



APPLYING THE IFRS SUSTAINABILITY DISCLOSURE STANDARDS



WELCOME

THIS INTERACTIVE WORKSHOP WILL START MOMENTARILY



LEARNING OBJECTIVES

Understand the purpose of the ISSB Standards



LEARNING OBJECTIVES

**Identify what
sustainability
information
investors need**



LEARNING OBJECTIVES

Develop a disclosure plan that supports your preparation for ISSB Standards

MODULE 1: PREPARE

Building on existing knowledge of the landscape and purpose of sustainability-related financial disclosure

Considering content, location, efficiency and user confidence when disclosing in general-purpose financial reports

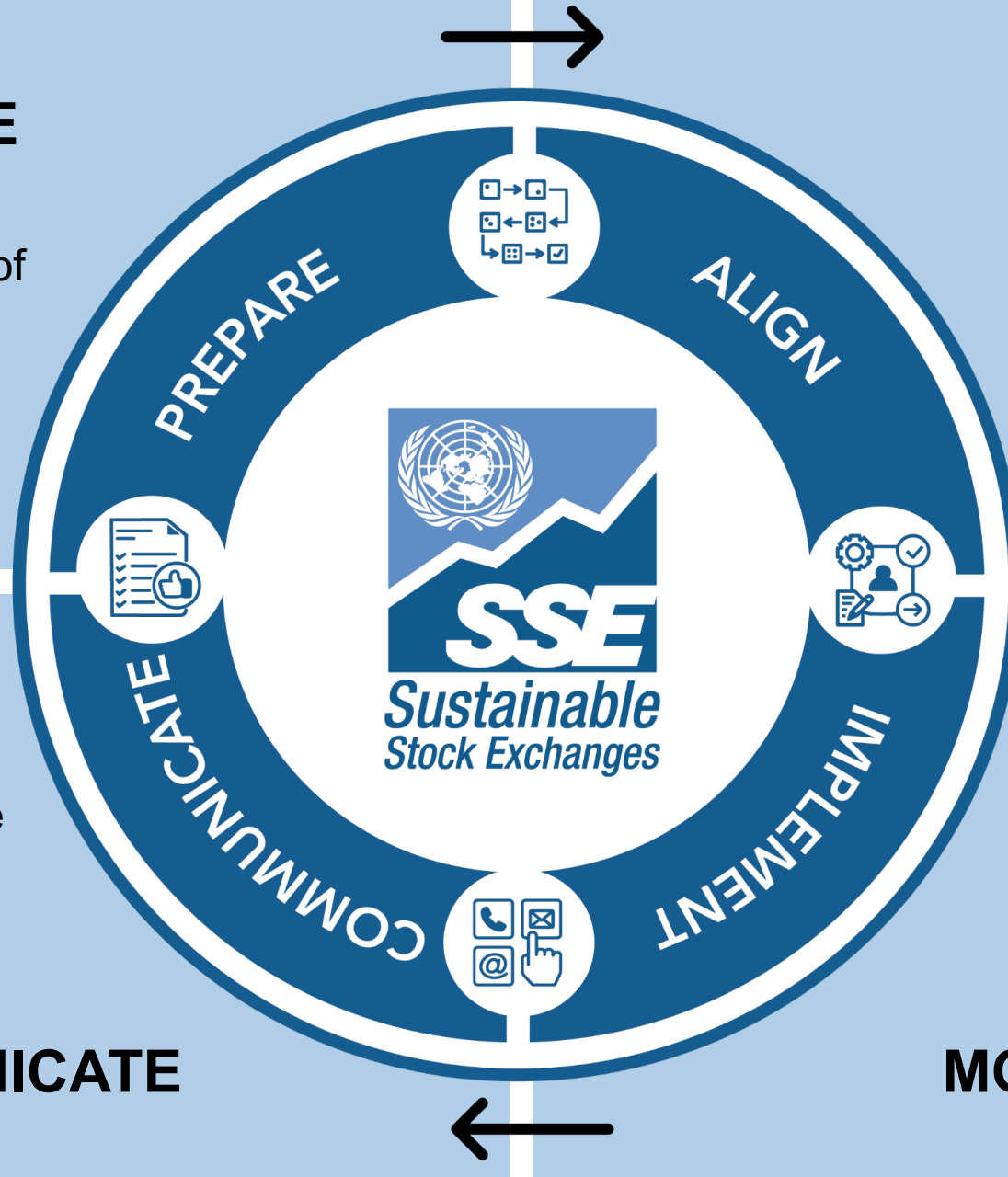
MODULE 4: COMMUNICATE

MODULE 2: ALIGN

Applying the IFRS Standards as the global baseline and integrating additional disclosures to meet geographical, sectoral and regulatory requirements

Identifying, evaluating, and integrating sustainability-related risks and opportunities

MODULE 3: IMPLEMENT





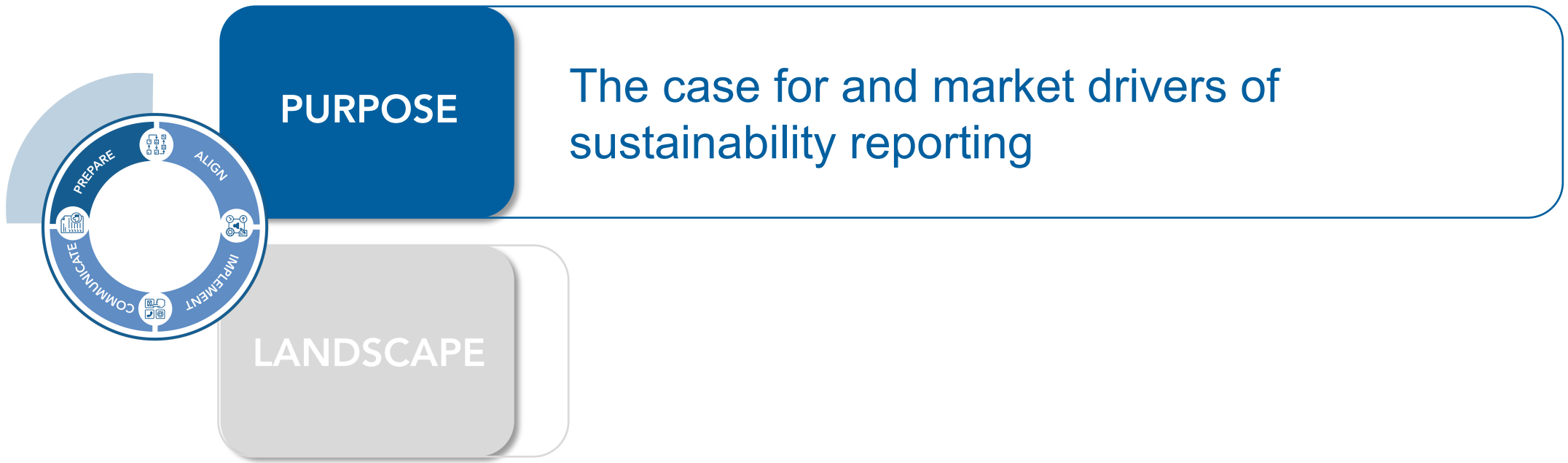
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Building a solid foundation of knowledge

PREPARE



Reasons for disclosing information



Compliance



Differentiating vis-a-vis our peers



Respond to societal expectations, demonstrate accountability and align with peer practice



Explain contribution to sustainable outcomes



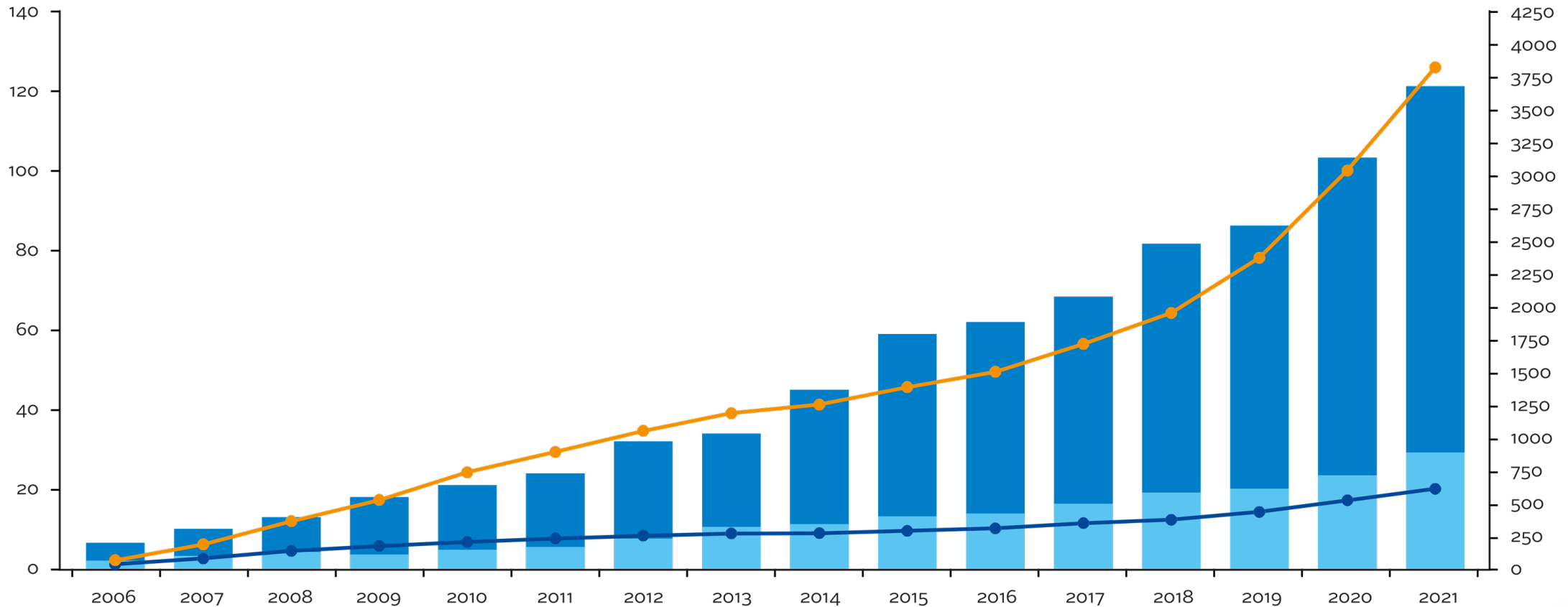
Respond to urgent demand from investors

Growth in PRI Signatories



Assets under management (US\$ trillion)

N° Signatories



<https://www.unpri.org/annual-report-2023>

● Number of Signatories
● Number of Asset Owners

■ Assets under management
■ Asset Owners' Assets under management



LANDSCAPE OF CLIMATE FINANCE IN 2021/2022

Global climate finance flows along their life cycle in 2021 and 2022. Values are averages of two years' data to smooth out fluctuations, in USD billions



SOURCES AND INTERMEDIARIES

Which type of organizations are sources or intermediaries of capital for climate finance?

INSTRUMENTS

What mix of financial instruments is used?

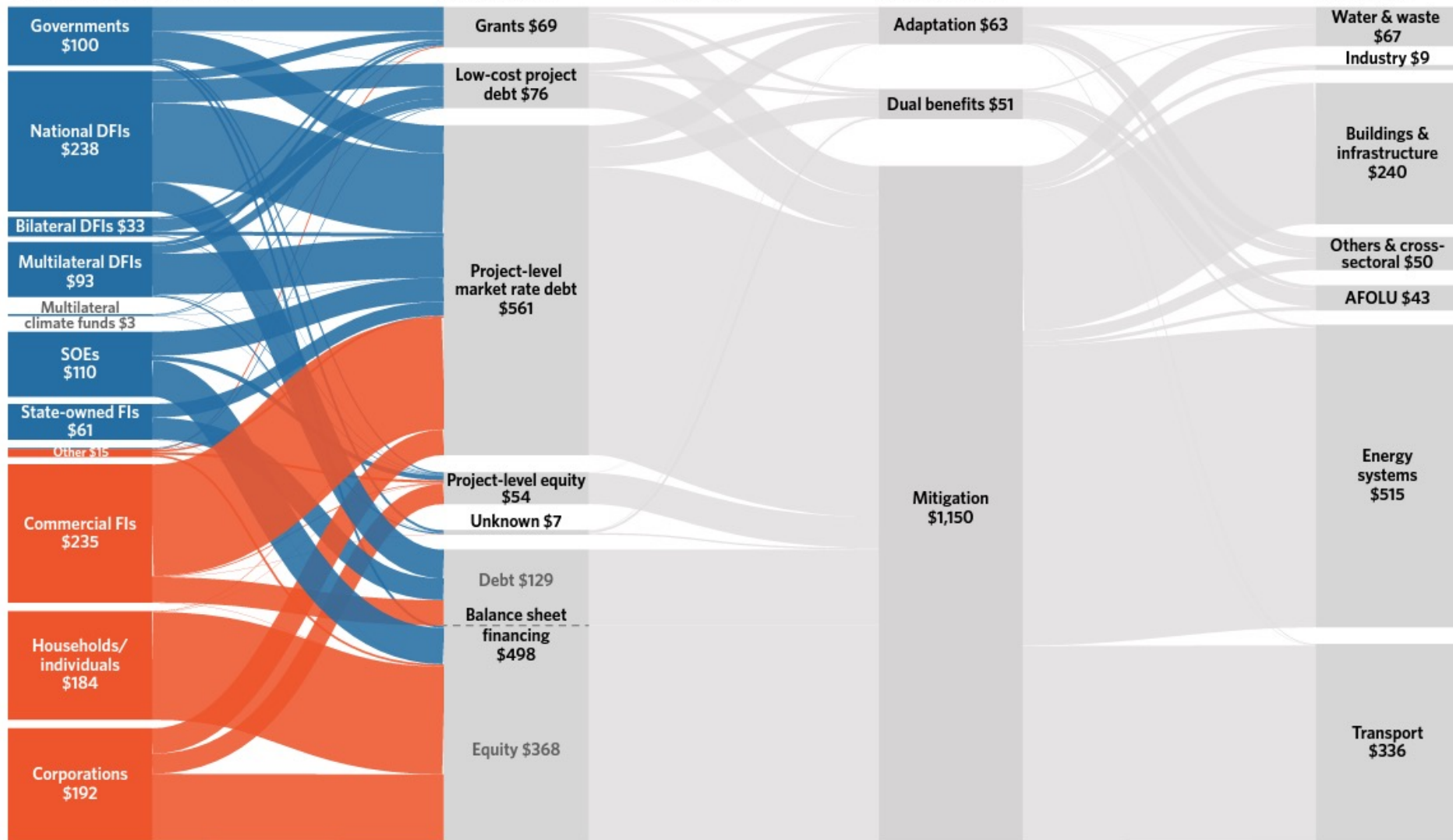
1.27 TRILLION USD ANNUAL AVERAGE

USES

What types of activities are financed?

