a digitally simulated “copy” of your company. The detailed, granular data of each layer of your organization, from the supply chain to the real estate footprint, paired with the computing capabilities that large software vendors provide, can allow for a clear current-state “twin” of the organization along with the capability to simulate future scenarios to help drive better planning.

- **Use geospatial technologies and simulations to help drive insights on physical assets**: Various geospatial technologies and simulation software can enable real estate resiliency assessments, and location decisions based on a much wider set of metrics including physical risks.

- **Improve predictive capabilities with sophisticated energy models**: Develop new insights about the financial and economic implications of energy consumption and make informed choices about energy usage—and potentially use these insights to help drive cost-optimized clean energy initiatives such as fleet electrification or solar adoption.

- **Use technology to help build a “secondary” marketplace**: Develop information exchange marketplaces either at an organization level or in collaboration with other companies to utilize swathes of data for different purposes, such as consumer buying patterns to inform more effective and predictive planning. Companies can also develop multi-party marketplaces to use data for different purposes, including portfolio management. For instance, data about efficiencies related to carbon emission and raw material usage can be used by banks and private equity (PE) players to embed...
in their loan and investment assessment criteria. This concept is not limited to data, either – improved circular economic principles enabled by these digital foundations could enable an enterprise to repurpose recycled raw materials on a secondary marketplace to extend effective lifespan of materials and reduce raw material costs. *(Note – the use of data for activities like these would only be ethical use within what’s allowable by each organization’s security and privacy policies, and compliant with relevant data protection laws such as the General Data Protection Regulation).*

- **Plan for broader sharing of data with participants in the business value chain:** Install data management systems with appropriate governance structure and access levels for different stakeholders to help meet their varied needs. For instance, supply chain participants could use this information to help optimize inventory planning.

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**Figure 2**

**Compliance to value journey**

**Priority Digital Actions**

**Enterprise value drivers**

- **Improved and net-new revenue streams**
  - Use technology to build a “secondary” marketplace
  - Optimize predictive capabilities with sophisticated energy models
  - Drive the ability to “digitally twin” your organization
  - Data transparency
  - Higher bottom line and margin
  - Enhanced supply chain transparency
  - Improved talent attraction and retention
  - Cost efficiency
  - Time efficiency
  - Stronger risk awareness and mitigation
  - Stronger climate resilience

- **Transparency and process efficiency**
  - Adopt waste measurement systems
  - Install real estate measurement systems
  - Embed green IT management systems
  - Enable interoperability dependencies between the various technology systems
  - Plan data democratization

- **Cost avoidance and regulatory risk mitigation**
  - Embed greenhouse gas (GHG) emission framework pervasively into your management and IT systems
  - Enhance your financial management systems with carbon accounting modules
  - Maintain digital passports of products
  - Optimize investments
  - Premium product design and pricing
  - Enhanced brand value
  - New revenue sources
  - Better access to green financing

**Foundation**

- Comply today
  - Select relevant mandates:
    - Corporate Sustainability Reporting Directive (CSRD), Securities and Exchange Commission (SEC) climate disclosure rules*

**Incremental**

- Comply tomorrow
  - Select relevant mandates:
    - Ecodesign for Sustainable Products Regulation (ESPR), Green Claims Directive*

**Transformational**

- Create value
  - Select relevant mandates:
    - N/A – transcended from compliance to profit

**Potential enterprise benefits**

(non-exhaustive)

- Optimized investments
- Premium product design and pricing
- Enhanced brand value
- New revenue sources
- Better access to green financing

* Regulation is proposed, not finalized

Source: Deloitte analysis
Sustainability regulations: A gateway to new digital opportunities

This wave of digitalization will likely result in more tangible value accretion such as new revenue sources, access to green financing, informed asset and portfolio management, strengthened climate resilience, and ability to attract higher quality talent and increase retention. Figure 3 details several examples of value possible from these critical digital actions. Specifically, read about how Maple Leaf Foods’ sustainability actions have led to value beyond compliance.