SECTORS

What is the finance used for?



Public Private

"Other" public sources include export credit agencies and unknown public funds

"Other" private sources include institutional investors, funds, and unknown

"AFOLU" stands for agriculture, forestry, other land use, and fisheries. "Others & cross-sectoral" includes \$6bn unknown

Source: Climate Policy Initiative

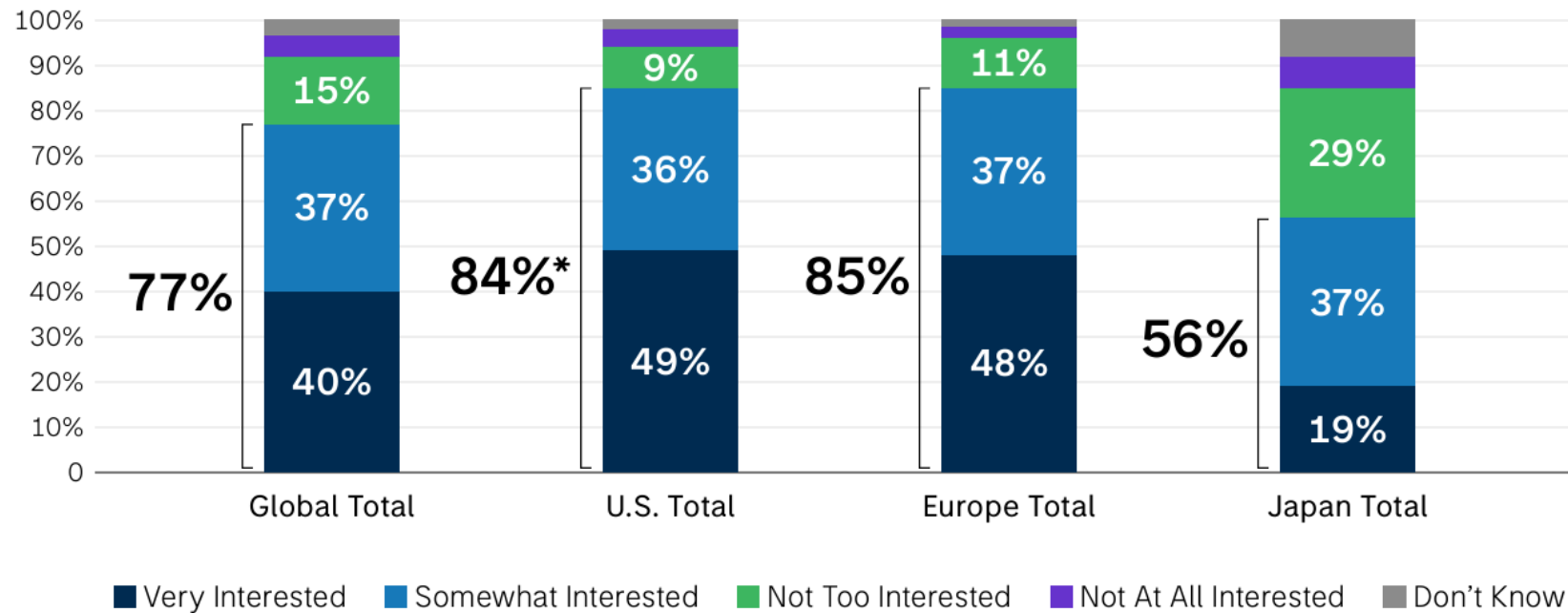


Individual investor interest in ESG information



More than three quarters of individual investors globally are interested in sustainable investing

How interested are you in sustainable investing?



* U.S. rates of interest appear to sum to 85% due to rounding. The "Very Interested" rate is 48.5% and "Somewhat Interested" rate is 35.6%, or 84.1% total.

Individual investor interest in ESG information



Top drivers globally for rising interest in sustainable investing

Percent of respondents 'significantly' or 'somewhat more' interested in sustainable investing due to the issue listed, over the last 12 months.

Rank	Driver for rising interest in sustainable investment of those investors most interested in sustainable investing	% interested
1	Financial performance of sustainable investments	74%
2	New climate science findings	71%
3	Market dynamics and broader economic performance	69%
4	Inflation	69%
5	Legislation limiting ESG considerations in investments	64%

Sustainability-related risks and opportunities income statement impacts

■ **Changes in revenue mix or total revenue**

- For example, a change in demand for products and services due to shifts in consumer preferences, or changes in production capacity from input disruption or impacts on workforce management and planning, etc.

■ **Changes in expenditures**

- For example, changes in operating costs, R&D expenditures required, costs associated with deploying new practices and processes, changes in production costs, changes in workforce costs, etc.

Sustainability-related risks and opportunities balance sheet impacts

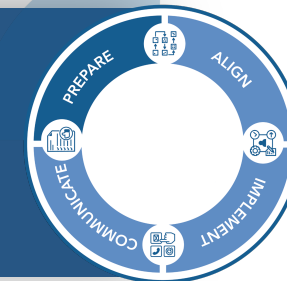
- **Changes to assets and/or liabilities**

- For example, changes to portfolio value, equity or liabilities or changes in carrying amount of assets from write-offs, asset impairment, early retirement of existing assets, acquisition of new assets, or re-pricing of assets, etc.

- **Changes to financing and the cost of capital**

- For example, changes financing structures, insurance premiums, capital availability, etc.

Understanding financial implications of sustainability-related issues



Scenario Phenomena	Time Horizon	Category of risks and opportunities	Description of impact	Impact
Acute Physical	From a short period (1 to 3 years)	Extreme Events	Particularly extreme and intense weather events.	Extreme events can cause impacts in terms of damage to property and lack of continuity of operations.
Chronic Physical	From a long period (2030 - 2050)	Market	Increased or decreased demand for electricity; increase or decrease in production.	Electricity demand is also affected by temperature, fluctuating in which may affect our business. Renewable energy generation can also be affected by structural changes in resource availability.
Transition	From a short period (1 to 3 years)	Policy and Regulation	CO2 pricing and emissions policies, incentives for energy transition, greater margin for investment in renewables and resilience.	The effects of energy transition and resilience policies can influence the volume and return on investments.
Transition	From an average 3 period (2025 – 2029)	Market	Changes in the price of commodity, raw materials and energy, evolution of the energy package, changes in retail consumption, modification of the competitive structure.	Considering two alternative transition scenarios, the Company assesses the impacts of the different trends with the increase in the weight of renewable sources in the energy package and the electrification of final consumption.

Partially extracted from Enel Américas, Integrated Annual Report Enel Américas 2022, pp. 132–133

The evolving risk environment (time is key)



Global risks ranked by severity over the short and long term

"Please estimate the likely impact (severity) of the following risks over a 2-year and 10-year period."

Risk categories

- Economic
- Environmental
- Geopolitical
- Societal
- Technological

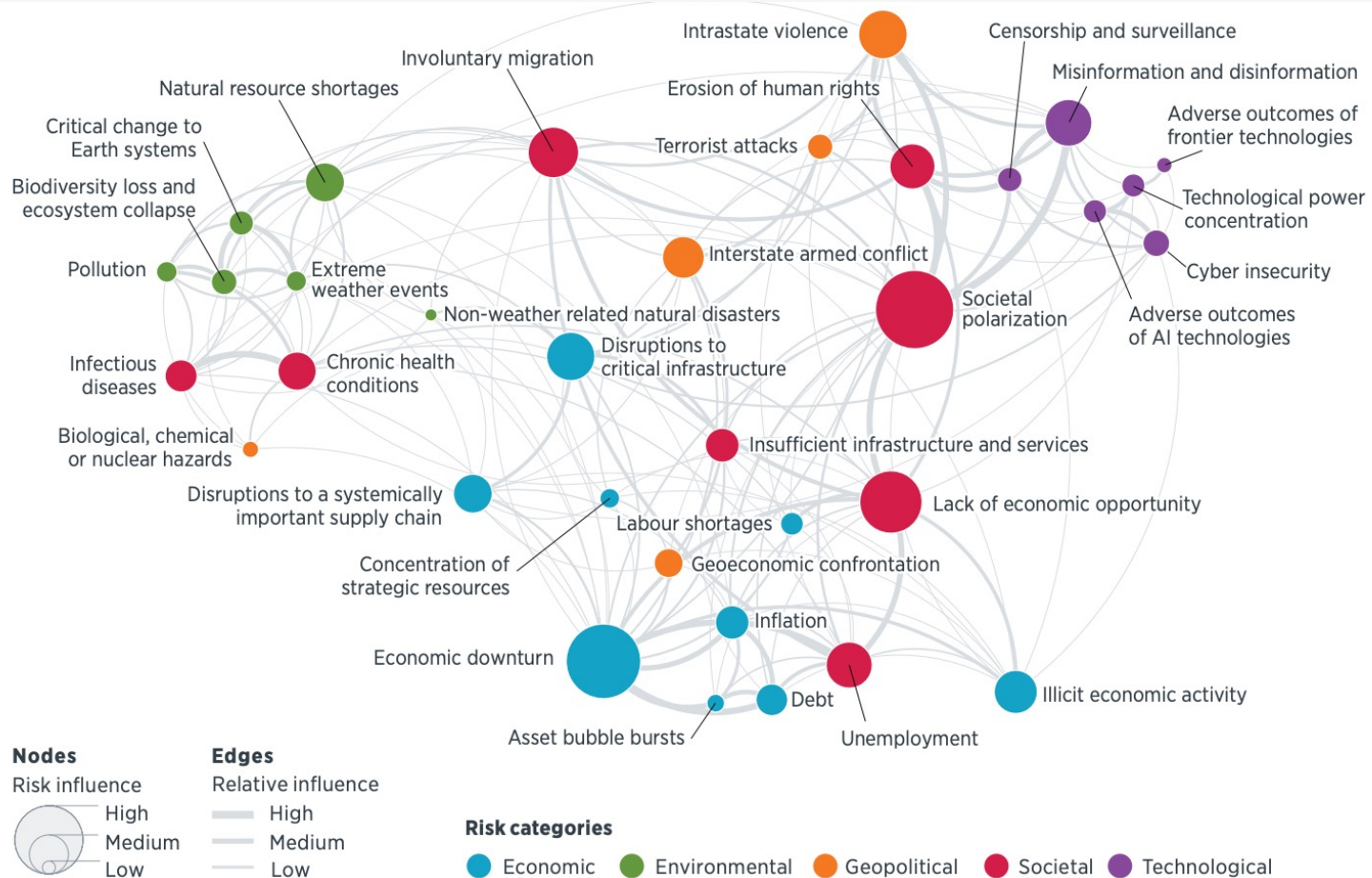
2 years



10 years

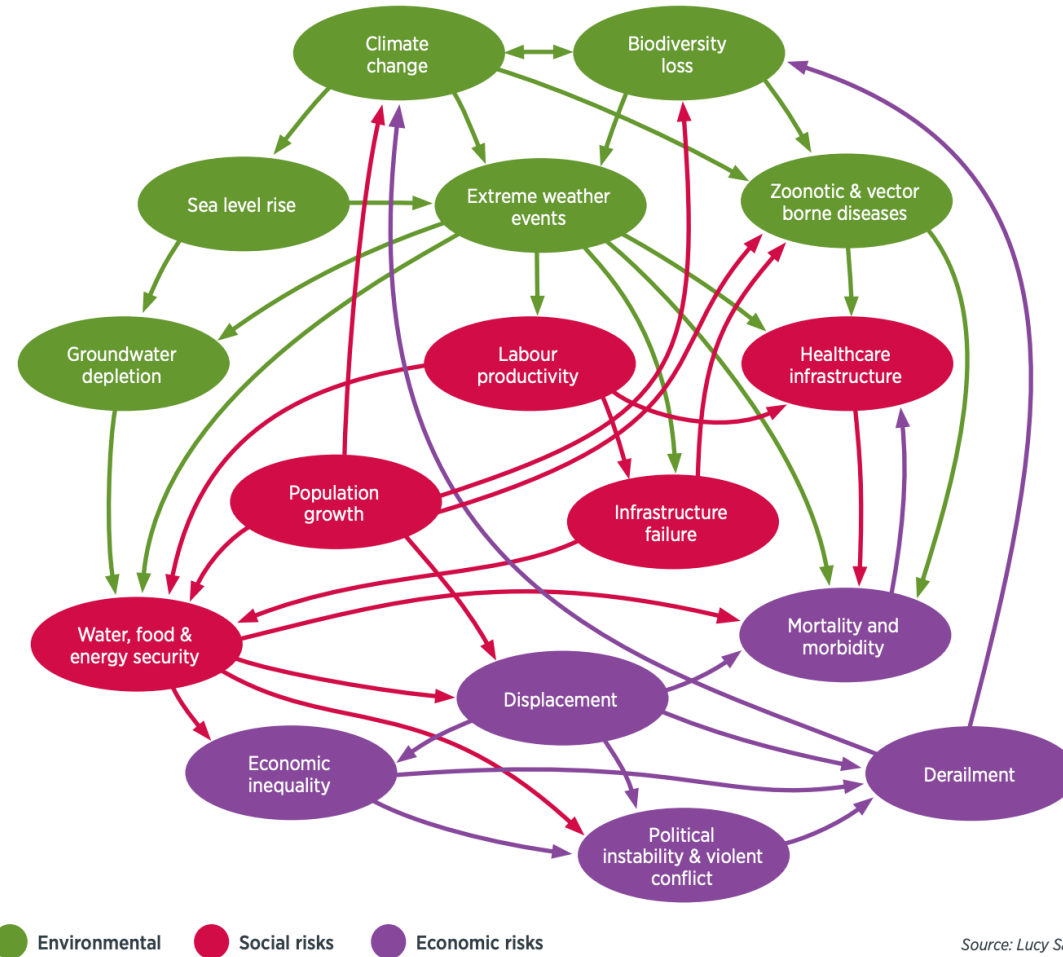


The connectivity of the risk environment



Source: World Economic Forum Global Risks Perception Survey 2023-2024

The connectivity of the risk environment



Source: Lucy Saye

ZOOM POLL

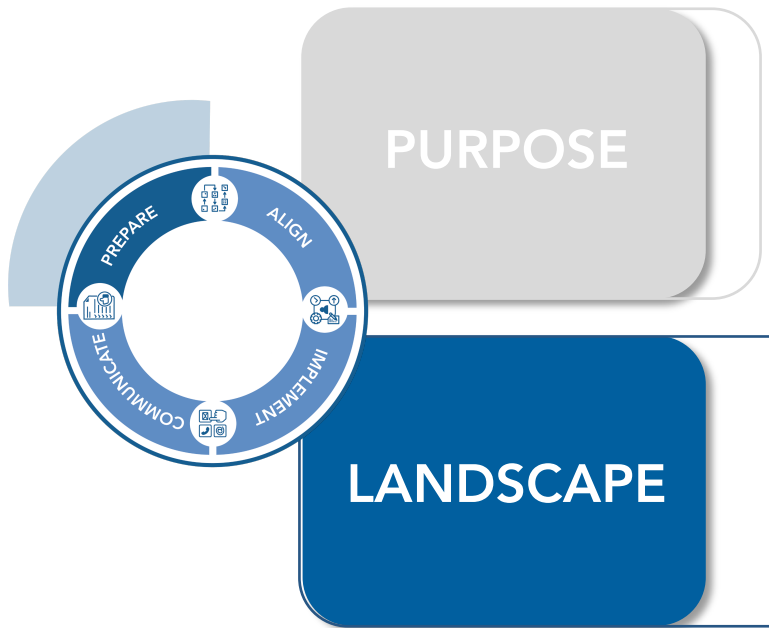
Select the
appropriate answer

The zoom poll should appear on your screen momentarily. If it does not appear, feel free to answer in the chat box or message the hosts directly.

1. What are your reasons for disclosing sustainability-related information?
(Select all that apply)

- a. To conform with legal, regulatory or listing **requirements**
- b. To communicate **management's objectives**
- c. To respond to societal **expectations**, demonstrate accountability and align with peer practice
- d. To respond to **investor** interest or pressure from investor bodies for disclosure of information
- e. Other (indicate in the chat)

PREPARE



The evolution of sustainability-related financial disclosures

ZOOM POLL

Select the
appropriate answer

The zoom poll should appear on your screen momentarily. If it does not appear, feel free to answer in the chat box or message the hosts directly.

2. What frameworks are you currently using?

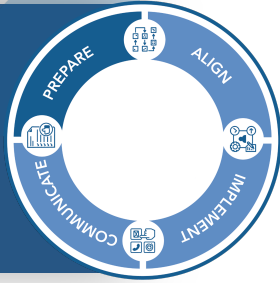
(Select all that apply)

- a. CDP
- b. GRI
- c. Integrated Reporting
- d. SASB
- e. TCFD
- f. UNGC
- g. Others (indicate in the chat)

The evolution of standards



Holistic reporting package



INVESTOR FOCUSED

Financial
accounting



Sustainability-related
financial reporting



MULTI-STAKEHOLDER FOCUSED



Purpose and audience differentiation



**FINANCIAL
MATERIALITY VIEW**



**IMPACT MATERIALITY
VIEW**



**DOUBLE
MATERIALITY VIEW**

Structure of the IFRS Foundation



Public accountability

IFRS Foundation Monitoring Board

Governance, strategy, oversight

IFRS Foundation Trustees

Independent standard-setting

International Accounting
Standards Board (IASB)

International Sustainability
Standards Board (ISSB)

IFRS Interpretations Committee
(IFRIC)

ISSB objectives



Develop standards for a global baseline of sustainability disclosures

Meet the information needs of investors

Enable companies to provide comprehensive sustainability information to global capital markets

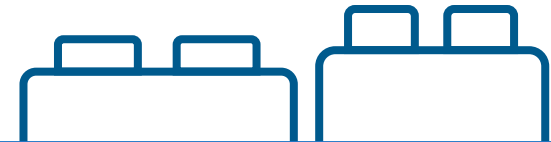
Facilitate interoperability with disclosures that are jurisdiction-specific and/or aimed at broader stakeholder groups

A truly global baseline of disclosures



Additional building block can be added to meet:

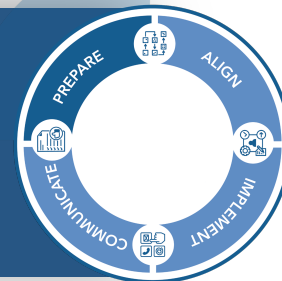
- Jurisdiction-specific requirements
- Broader multi-stakeholder needs



ISSB Standards

- A comprehensive foundation of disclosures for global jurisdictional adoption
- Common language for comparable, decision-useful disclosures
- Designed to meet investor needs across global capital markets

Making ISSB Standards the global baseline



ISSB

provide comprehensive global baseline through Standards



IOSCO

endorses ISSB Standards recommending adoption



Audit standard-setters

enhance and develop assurance standards



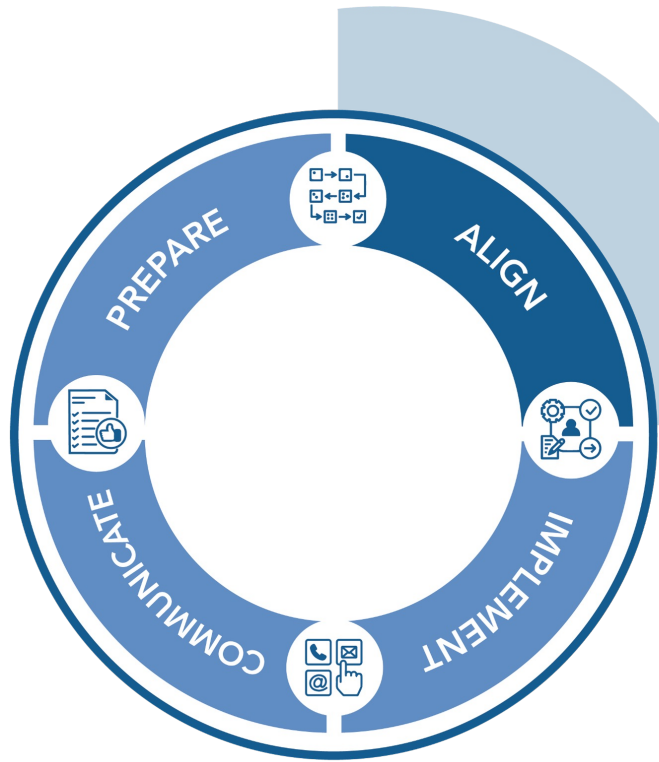
Jurisdictions

require by adopting the Standards



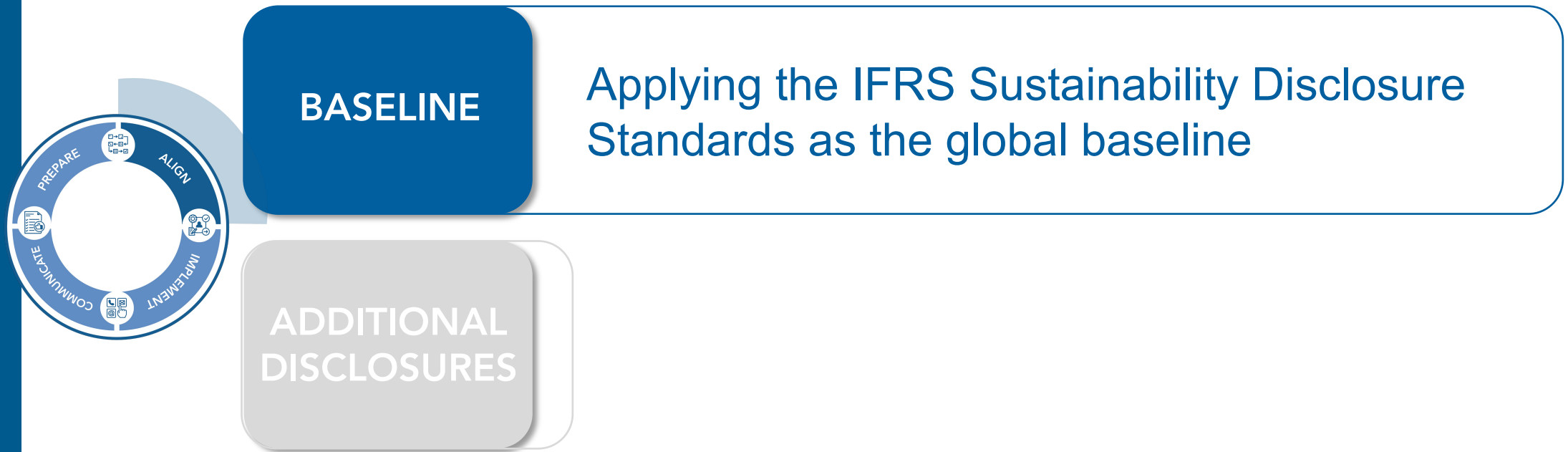
Market participants

voluntarily opt to apply the Standards

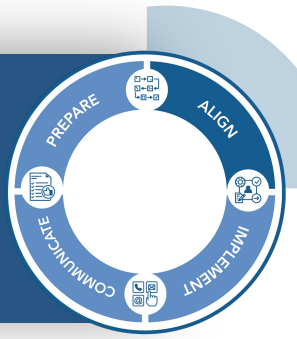



Setting the direction: Applying the IFRS standards & integrating additional disclosures

ALIGN





Important terms



 **Sustainability-Related Financial Information**

 **Sustainability-Related Risks & Opportunities**

 **General Purpose Financial Reports**

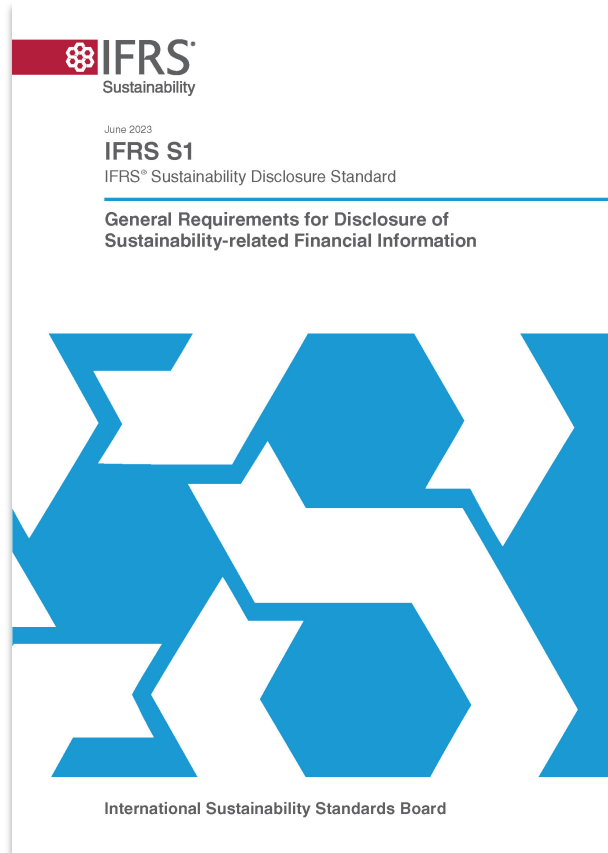
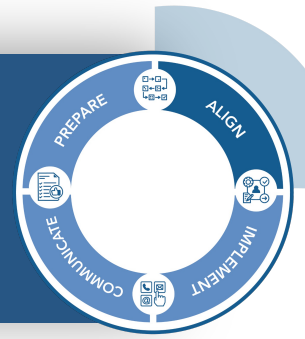
 **Material Information**