**Figure 3**
Value creation along the digital transformation journey

<table>
<thead>
<tr>
<th>FOUNDATIONAL</th>
<th>INCREMENTAL</th>
<th>TRANSFORMATIONAL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cost efficiency</strong></td>
<td>• Avoid fines and litigation costs</td>
<td>• New revenue sources</td>
</tr>
<tr>
<td></td>
<td>• Use a single system and work with different departments to help gather relevant data for meeting disclosure requirements of multiple regulations.</td>
<td>• High product circularity and an extended product lifecycle can unlock resale values through listing on the secondary markets.</td>
</tr>
<tr>
<td><strong>Time efficiency</strong></td>
<td>• Digital systems can pull data from varied sources, with higher accuracy, lower cost, and at a faster speed compared to manual processes.</td>
<td>• Industrializing carbon credits created from abated carbon and monetizing it in markets can help with increased income in efforts to reach net zero.</td>
</tr>
<tr>
<td><strong>Transparency</strong></td>
<td>• Address multiple stakeholders’ expectations—shareholders, employees, vendors etc. through consistent disclosures.</td>
<td>• Monetize ESG data such as geospatial insights, develop new ESG compliant products.</td>
</tr>
</tbody>
</table>

Enhanced supply chain transparency

- Simplify complex supply chains, and enhance supply chain traceability as a result of a digital ledger.
- Enable each participant in the supply chain to use their data to help drive efficiencies.

Stronger risk awareness and mitigation

- Comprehensive supply chain visibility and traceability could lead to proactively identifying challenges and resolving them in real-time helping create resilient supply chains.

Optimized investments

- Use insights from ESG-enabled financial management systems for forecasting financing needs.
- Use product insights from digital ledger for making decisions related to capital allocations, marketing and advertising green claims etc.

Premium product design and pricing

- Use technology to help create a digital ‘replica’ of physical assets and inform sustainable design changes which customers are willing to pay.
- In fact, some governments including several in the EU are instituting “green procurement” targets for public authorities, meaning sustainable product design will create a distinct competitive advantage for companies that sell products to government agencies – and this represents a macro market force given public authority purchasing power represents 14% of EU GDP.

Enhance brand value

- Support green claims with verifiable data generated from implementation of emission measurement systems.

Source: Deloitte analysis
Maple Leaf Foods' transition as an industry leading net-zero firm

Take the case of Maple Leaf Foods, one of Canada’s largest animal protein companies. The client realized the meat industry was facing a major climate crisis. They became compelled to change and made a bold commitment to become carbon neutral despite the emissions-intensive nature of their industry. They were able to become one of the first companies of their kind to set Science Based Targets initiative (SBTi)-approved emissions targets in 2019, and used advanced scenario modeling and abatement-planning technology platforms to help build out a credible carbon-neutral strategy to achieve these targets.

After using these digital approaches to define Maple Leaf Foods’ target and strategy, they were able to realize clear value on their path to net zero. In becoming one of the world’s first carbon-neutral food company (an achievement all on its own), they were able to:

• Secure Canada’s first sustainably-linked loan (SLL)
• Create new premium product categories of low carbon-alternative proteins
• Use carbon neutrality as a point of brand differentiation on their core brands

By moving ahead of impending regulatory mandates Maple Leaf Foods’ purpose-driven digital actions led to several business benefits. Not only are they positioned well to comply with emerging regulations, but they were able to realize differentiated new value.
The bottom line: The journey from ESG compliance to profit can be built through a digital plan

Preconceived notions around relevance and implementation of ESG regulations can cause executives to think about the technology efforts associated with regulatory compliance myopically. The digital transformation that is catalyzed by ESG regulation, in addition to being the right thing to do for our planet and future generations, present a new avenue of monetization for companies. The following factors are causing companies to tread lightly in this space:

• Monitoring regulations only in headquartered (HQ) countries: Many companies expect to be impacted by regulations in their home country. However, many companies headquartered outside of the EU will likely be impacted by EU regulations due to having operations in the EU above a certain threshold.