Important terms



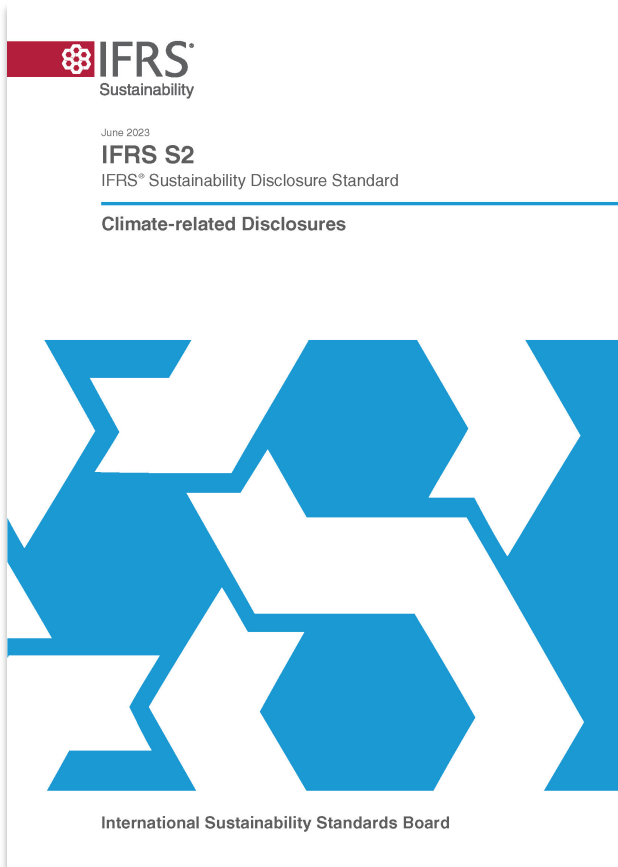
- **Sustainability-Related Financial Information** - Information about a company's sustainability-related risks and opportunities that is useful to primary users of
- **Sustainability-Related Risks & Opportunities**—Those risks and opportunities that could reasonably be expected to affect the entity's cash flows, access to finance or cost of capital over the short, medium or long term (IFRS S1.3).
- **General Purpose Financial Reports**—may have different names in different jurisdictions including integrated report, strategic report, operating and financial review. Includes financial statements and sustainability-related financial disclosures.
- **Material Information**—Information is material if omitting, misstating or obscuring it could reasonably be expected to influence investor decisions (IFRS S1.18).

IFRS S1: General requirements



- Requires **material information** about **sustainability-related risks and opportunities** with the financial statements to meet investor information needs
- Applies **Task Force on Climate-related Financial Disclosures (TCFD) architecture**
- Requires **industry-specific disclosures**
- Refers to **sources to help companies** identify sustainability-related risks and opportunities and information beyond climate (IFRS S2)
- Can be used with **any accounting requirements (GAAP)**

IFRS S2: Climate-related disclosures



- Incorporates the **TCFD recommendations**
- To meet investor information needs, IFRS S2:
 - is used in accordance with **IFRS S1**
 - requires disclosure of **material information** about **climate-related risks and opportunities**, including physical and transition risks
 - requires **industry-specific disclosures** – supported by accompanying guidance built on SASB Standards

IFRS S1 and S2 together



IFRS S2 is to be applied in accordance with IFRS S1 because S1:

- Establishes important **conceptual foundations**, e.g.: **connected information, value chains**
- Provides important guidance on the **assessment of materiality**
- Sets out the **qualitative characteristics** of the information to be provided, e.g.: **relevant** and **faithful representation**
- Sets out requirements and concepts for reporting, e.g.:
 - the reporting entity
 - timing and location of reporting
 - connections and comparative information in reporting

Core Concepts



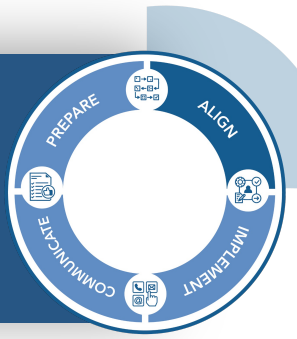
i **Meeting primary users' needs**

i **Connected information**

i **Consistent information**

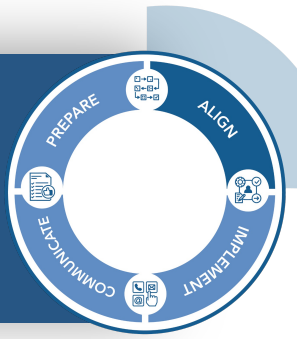
i **Fair representation**

Meeting primary users' needs



- **Primary users of general purpose financial reports** are existing and potential investors, lenders and other creditors
- Information influences **primary users of general-purpose financial reports** when it informs their decisions about:
 - Whether to provide resources to the entity
 - Buying, selling or holding equity and debt
 - Providing or selling loans and other forms of credit
 - Voting on or otherwise influencing how the company manages its economic resources

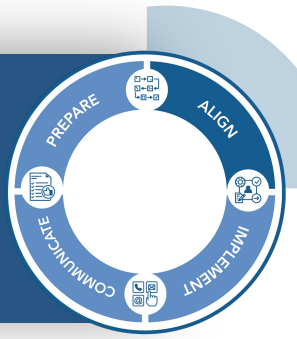
Connected information



IFRS S1 asks for information that enables understanding of the connections between:

- sustainability-related risks and opportunities
- disclosures on core content
- sustainability-related financial disclosures and financial statements

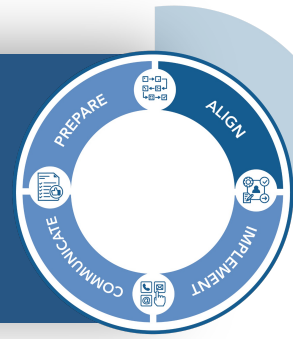
Consistent information



Consistency is enhanced when the same data and assumptions are used for sustainability-related financial information and the related financial statements:

- Prepared **for the same reporting entity and reporting period** as the financial statements
- Provided **at the same time** as the financial statements and as part of the general purpose financial reports
- Include **data and assumptions that are consistent** with the the related financial statements as much as possible

Fair presentation



A **complete set** of sustainability-related financial disclosures should fairly present all sustainability-related risks and opportunities that could reasonably affect the company's prospects

To achieve fair presentation

Disclose relevant and material information

Faithfully represent information using principles of decision-usefulness

Disclose comparable, verifiable, timely and understandable information

Disclose additional information if needed

To achieve faithful representation

Complete, neutral and accurate depiction of sustainability-related risks & opportunities

ZOOM POLL

Select the
appropriate answer

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3. What information should be considered for connectivity?

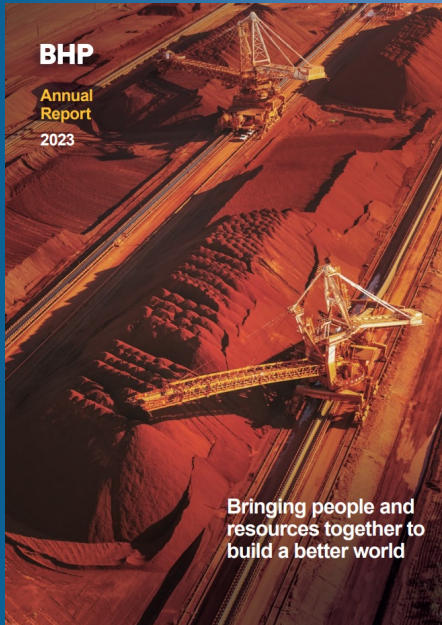
(Select all that apply)

Connections between:

- a. Governance, strategy, risk management and metrics & targets
- b. Sustainability-related financial disclosures and financial statements
- c. Sustainability-related risks and opportunities

EXAMPLE

Connection between decarbonization and net zero strategy and investment decisions



Capital allocation towards pathways and solutions

Decarbonisation is embedded in our annual investment and prioritisation processes. All investment decisions consider the quantity of GHG emissions associated with the project, the cost per tonne of CO₂-e associated with the project and the alignment with the Group pathways to a net zero trajectory.

In FY2023, we spent US\$122 million on initiatives associated with operational GHG emission reductions, together with value chain GHG emission reductions in areas such as steelmaking and shipping, and BHP Ventures investments. This figure does not include the operating expenditure associated with renewable electricity arrangements established at a number of our operated assets, which collectively represented the main source of operational GHG emission abatement for BHP in FY2023.

From FY2024 to FY2030, we expect to spend around US\$4 billion (nominal value) on operational decarbonisation, with plans reflecting an annual capital allocation of between approximately US\$250 million and approximately US\$950 million per year over the next five years.

On current assumptions, the overall portfolio of decarbonisation projects to support achievement of our medium-term target is expected to deliver a positive net present value (NPV) for the Group, while to date, most implemented projects have delivered a positive or neutral NPV.

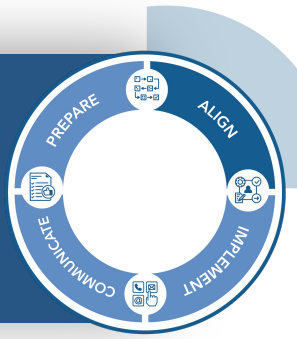
BHP Ventures also continues to build a portfolio of investments to help accelerate innovation in the mining industry through assessment and execution of additional investments across emerging technology areas, including long-duration energy storage solutions, diesel displacement and carbon dioxide removal.

 For more information on our range of investments to drive decarbonisation and sustainable growth refer to [bhp.com/about/our-businesses/ventures](https://www.bhp.com/about/our-businesses/ventures)

Connection to future spending plans and targets

Example source: BHP Annual Report 2023 pg 47 – <https://www.bhp.com/investors/annual-reporting/annual-report-2023>

Additional guidance



Application Guidance

Same authority as the main part of the Standard



Educational Material

Helps companies apply the standards



Accompanying Guidance

Illustrative guidance and examples.



Industry-based Guidance

Accompanying or illustrative guidance

The background of the slide features a hand-drawn target on a light blue surface. The target consists of several concentric circles drawn with a black marker. A pencil is positioned in the lower right quadrant, with its tip pointing directly at the center of the innermost circle. The overall aesthetic is clean and professional, with a blue color palette.

**Core content
areas of S1/S2**

Core content areas



GOVERNANCE

- Governing Body
- Management

STRATEGY

- Risks & Opportunities
- Effects on
 - Business model / supply chain
 - Strategy
 - Financial / cash flows
- Resilience

RISK MANAGEMENT

- Risks
- Opportunities
- Integration

METRICS & TARGETS

- Metrics
- Targets



Governance – Governing Board & Management



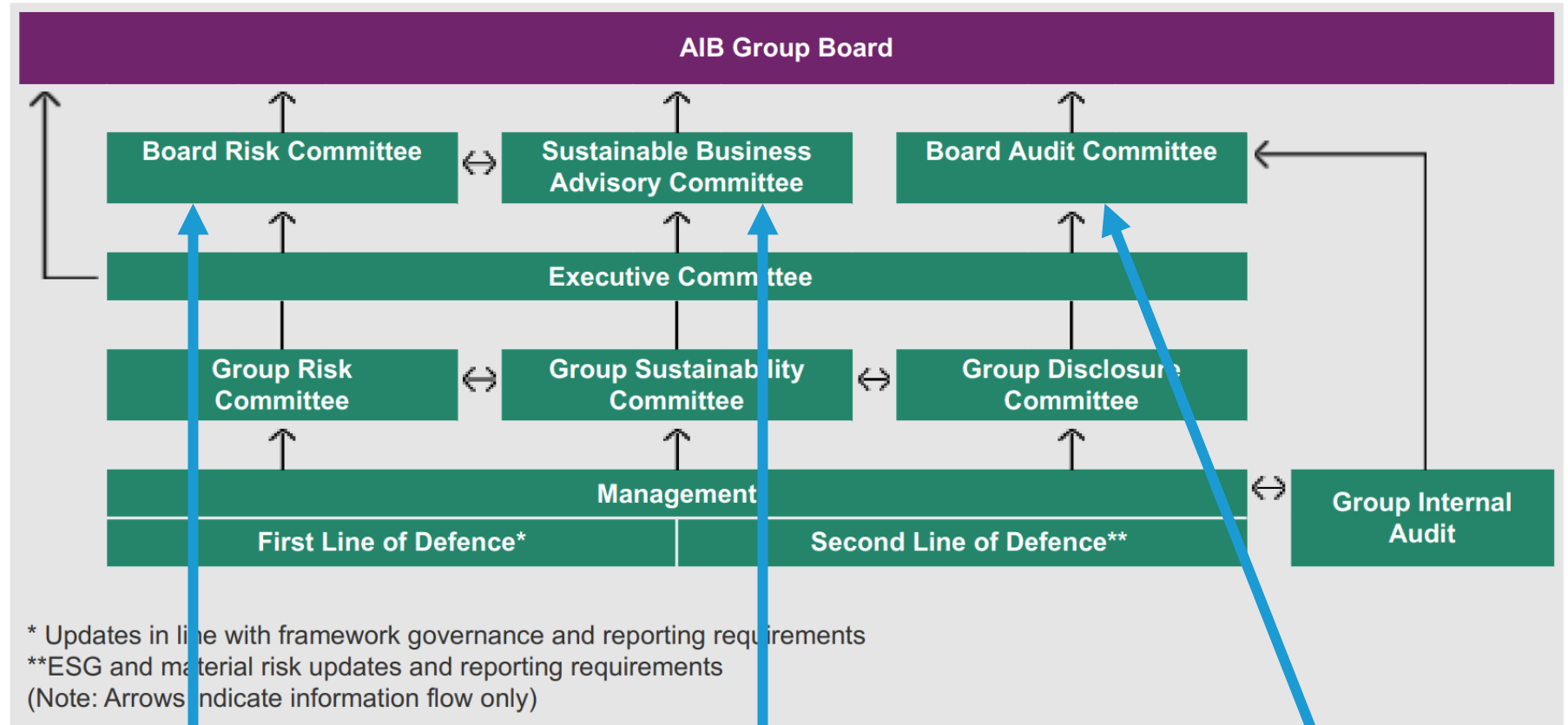
- Which **Board and Management bodies or committees** are responsible for sustainability and climate-related risks and opportunities?
- What are their **skills and competencies**?
- What **processes and controls** do they use for managing risks and opportunities?
- How and when** do they get informed about risks and opportunities?
- What are their **roles and responsibilities**?
- What sort of **decisions** do they make and what **targets** do they set based on risks and opportunities?

Note: Avoid unnecessary duplication

EXAMPLE

Example source: [AIB Group plc AFR Dec 2022](#), page 32

Governance model



Ensures that risks within the Group are appropriately identified, reported, assessed, managed and controlled, including key strategic and operational risk issues. Scope of committee includes ESG risks, including climate risk.

Supports the Group's sustainable business strategy which includes the development and safeguarding of the Group's social license to operate, plus sustainability disclosures outside of annual report.

Oversees the quality and integrity of the Group's accounting policies, financial and narrative reporting, non-financial disclosures and disclosure practices, internal control framework and audit.

EXAMPLE

Governance model

Role of the Board

What it has done to inform strategy

Actions taken, including investment

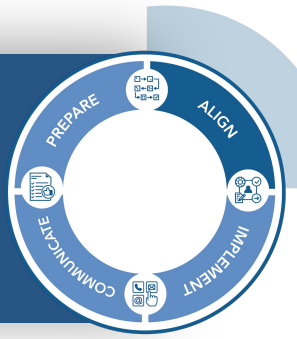
Governance

a) Board's Oversight of Climate-related Risks and Opportunities

- At Toyota, to ensure effective strategy formulation and implementation in line with latest societal trends, important climate-related issues, if arise, are **reported to the Board of Directors**.
- The Board of Directors conducts the following duties:
 - Deliberate and supervise strategies, major action plans, and business plans.
 - Monitor the progress toward qualitative and quantitative targets addressing climate issues.
- Monitoring is performed in consideration of the financial impact of the following risks/opportunities, which may turn into climate-related issues:
 - Risks/opportunities related to products, such as fuel efficiency/emission regulations.
 - Risks/opportunities related to low-carbon technology development.
- These governance mechanisms are used in formulating long-term strategy, including the Toyota Environmental Challenge 2050, and in formulating and reviewing the medium- to long-term targets and action plans.
- Cases of decisions made at the Board of Directors Meeting in 2022
 - Reported on and approved the identification of carbon neutrality (CN) as a key matter in relation to climate change and the development of a plan to transition to CN by 2050.
 - The Board of Directors decided by resolution the level of battery-related investment in order to secure the number of batteries which serve as a pacemaker to expand its line of BEVs.



Strategy overview

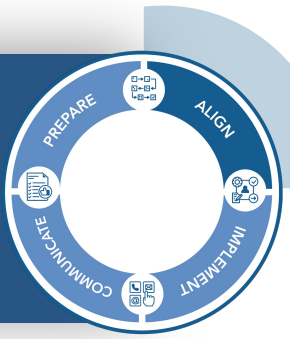


The disclosure requirements about strategy relate to:

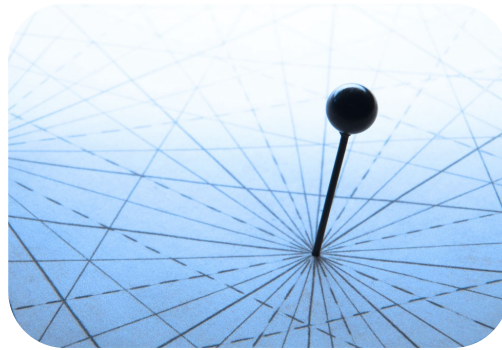
- **Sustainability and climate-related risks and opportunities** that have been identified and the **time horizons** over which they are expected to occur
- **Effects of those risks and opportunities** on the company's:
 - value chain
 - business model and strategy
 - financial position, performance and cash flows



Strategy - time horizons



Cash flow, investment and business cycles



Planning horizons for strategic decision-making and capital allocation



Assessment periods used by investors

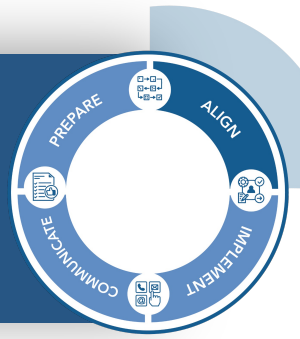


Life of assets

- Time horizons are entity specific and may include industry specific characteristics
- You don't have to stick to one time horizon. It depends what you are trying to strategise for and why – see for example [Three Horizons Framework](#)



Strategy - addressing financial effects



When reporting the effects of sustainability-related risks and opportunities on a company's current and anticipated financial performance, financial position and cash flows...

- Disclose both quantitative information and qualitative information
- Can provide qualitative rather than quantitative information when:
 - The risks and their effects are not separately identifiable
 - There is a high level of measurement uncertainty
 - For anticipated effects, quantitative information would not be commensurate with the company's skills, expertise and resources

EXAMPLE

Current and anticipated financial risks

3.8. Climate risks analysis

3.8.1. Transition risks

Scenario analysis

In 2022, we revised our scenario analysis under the following scope:

- Transition risks.
- Focusing on the three most exposed business units, based on total emissions (Scope 1, 2 and 3) and exposure to climate sensitive markets, like automotive and buildings: Soda Ash, Specialty Polymers and Novocare. These three GBUs represent 52% of Solvay's 2021 sales.
- Two International Energy Agency (IEA) scenarios: 1.5°C Scenario (IEA Net Zero Emissions Scenario 2021) and 3°C Scenario (IEA Stated Policy Scenario 2021).
- Using a leading audit, tax and consulting services company's tool for climate scenario analyses.
- Assumptions of price and cost changes, volume changes and adaptation potential (cost pass-through) were taken from the consultant's models. This included price trajectories up to 2050 for oil, coal, gas, CO₂, electricity and energy usage in transport, in our own operations and upstream.
- Analysis of the market dynamics and identification of the essential characteristics of individual sites was based on the consultant and Solvay sector and climate expertise, considering products sold in main markets, namely construction, packaging, automotive, oil and gas, home and personal care, food and feed, and electronics.

The main conclusions of the scenario analysis were:

- The soda ash business relies highly on a competitive price advantage. Since prices for raw materials and our own operations will increase in a 1.5°C scenario, the scenario analysis concluded that, in the absence of cost pass-through measures, the contribution margin could decrease by up to 16%, while additional demand for glass for energy efficient buildings would drive overall profit and sales. Sales could increase to €2.4 billion in the 1.5°C scenario and to €2.1 billion in the 3°C scenario, by 2050.
- The specialty polymers business has the most significant opportunities in a 1.5°C world. Products are expensive and resilient to cost increases and the demand for most customer segments would increase. Focusing on increasing production capacities for this GBU should be prioritized in a 1.5°C world. Sales could increase to €4.7 billion in the 1.5°C scenario and to €4.3 billion in the 3°C scenario, by 2050.
- Novocare faces risks relating to vegetable oil imports. This is because vegetable oils from palm oil and other alternatives are highly CO₂ emissions and water intensive. Shifting to sustainable alternatives is expensive, but it may result in a reputation boost for Solvay and decrease costs for these alternatives in the long run. Novocare has the highest weighted CO₂ intensity in their supply chain. This should be monitored and suppliers should be engaged to reduce Scope 3 emissions. Sales could increase to €2 billion by 2050 in both scenarios.

As stated by the Task Force on Climate-related Financial Disclosures, "scenario analysis helps companies in making strategic and risk management decisions. It allows a company to understand the risks and uncertainties it may face, thus contributing to the development of greater strategies and those expressed or implied by such analysis."

Examples of actions decided upon to manage the risks and opportunities:

- Cost pass-through measures, which have already been implemented.
- Solvay's announcement in February 2022 of a PVDF capacity investment to support a fully integrated and digitalized PVDF operation and will be the largest PVDF production site in Europe.
- Solvay's announcement in June 2022 that our Changshu site had its Group's commitment to meeting the needs of customers worldwide.
- High-performance polymer Solvay® poly(vinylidene fluoride) since mid-2021.
- Solvay and Orlon's announcement in November 2022 that they are on market. The joint venture will create the largest PVDF production facility (\$800 million, partially funded by a grant to Solvay from the US Dept.

Product and market related risks

The Sustainable Portfolio Management (SPM) global and systematic approach on climate risk and opportunities, to anticipate their impact and drive oriented compass that allows us to take a snapshot of products' sustainability. SPM informs us about the contribution Solvay's products make to sustain their environmental manufacturing footprint and the associated risks and indicators:

- how their applications bring benefits or face challenges from a holistic environmental topics covering four main themes, namely health and safety, circularity, climate and resource efficiency.

For more details about SPM, see section 5.1: Product design and life cycle.

3.8.1. Transition risks

Scenario analysis

In 2022, we revised our scenario analysis under the following scope:

- Transition risks.
- Focusing on the three most exposed business units, based on total emissions (Scope 1, 2 and 3) and exposure to climate sensitive markets, like automotive and buildings: Soda Ash, Specialty Polymers and Novocare. These three GBUs represent 52% of Solvay's 2021 sales.
- Two International Energy Agency (IEA) scenarios: 1.5°C Scenario (IEA Net Zero Emissions Scenario 2021) and 3°C Scenario (IEA Stated Policy Scenario 2021).
- Using a leading audit, tax and consulting services company's tool for climate scenario analyses.
- Assumptions of price and cost changes, volume changes and adaptation potential (cost pass-through) were taken from the consultant's models. This included price trajectories up to 2050 for oil, coal, gas, CO₂, electricity and energy usage in transport, in our own operations and upstream.
- Analysis of the market dynamics and identification of the essential characteristics of individual sites was based on the consultant and Solvay sector and climate expertise, considering products sold in main markets, namely construction, packaging, automotive, oil and gas, home and personal care, food and feed, and electronics.

The main conclusions of the scenario analysis were:

- The soda ash business relies highly on a competitive price advantage. Since prices for raw materials and our own operations will increase in a 1.5°C scenario, the scenario analysis concluded that, in the absence of cost pass-through measures, the contribution margin could decrease by up to 16%, while additional demand for glass for energy efficient buildings would drive overall profit and sales. Sales could increase to €2.4 billion in the 1.5°C scenario and to €2.1 billion in the 3°C scenario, by 2050.
- The specialty polymers business has the most significant opportunities in a 1.5°C world. Products are expensive and resilient to cost increases and the demand for most customer segments would increase. Focusing on increasing production capacities for this GBU should be prioritized in a 1.5°C world. Sales could increase to €4.7 billion in the 1.5°C scenario and to €4.3 billion in the 3°C scenario, by 2050.
- Novocare faces risks relating to vegetable oil imports. This is because vegetable oils from palm oil and other alternatives are highly CO₂ emissions and water intensive. Shifting to sustainable alternatives is expensive, but it may result in a reputation boost for Solvay and decrease costs for these alternatives in the long run. Novocare has the highest weighted CO₂ intensity in their supply chain. This should be monitored and suppliers should be engaged to reduce Scope 3 emissions. Sales could increase to €2 billion by 2050 in both scenarios.