• ESG standards are still evolving: Many of the existing standards are not yet mandatory. A notable example being the recently finalized ISSB S1 and S2. Canada, Japan, and the UK are examples of countries that have publicly announced support for adopting the ISSB standards in some form, though have not formally adopted yet. Despite the fact that standards like ISSB and European Sustainability Reporting Standards (ESRS) are not yet mandated, they are finalized, and for that reason it is critical to plan the impact on core systems and plan digital changes ahead of time.

• Noncompliance consequences don’t “feel” real: Many of these sustainability-related regulatory mandates are either already in effect, or will go into effect over the next 24 months. However, effective compliance will take ample preparation time, and not allowing for this lead time can turn compliance efforts into a last-minute crisis with material consequences. For example, violations of the Germany Supply Chain Due Diligence Act could carry fines up to 2% of a company’s annual revenue and the EU Corporate Sustainability Due Diligence Act carries even steeper penalties of up to 5% of the annual group turnover.

Considering there will be assurance requirements associated with some of these mandates, the need for completeness and accuracy of the information reported will become critically important. Inaccurate information may present a reputational and monetary risk to companies.

Despite these challenges, companies should act now to lay the foundation for profitable digital transformation. Effective dates for compliance appear distant, but preparation and implementation of systems will likely take months, if not longer. It is important that leaders rethink regulatory preparedness in a more expansive manner and proactively use digital technologies to help enable competitive differentiation. Companies that choose to remain defensive in their approaches to ESG regulatory compliance can waste thousands of employees working hours on inefficient, manual processes for measurement, reporting, and disclosure – and may underperform in the market relative to their digitally mature competitors. The leading organizations that aim to shape themselves responsibly and with purpose can lead with digital technologies to help unlock pathways not only to regulatory compliance, but also enhanced brand value, and possibly a higher bottom line. Many pathways to digital value can be possible dependent on relevant mandates and enterprise priorities.
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Figure 4
Example of value of potential digital evolution based on proposed regulation (Proposed Green Claims Directive*, Ecodesign for Sustainable Products Regulation)

<table>
<thead>
<tr>
<th>COMPANY</th>
<th>CUSTOMER</th>
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<tr>
<td>Lack of ability to influence customers based on environmental considerations and limited ability to track and influence secondary use or reclaim components.</td>
<td>A customer cannot scan a product at source and compare its carbon footprint or recyclability against other competitors – not a major decision factor for consumers today.</td>
</tr>
<tr>
<td>Although current regulations are evolving, basic data requirements are well known – CIOs/CMOs can initiate a discovery process to understand systems impact of including digital passport data and information required to meet green claims. All ongoing implementations should factor for this.</td>
<td>Demand for verifiably sustainably-sourced products continues to grow as emissions impact of consumer sectors such as fast fashion, plastics becomes more apparent, and high-profile litigation cases around greenwashing claims continue to be highlighted in the media.</td>
</tr>
<tr>
<td>(Batch ID, Product ID, Class ID) level information becomes ubiquitous in marketing, supply chain and sales systems. Systems must be able to factor various aspects of metadata associated with each level of information for extended use in operational planning and reporting.</td>
<td>Sustainability data becomes a large factor in the purchase decision making process - customers have the ability to scan a product and immediately compare information including emissions, distance the product travelled, recyclability and reusability.</td>
</tr>
<tr>
<td>Companies should either directly plan for customer buyback or recycling programs or contract with component recyclers with the aim to drive down raw material and component prices for related product lines, and make sure capabilities are in place to track recovery logs, quality assurances, and other key information points required to validate materials and products are recycled and still of high quality.</td>
<td>Customers have products that can either last longer because of replaceable components or are able to easily return/recycle their used products to companies. In addition to sustainability being a large decision driver, quality secondary markets become a larger purchase channel.</td>
</tr>
<tr>
<td>CMOs can launch differentiating campaigns with the assurance that product lines are in line with mandates including Ecodesign of Sustainable Products and Green Claims, and use verifiably recycled and low-carbon materials.</td>
<td></td>
</tr>
<tr>
<td>Companies have the ability to: Have greater control of secondary markets for their products – driving a new revenue stream. Plan new products factoring components and raw material supplies from previous product lines. Differentiate product and brand on the basis of sustainability (influencing marketing and design).</td>
<td></td>
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* Regulation is proposed, not finalized
Source: Deloitte analysis
At the end of the day, the CIO and their organization have both a responsibility to help the enterprise effectively comply with sustainability mandates, and equally an opportunity to help lead the business down the path to new value.

In closing – a regulatory tidal wave is coming for nearly all organizations. Most will find a way to comply – but the organizations that act promptly to embark on a digitally-enabled sustainability transformation may not only find a way to ride this regulatory wave but thrive in a new era of business.

**What does this mean for Chief information officers (CIOs) and enterprise technology?**

The CIO is central to this compliance-to-value journey for enterprises. The CIO and their organization should be prepared to help make prompt and well-informed decisions on what technology investments may be needed to first comply with imminent mandates, then to realize incremental value from these investments. A CIO should keep the following in mind:

**01 Clear vision and roadmap**

A clear roadmap vision can help secure buy-in and provide a “north star”–business and finance leadership may only be interested in doing the minimum to help achieve compliance and avoid business disruption. A concise articulation showing a clear roadmap to incremental value and new sources of profit can help critical stakeholders into the “compliance-to-value” mindset and help set the agenda for a compliance-to-value business transformation program.

**02 Trusted vendor choices**

There are several options, familiar and emerging, for vendor choices–many of the most commonly-used and familiar technology vendors have entered the market in some way around ESG data measurement, accounting, and disclosure–it is worth speaking with your trusted vendors to understand the offerings they may have “off the shelf”. However, several niche players have had relevant products in-market for years longer than the traditional enterprise technology vendors–assessing both options and selecting the right set of vendors can help accelerate your compliance-to-value journey at the right price point.

**03 Maturity of tech offerings**

Technology offerings may still be in some cases immature–while solutions exist on the market, bear in mind many of the solutions may still be maturing in terms of feature functionality and integration across the requisite data sources. Engaging the right specialists to understand where drawbacks may exist for each vendor solution can help avoid pitfalls during implementation–and potentially help to negotiate a better price point with vendors that are often willing to invest to win customers.

**04 Right strategic partner**

The right systems integrator and strategic partner can make a difference–understanding not only how ESG data platforms integrate across several components of the business, but how they can work together to help unlock new value can be a tall task. A team of multi-disciplinary specialists can serve as an effective strategy and technology partner as a guide along the compliance-to-value journey, and help you get to the “value” end of the journey faster and more cost-effectively than your competitors.
Appendix

Several countries have developed or are in the process of developing sustainability-related mandates. This section lists out key digital implications for companies based on a selection of regulations applicable in regions/countries such as the United States, EU, United Kingdom, and Asia Pacific.

Please access IAS Plus and Green Compass by Deloitte to learn more about the regulations and mandates.

These are not meant to be exhaustive lists or “one size fits all” for each client in the noted region – these are meant to give an illustrative view of a selection of potentially relevant regulatory mandates for each geography, and relevant digital actions to take over the next several years.

Note: The following figures do not represent an exhaustive list of regulatory mandates that will apply in these geographies, only a subset of key mandates in each case to illustrate the complexity business leaders will soon face.

Figure 5.1
A plethora of disclosures mandated for US-based clients...