EXAMPLE

Anticipated financial impacts



Delivering sustainable business performance

Unilever Annual Report and Accounts 2022



Example source: [Unilever Annual Report](#), pages 50-51

Financial quantification of assessed risks and opportunities

Potential financial impact on profit in the year (€bn)^(a)

Regulatory and Market Risks	Key assumptions	Sensitivity	2030	2039	2050
1. Carbon tax and voluntary carbon removal costs We quantified how high prices from carbon regulations and voluntary offset markets for our upstream Scope 3 emissions might impact our raw and packaging materials costs, our distribution costs and the neutralisation of our residual emissions post-2039.	<ul style="list-style-type: none"> Absolute zero Scope 1 and 2 emissions by 2030 Scope 3 emissions exclude consumer use emissions Carbon price would reach 245 USD/tonne by 2050, rising more aggressively in early years in a proactive scenario The price of carbon offsetting would reach 65 USD/tonne by 2050 Offsetting 100% of emissions on and after 2039 	ρ	-3.2	-5.2	-6.1
		€	-2.4	-4.8	-6.1


Physical Environmental Risks	Key assumptions	Sensitivity	2030	2039	2050
5. Extreme weather (temperature) impact on crop yields We quantified how extreme weather events such as sustained high temperatures could impact crop output and therefore sourcing costs across key commodities.	<ul style="list-style-type: none"> By 2050, in a proactive scenario, extreme weather would increase prices by: <ul style="list-style-type: none"> Palm: ~12%; Commodities and food ingredients: ~14% By 2050, in a reactive scenario, extreme weather would increase prices by: <ul style="list-style-type: none"> Palm: ~18%; Commodities and food ingredients: ~21% 	ρ	-0.3	-0.8	-1.9
		€	-0.4	-1.1	-2.8


If *proactive* approach is taken to managing climate change


If *reactive* approach is taken to managing climate change

EXAMPLE


Ambition to significantly reduce earnings cyclicality


 Responsible exit from the paper business

 Growth in packaging with increased integration of captive pulp

 Developing a more value added pulp product mix

 Growing the share of building solutions

 High self-sufficiency on energy reduces our exposure to external cost instability

 30% self-sufficiency in wood supply

Long-term sustainable, profitable growth

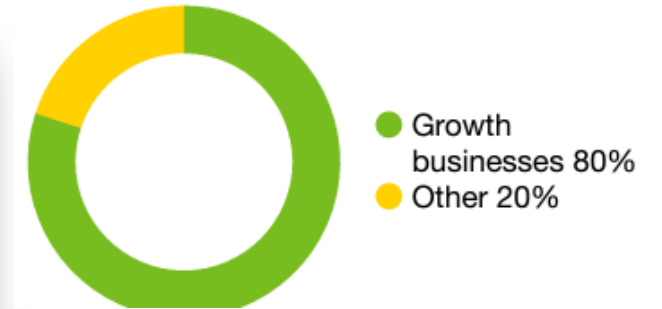
Stora Enso has a long and rich history dating back to 1288. Our unique history has supported our survival, proactiveness and adaptability over the centuries. This has nurtured a deep-down business culture which can manage market fluctuations, build on modernisation and innovation, and provide solutions to current demands in the market. In recent years, we have been through a comprehensive transformation process, proactively repositioning our business from largely a pulp and paper company to a global renewable materials company, ensuring our future for many more years to come. Sustainability trends underpin our opportunity for long-term, sustainable, profitable growth, and today our products are mitigating the climate challenge, providing us with new opportunities.

Current and anticipated financial risks

Our strategy is to drive the green transition by accelerating our growth in renewable packaging, sustainable building solutions, and biomaterials innovations, while staying within the planetary boundaries. We do that through advancing our leading market positions in high-margin products, strong and competitive assets, best-in-class industry competence and control of the renewable resource wood. We are committed to ambitious science-based targets, on areas where we have the biggest environmental impact. These segments involve a higher degree of innovations and value added products which will further future proof our business and strengthen our competitiveness.

Climate change and resource scarcity affect the environment as well as economies and society as a whole. There is strong pressure to maximise the efficient use of raw

Sales in 2030



materials and to make the value chains circular. As a result of our new strategic direction, Stora Enso is and will be a more efficient and less cyclical company. Our focus, resources and investments are allocated where we have the best business opportunities for profitable growth, with leading market positions and strong competitiveness. Most of our products and solutions are renewable and circular, and the CO₂ they replace and store, helps to mitigate climate change. Our forest assets create a solid and valuable foundation for our business. They deliver growing value that provides Stora Enso with a solid balance sheet, and potential new ancillary revenue streams from wood-based solutions for sustainable wind and solar power as well as carbon credits. Our forests are also an important source of raw material which provides us with competitive wood supply, giving us tactical flexibility, synergies, and value.

ZOOM POLL

Select the appropriate answer

The zoom poll should appear on your screen momentarily. If it does not appear, feel free to answer in the chat box or message the hosts directly.

**4. A company may choose to disclose only qualitative information about current and anticipated financial effects when:
(Select all that apply)**

- a. The company cannot separate the effects of a climate-related risk or opportunity from other effects
- b. There is a high level of measurement uncertainty
- c. The quantitative information sheds a negative light on the company



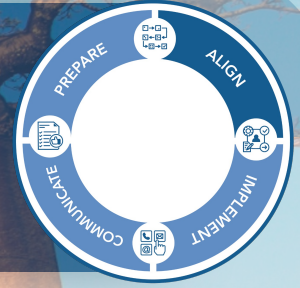
Addressing climate risks and opportunities



Information about the response and planned response should include:

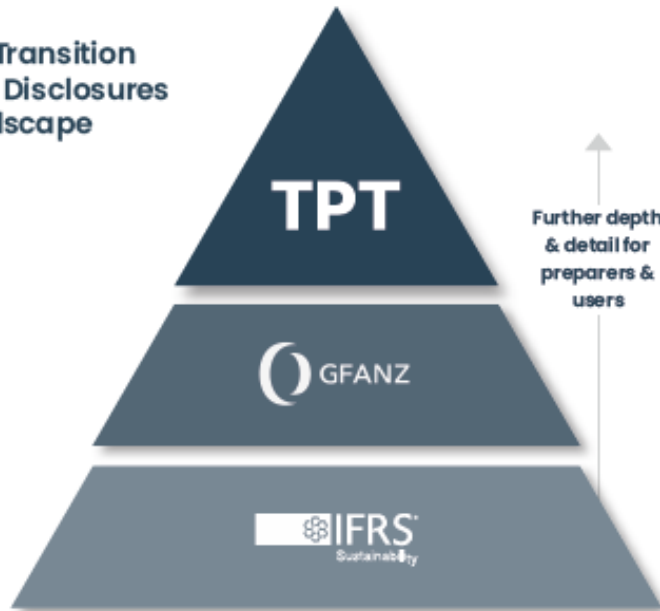
- How the entity **plans to achieve climate-related targets**
- Current and anticipated **changes to the business model**
- Current and anticipated **direct mitigation and adaptation efforts**
- Current and anticipated **indirect mitigation and adaptation efforts**
- **Progress against** any **plans** previously disclosed
- **Trade-offs** between sustainability-related risks and opportunities

Transition plans



An aspect of the company's overall strategy that includes targets, actions or resources for the transition towards a lower-carbon economy, including, for example GHG emissions reductions plans.

The Transition Plan Disclosures Landscape



Real economy

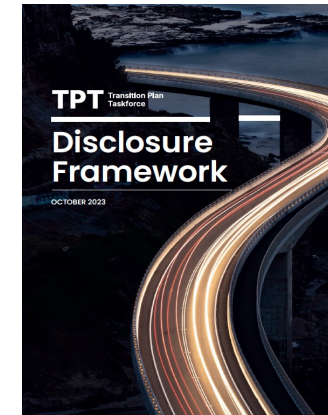


Financial institutions



Sectoral pathways

Pathway expectations



Transition pathway disclosure framework



Strategy – Resilience

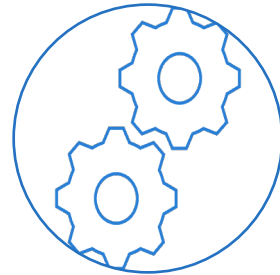


Use **climate-related scenario analysis** to assess your climate resilience



Climate resilience assessment

- Implications of climate change for the company's strategy and business model; and
- Company's financial & operational capacity to adjust/adapt over short, medium and long term.



Inputs and key assumptions

- Use relevant scenarios, and provide information about scenarios selected; and
- Provide information on assumptions used.



Strategy - scenario analysis continued



IFRS S2 includes application guidance on how to apply scenario analysis building on TCFD materials

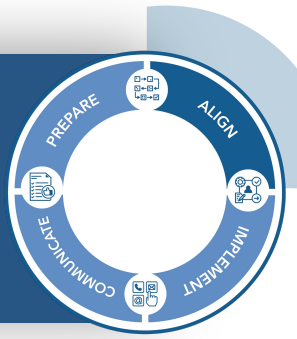
The guidance requires:

- Method of climate-related scenario analysis **commensurate with a company's circumstances**
- Use of **all reasonable and supportable information** that is available to a company at the reporting date **without undue cost or effort**

EXAMPLE

Example source: CEMEX, 2022 Integrated Report, p. 258
<https://www.cemex.com/documents/d/cemex/integratedreport2022>

SCENARIO NAME	STATED POLICIES						SUSTAINABLE DEVELOPMENT						NET ZERO EMISSIONS BY 2050					
Short name - external reference scenario	STEPS						SDS						NZE					
STRATEGY EFFECTIVENESS: RISKS AND OPPORTUNITIES																		
RISKS	PROBABILITY			IMPACT			PROBABILITY			IMPACT			PROBABILITY			IMPACT		
	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH	LOW	MED	HIGH
Reduced market demand for higher-carbon products/ commodities	[Blue bar]			[Purple bar]			[Blue bar]			[Purple bar]			[Blue bar]			[Purple bar]		
Physical: Increased business interruption and damage across operations and supply chains with consequences for input costs, revenues, asset values, and insurance claims	[Blue bar]			[Purple bar]			[Blue bar]			[Purple bar]			[Blue bar]			[Purple bar]		
Increased input/operating costs for high carbon activities under regulated markets (even threats to securing license to operate)	[Blue bar]			[Purple bar]			[Blue bar]			[Purple bar]			[Blue bar]			[Purple bar]		
Risk of stranded assets: plants that cannot be easily upgraded and close to end of their lifetime	[Blue bar]			[Purple bar]			[Blue bar]			[Purple bar]			[Blue bar]			[Purple bar]		
OPPORTUNITIES																		
Increased demand for energy-efficient, lower-carbon products and services	[Blue bar]			[Purple bar]			[Blue bar]			[Purple bar]			[Blue bar]			[Purple bar]		
New technologies available at competitive cost that disrupt markets	[Blue bar]			[Purple bar]			[Blue bar]			[Purple bar]			[Blue bar]			[Purple bar]		
Access to competitive energy sources (AF cost)	[Blue bar]			[Purple bar]			[Blue bar]			[Purple bar]			[Blue bar]			[Purple bar]		
Opportunity to enhance reputation and brand value	[Blue bar]			[Purple bar]			[Blue bar]			[Purple bar]			[Blue bar]			[Purple bar]		

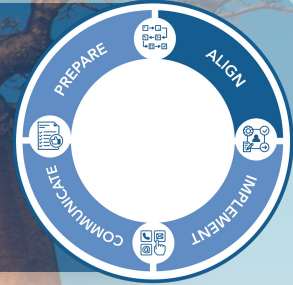


Risk Management

An entity must disclose information about:

- The **processes and policies** used to identify, assess, prioritise and monitor sustainability-related risks;
- The process used for **identifying, assessing, prioritising and monitoring** sustainability-related opportunities; and
- Whether sustainability risk & opportunity management integrated into the entity's **overall risk management process**.

Climate-related risks



Transition Risks

Transition risks

- Policy & Legal
- Technology
- Market
- Reputation

Examples

- Increased pricing of GHG emissions
- Enhanced reporting obligations
- Exposure to litigation
- Cost of transition to lower-emission technologies
- Changing customer behavior
- Uncertainty in market signals
- Increased cost of raw materials
- Stigmatization of sector
- Increased severity of extreme weather events
- Changing weather patterns

Financial impacts

- cash flows,
- access to finance
- cost of capital
- over the short, medium and long term



Physical Risks

Physical Risks

- Acute
- Chronic

Climate-related opportunities



 Resource Efficiency
 Energy Source
 Products & Services
 Markets
 Resilience

Example opportunities

- Improving resource efficiency across value chain
- Use of lower-emission sources of energy
- Use of supportive policy incentives
- Use of new technologies
- Development of low emission goods/ services
- Access to new markets
- Differentiating against competitors
- Resource substitution/ diversification

Financial Impacts

- cash flows
- access to finance
- cost of capital
- over the short, medium and long term

EXAMPLE

Risk, opportunities and strategy



Transition Plan: 5 Year Plan
Our route towards carbon negative

Example source: [TransitionPlan5YearPlanFinal.pdf \(nats.aero\)](https://www.nats.aero/TransitionPlan5YearPlanFinal.pdf), page 15

Weather in 2019

Major storms which cost aviation an estimated **€2.2billion** in 2019 in terms of en-route delays, are expected to increase in intensity.