**SEC US Climate disclosure***
Requires climate-related disclosure including risks, governance practices, risk management processes, emission targets, and related metrics

**CSRD**
Mandates ESG-related disclosures for undertakings operating in the EU and, supply and subcontracting chains including relevant policies, potential risks and non-financial KPIs

**Green Claims Directive***
Sets out minimum norms for how companies substantiate, communicate, and verify their environmental claims for all firms placing products and services in the EU market

**Ecodesign for Sustainable Products Regulation**
Imposes requirements for consumer goods manufacturers to provide standardized information about product sourcing to drive sustainable manufacturing practices

**SCDDA**
Applies disclosure requirements for supply network emissions and human rights violations for large German enterprises and German branches of foreign subsidiaries

Notes: (i). Includes (a) Non-EU entities with listed debt or equity securities and (b) EU subsidiary of US-based firm with 500+ employees; | (ii). Except microenterprises (<10 employees and an annual turnover <EUR2M); | (iii). Initial scope of products include car batteries, textile goods, construction products and electronic goods;

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<td>2025 - 2026</td>
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**Key digital actions enabling regulatory compliance**

**Now - 2024**
- Assess existing ESG reporting controls
- Establish end-to-end GHG emissions estimation and measurement systems
- Implement data management and reporting systems for scope 1, 2 and 3 emissions
- Implement platform(s) for risk management and collaboration
- Adopt supply chain reporting and management systems to capture emissions across tier 1,2 and 3 suppliers
- Implement vendor risk assessment and complaints mechanism to report ESG-related violations

**2024 - 2025**
- Implement real-time ESG dashboard to identify non-compliant pathways and hotspots
- Employ advanced analytics to assess financial impact of sustainability data
- Implement digital platforms to apply ‘internal carbon pricing’ to reduce emissions
- Deploy reporting platform to streamline reporting from internal 3rd party sources

**2025 - 2026**
- Implement product lifecycle management tool which IDs products and tracks hazardous waste
- Develop a GHG accounting framework to substantiate supplier claims
- Design an environmental claims management framework focused on data integrity, transparency and verification

Notes:
* Regulation is proposed, not finalized

Source: Deloitte analysis
Sustainability regulations: A gateway to new digital opportunities

Figure 5.2

A plethora of disclosures mandated for EU and UK clients...

SEC US Climate disclosure*
- Requires climate-related disclosure including risks, governance practices, risk management processes, emission targets, and related metrics

ISSB (S1 and S2)
- Proposes voluntary disclosure of sustainability-related and climate-related risks and opportunities material to a firm’s operation over and above TCFD’s ESG disclosure requirements

Green Claims Directive*
- Sets out minimum norms for how companies substantiate, communicate, and verify their environmental claims for all firms(*) placing products and services in the EU market

SCDAA
- Applies disclosure requirements for supply network emissions and human rights violations for large German enterprises and German branches of foreign subsidiaries

CSRD
- Mandates ESG-related disclosures for undertakings operating in the EU(i) and, supply and subcontracting chains including relevant policies, potential risks and non-financial KPIs

Ecodesign for Sustainable Products Regulation
- Imposes requirements for consumer goods manufacturers(iii) to provide standardized information about product sourcing to drive sustainable manufacturing practices

Notes: (i). Includes (a) Non-EU entities with listed debt or equity securities and (b) EU subsidiary of US-based firm with 500+ employees; (ii). Except microenterprises (<10 employees and an annual turnover <EUR2M); (iii). Initial scope of products include car batteries, textile goods, construction products and electronic goods;

ISSB (S1 and S2) Voluntary

Applicable in:

<table>
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Key digital actions enabling regulatory compliance

- Assess existing ESG reporting controls
- Establish end-to-end GHG emissions estimation and measurement systems
- Implement data management and reporting systems for scope 1, 2 and 3 emissions
- Implement/operate platforms for climate risk documentation and management
- Adopt supply chain reporting and management systems to capture emissions across tier 1, 2 and 3 suppliers
- Implement vendor risk assessment and complaints mechanism to report ESG-related violations
- Implement real-time ESG dashboard to identify non-compliant pathways and hotspots
- Employ advanced analytics to assess financial impact of sustainability data
- Implement digital platforms to apply ‘internal carbon pricing’ to reduce emissions
- Deploy reporting platform to streamline reporting from internal 3rd party sources
- Embed reporting platform to publish automated compliance report in the required format

- Implement product lifecycle management tool which IDs products and tracks hazardous waste
- Develop a GHG accounting framework to substantiate supplier claims
- Design an environmental claims management framework focused on data integrity, transparency and verification

* Regulation is proposed, not finalized

Source: Deloitte analysis
### A plethora of disclosures mandated for Asia-based clients...