Bad weather forced airlines to fly

1m extra km

burning

6,000 tonnes extra fuel

producing

19,000 tonnes extra CO₂

Weather in 2050

Extreme weather is predicted to drive these numbers up, with horizontal flight inefficiency on days when storms account for over 50% of air traffic flow management delays expected to **worsen by 0.5%.**

That's an extra

57,000 tonnes of CO₂/yr

increasing every 1,000 nautical mile flight by roughly 40 nautical miles further driving up the cost to airlines, passengers and their carbon footprint.

66% of coastal/low-lying airports are at an increased risk of flooding in the event of a storm surge.

Reducing flight durations

Future flight operations will also be modified by climate change with jet streams reducing many transatlantic flight durations both eastbound and westbound.

This will have positive effects on flight times, fuel burn and emissions, and could yield possible saving of

55,000 tonnes of fuel

per year by 2050

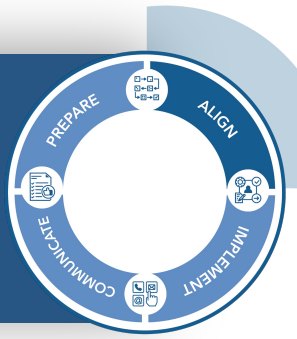
c.175,000 tonnes of CO₂

Current acute risks and impacts

Future acute risks and impacts

The outcome of chronic changes may be positive in some respects, but strategy will need to respond

Metrics



Metrics must:

- Enable primary users to understand the entity's performance on sustainability-related risks and opportunities
- Be reported by an applicable IFRS Sustainability Disclosure Standard – e.g. IFRS S2
- Include metrics the entity uses
- Be associated with industry-specific business models, activities and common features
- Be consistent over time

Metrics shall refer to and consider:

- Associated disclosure topics included in the SASB Standards

Metrics can:

- Be taken from a source other than ISSB Standards
- Be developed by the entity

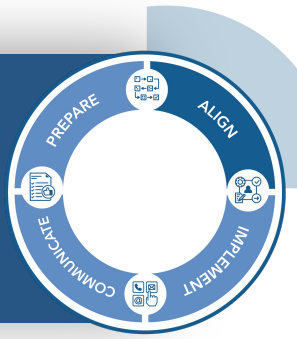
GHG emissions



Companies shall disclose (measured in accordance with the GHG Protocol Corporate Standard):

- Scope 1: direct emissions
- Scope 2: indirect emissions from the generation of purchased energy consumed by the company
- Scope 3: all other indirect emissions that occur in the company's value chain
- Whether an internal carbon price is used for decision making
- Any climate-related considerations for executive remuneration

Targets



Targets may be set by the entity or required by regulation. Targets should be **clearly labelled and defined**. For each target, the entity is required to disclose:

- **the target** - whether qualitative or quantitative, set by the company or by law or regulation
- **the metric used to set the target**
- **the period over which the target applies**
- **the base period from which progress is measured**
- **any milestones and interim targets**
- **performance against each target** and an analysis of trends or changes
- **any revisions to the target** together with an explanation

ZOOM POLL

Select the
appropriate answer

The zoom poll should appear on your screen momentarily. If it does not appear, feel free to answer in the chat box or message the hosts directly.

5. Metrics for sustainability-related financial disclosures should be connected to:

(Select all that apply)

- a. Financially material risks
- b. Financially material opportunities
- c. Targets
- d. Your strategy

EXAMPLE



Annual Report 2022



Decarbonization strategy

Decarbonization is at the heart of the Company's climate action strategy, aiming to have a leadership position within the steel industry in terms of target-setting, performance and disclosure. In 2021, ArcelorMittal set out a clear roadmap for achieving medium-term 2030 CO₂e targets with an anticipated gross investment of approximately \$10 billion, and its commitment to achieve net-zero steelmaking globally by 2050.

The Company's target is to reduce carbon emissions intensity by 25% globally and by 35% in Europe by 2030. Both targets cover Scopes 1 and 2 for steel and mining per tonne of crude steel.

(definitions: GHG intensity - the average GHG emitted in the production of one tonne of crude steel. It includes emissions from all the processes involved in the production of an 'average' tonne of steel, scope 1 and 2.

Scope 1: process CO₂e emissions from steel + CO₂ from mining + CH₄ from mining. Scope 2: indirect emissions from 'net' purchased electricity + electricity purchased at mining sites.)

Linking strategy, targets and assumptions

Assumptions behind targets

To set the ArcelorMittal's target, the Company has made a key set of assumptions:

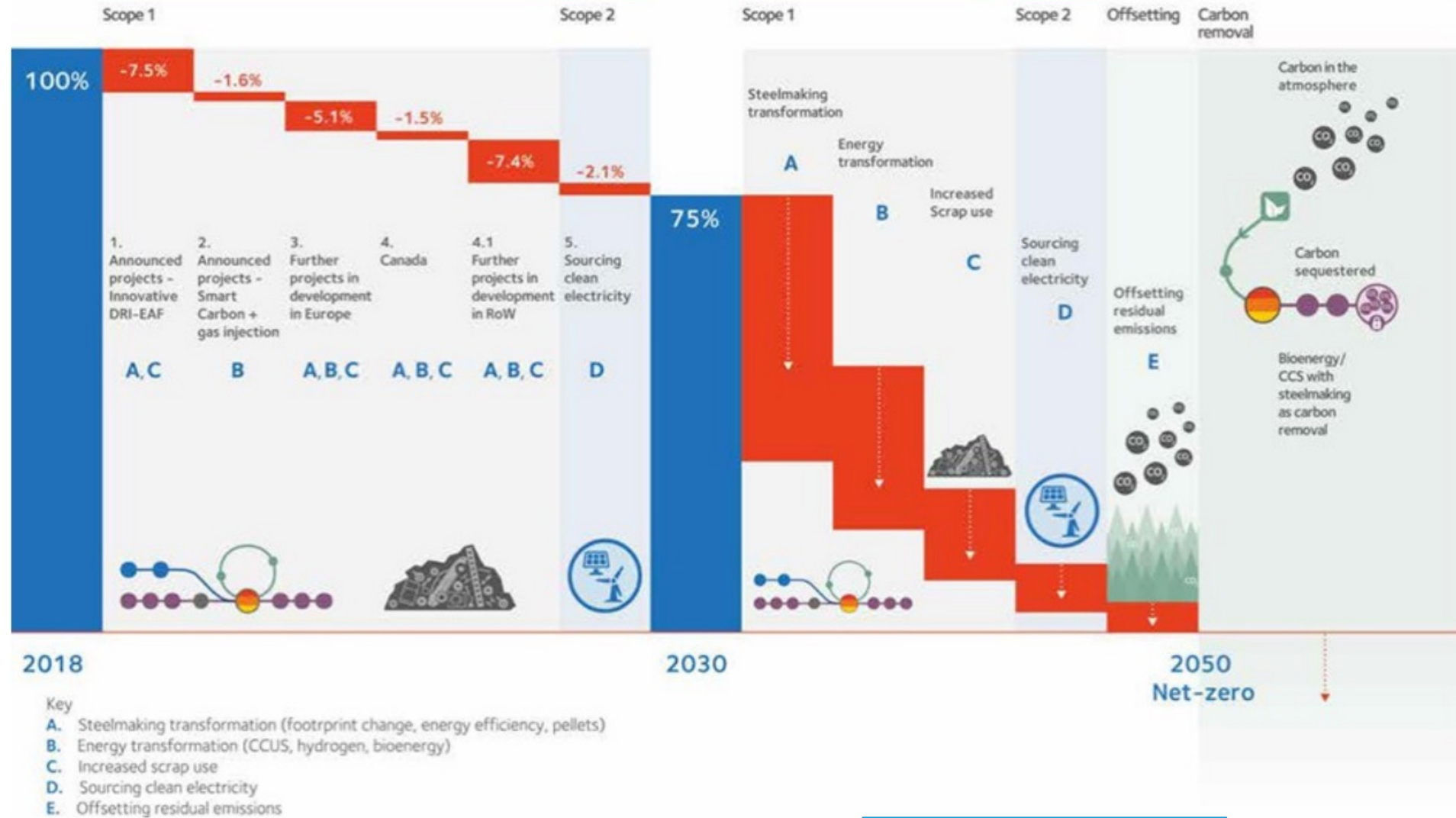
- a. The cost of green hydrogen will become increasingly competitive over the next decade but will still require government support in ArcelorMittal's countries of operation
- b. Carbon capture, utilization and storage ("CCUS") infrastructure will take time to be built at scale. While Europe is expected to take the lead, CCUS infrastructure has the potential to expand quickly in the US and Canada – providing some potential upside to the business' assumptions
- c. Different regions of the world will continue to move at very different paces and the level of climate ambition will differ between jurisdictions at any given time
- d. The introduction of climate-friendly policies in other regions will be 5-10 years behind Europe and the US
- e. As it has been reported, 2060 may not be a realistic net-zero target for developing economies, which may mean emissions do not peak until 2030.

Example source: ArcelorMittal's 2022 Annual Report –
<https://corporate.arcelormittal.com/media/obsd1lud/annual-report-2022.pdf>

EXAMPLE



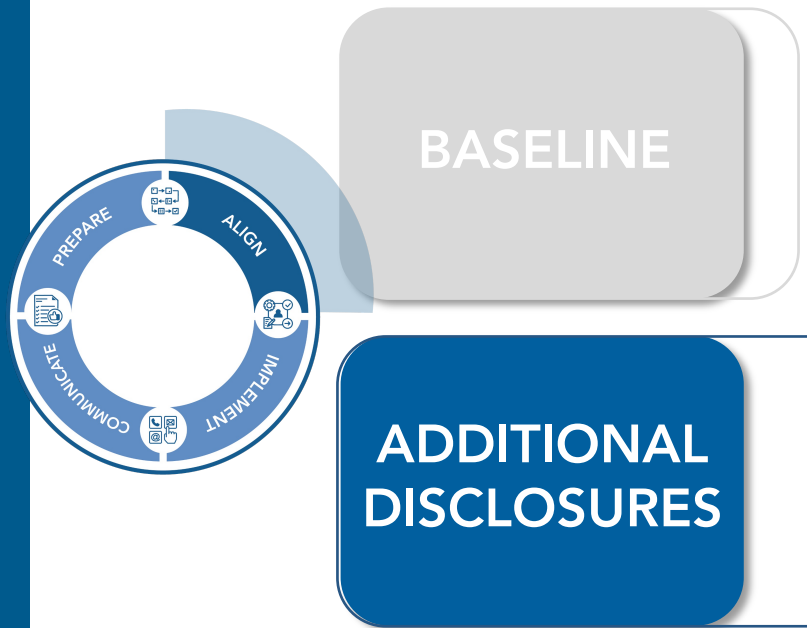
Annual Report 2022



Linking strategy, targets and assumptions

Example source: ArcelorMittal's 2022 Annual Report – <https://corporate.arcelormittal.com/media/obsd1lud/annual-report-2022.pdf>

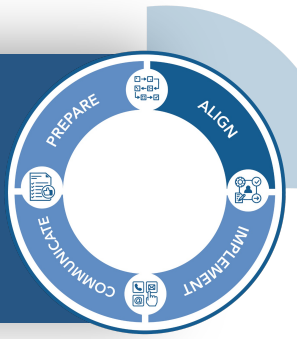
ALIGN



ADDITIONAL DISCLOSURES

Integrating other disclosure requirements that companies may be required to comply with

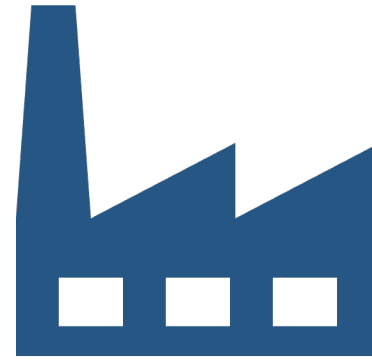
Building on the baseline



Listing requirements



Policy objectives

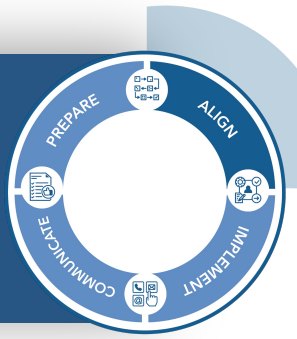


Industry standards



Other stakeholders

From TCFD to IFRS S2



TCFD has **fulfilled its remit** and disbanded, helping to further reduce the ‘alphabet soup’



TCFD **monitoring responsibilities transferred** to IFRS Foundation

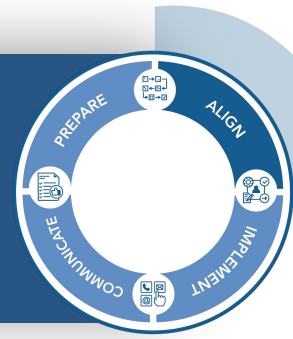


IFRS S1 and IFRS S2 incorporate the recommendations of the TCFD

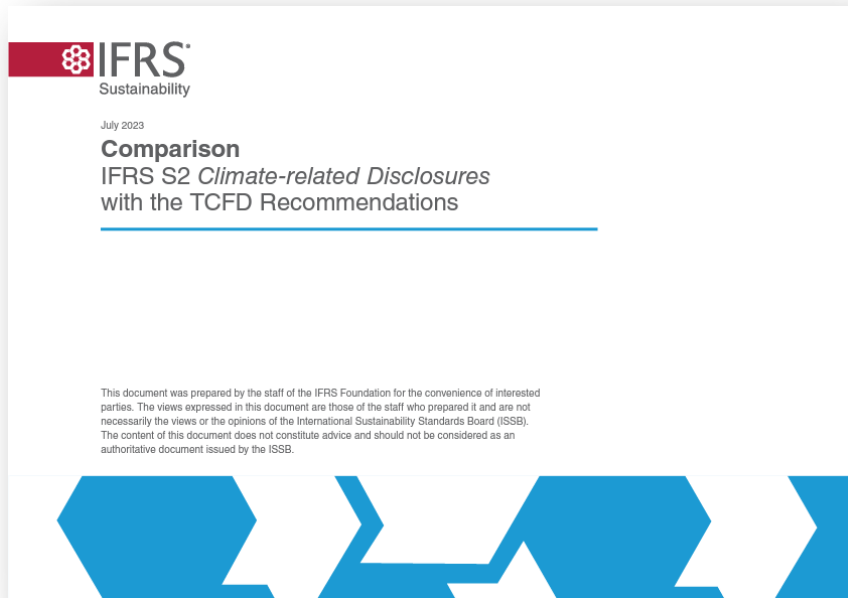


Companies and jurisdictions still able to **make use TCFD recommendations as a resource**

TCFD-ISSB mapping



Some differences between IFRS S2 and the TCFD's **guidance**, not the TCFD's recommendations.