<table>
<thead>
<tr>
<th>Regulation</th>
<th>Description</th>
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<tbody>
<tr>
<td>BSRS</td>
<td>Mandated business sustainability report for top-1000 listed Indian firms by market share</td>
</tr>
<tr>
<td>SEC US Climate disclosure*</td>
<td>Requires climate-related disclosure including risks, governance practices, risk management processes, emission targets, and related metrics</td>
</tr>
<tr>
<td>SCDDA</td>
<td>Applies disclosure requirements for supply network emissions and human rights violations for large German enterprises and German branch of foreign subsidiaries</td>
</tr>
<tr>
<td>ISSB (S1 and S2)</td>
<td>Proposes voluntary disclosure of sustainability-related and climate-related risks and opportunities material to a firm’s operation over and above TCFD’s ESG disclosure requirements</td>
</tr>
<tr>
<td>CSRD</td>
<td>Mandates ESG-related disclosures for undertakings operating in the EU and, supply and subcontracting chains including relevant policies, potential risks and non-financial KPIs</td>
</tr>
<tr>
<td>Green Claims Directive*</td>
<td>Sets out minimum norms for how companies substantiate, communicate, and verify their environmental claims for all firms placing products and services in the EU market</td>
</tr>
<tr>
<td>Ecodesign for Sustainable Products Regulation</td>
<td>Imposes requirements for consumer goods manufacturers to provide standardized information about product sourcing to drive sustainable manufacturing practices</td>
</tr>
</tbody>
</table>

### Key digital actions enabling regulatory compliance

<table>
<thead>
<tr>
<th>Now - 2024</th>
<th>2024 - 2025</th>
<th>2025 - 2026</th>
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<tbody>
<tr>
<td>Design and implement data management platforms to maintain a broad range of ESG data and metrics, including emissions</td>
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<tr>
<td>Assess existing ESG reporting controls</td>
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<td>Employ risk management platform to identify material risk or opportunities</td>
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<tr>
<td>Establish end-to-end GHG emissions estimation and measurement systems</td>
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<tr>
<td>Implement data management and reporting systems for scope 1, 2 and 3 emissions</td>
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<tr>
<td>Implement operate platforms for climate risk illumination and management</td>
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<tr>
<td>Adopt supply chain reporting and management systems to capture emissions across tier 1, 2 and 3 suppliers</td>
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<tr>
<td>Implement vendor risk assessment and complaints mechanism to report ESG-related violations</td>
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<tr>
<td>Deploy reporting platform to streamline reporting from internal 3rd party sources</td>
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<tr>
<td>Implement real-time ESG dashboard to identify non-compliant pathways and hotspots</td>
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<td>Employ advanced analytics to assess financial impact of sustainability data</td>
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<tr>
<td>Implement digital platforms to apply ‘internal carbon pricing’ to reduce emissions</td>
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<tr>
<td>Embed reporting platform to publish automated compliance report in the required format</td>
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</tbody>
</table>

*Notes: (i). Includes (a) Non-EU entities with listed debt or equity securities and (b) EU subsidiary of US-based firm with 500+ employees; | (ii). Except microenterprises (<10 employees and an annual turnover <EUR2M) | (iii). Initial scope of products include car batteries, textile goods, construction products and electronic goods; |

*Regulation is proposed, not finalized

Source: Deloitte analysis
Endnotes

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