- In some cases, IFRS S2 uses **different wording** to capture the **same information** as the TCFD;
- IFRS S2 **requires more detailed information** that is in line with the TCFD; and
- IFRS S2 provides some **additional requirements and guidance**.

ZOOM POLL

Select the
appropriate answer

The zoom poll should appear on your screen momentarily. If it does not appear, feel free to answer in the chat box or message the hosts directly.

6. Companies who disclose using the TCFD recommendations automatically comply with the ISSB Standards.

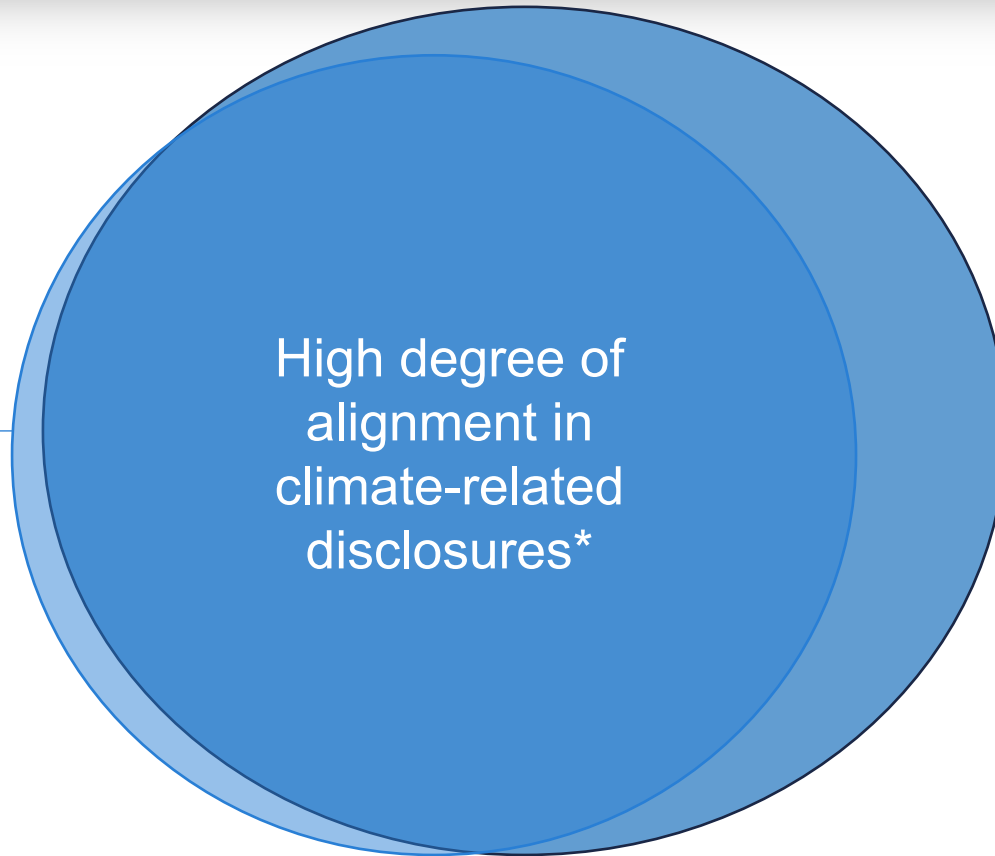
- a. True
- b. False

Baked-in alignment



IFRS Sustainability Disclosure Standards:

Additional requirements (eg financed emissions)



ESRS:

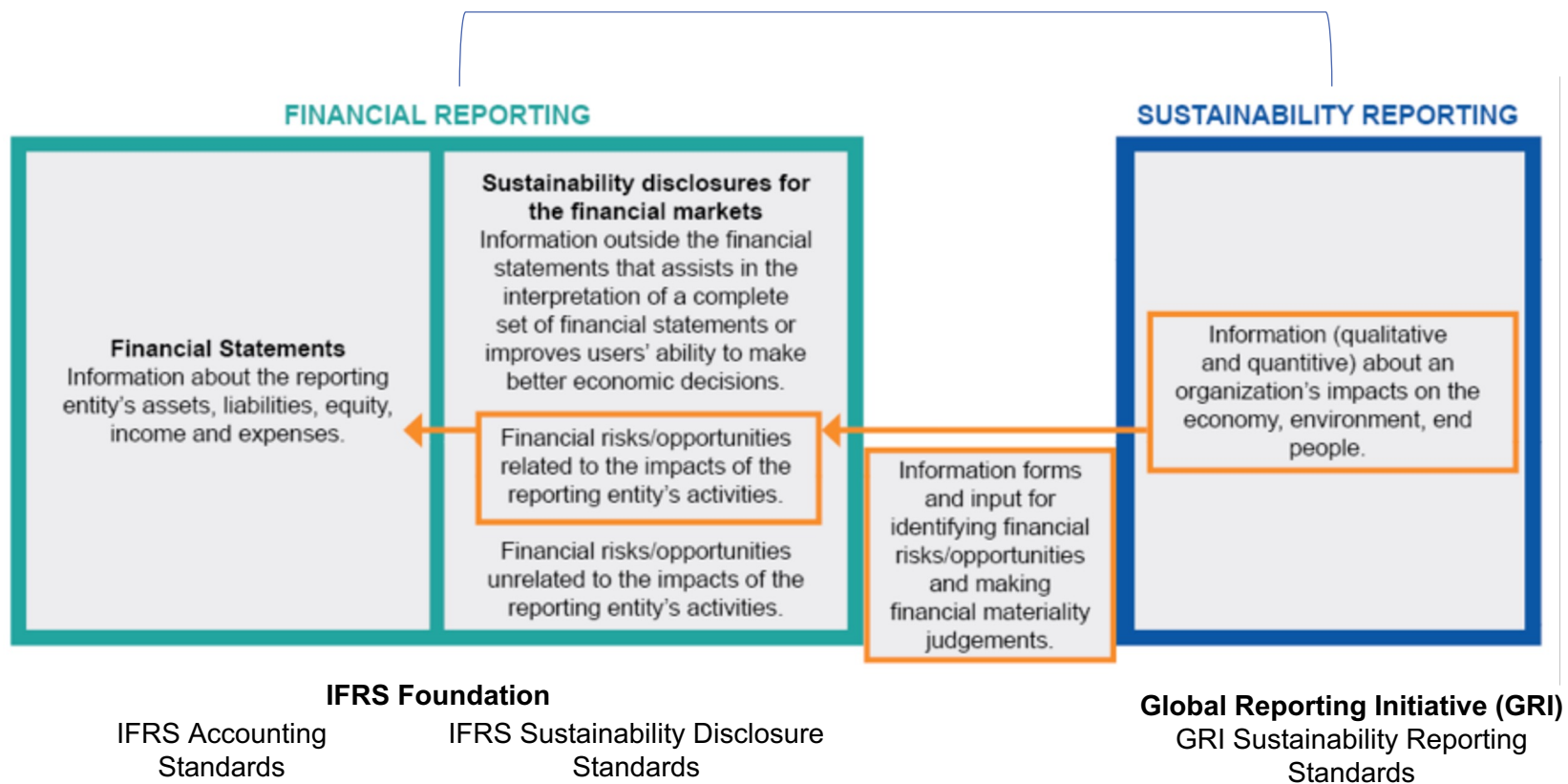
Additional requirements for stakeholders interested in impacts (that do not create risks or opportunities for a company's prospects) and information that, if missing or obscured, is not reasonably expected to affect investor decisions

* The ISSB, the European Commission, and the European Financial Reporting Advisory Group (EFRAG) are discussing how to explain the alignment and interoperability between the respective standards, including the choices a company needs to make to enhance alignment and where the standards have specific requirements.

Building on the baseline: adding impact



INTEGRATED REPORTING



EXAMPLE



Description to approaches taken to prepare report

Notes to the consolidated ESG statement

Section 6 Basis of preparation

Principles of consolidation

The disclosures of energy consumption and CO₂ emissions cover production sites, laboratories and offices. The disclosures of water consumption cover production sites, laboratories and offices. The disclosures of environmental breaches and waste cover production sites.

The social and governance-related disclosures cover the Novo Nordisk Group comprising Novo Nordisk A/S and entities controlled by Novo Nordisk A/S. Novo Nordisk Engineering A/S is not in the scope of reporting. Novo Nordisk Employer Score, failed inspections, facilitations of Novo Nordisk employees trained in business ethics and gender in management and senior management. Novo Nordisk Pharmatech A/S is not in scope for facilitations of the Novo Nordisk Way and employees trained in business ethics.

Accounting policies and changes hereto

The accounting policies set out in the notes have been applied consistently in

General reporting standards and principles

Novo Nordisk's annual reporting complies with the Danish Financial Statements Act. Sections 99a, 99b, 99d and 107d specify the requirements to report on the management of risks related to the environment, climate, human rights, labour and social conditions, anti-corruption, gender distribution and data ethics. These requirements are addressed in the Management review.

As recommended by the Taskforce on Climate-related Financial Disclosures (TCFD), Novo Nordisk is working to integrate two climate change scenarios into the risk management process to identify short-, medium- and long-term risks within the production and supply chain:

- Limiting temperature increase to well below 2°C scenario, preferably 1.5°C, compared to pre-industrial times in accordance with the Paris Agreement.
- 4°C scenario as an alternative high-emission scenario.

Novo Nordisk discloses in accordance with the recommendations put forward by the Carbon Disclosure Project (CDP). For a full breakdown of climate and water impacts, please refer to the publicly available report on Novo Nordisk's CDP disclosures at [cdp.net](https://www.novonordisk.com/cdp).

Conformance statement to standards & frameworks used

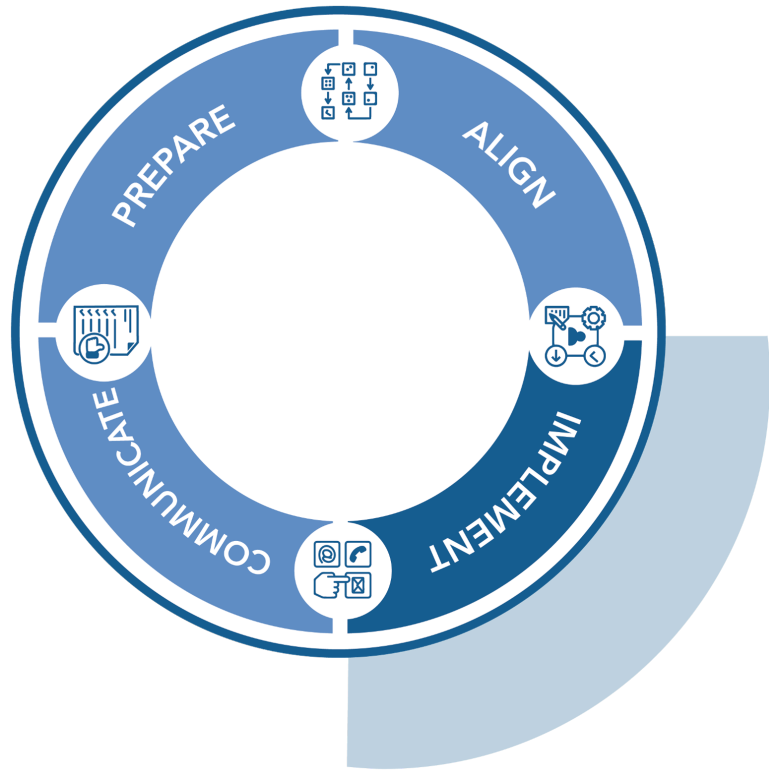
ZOOM POLL

Select the
appropriate answer

The zoom poll should appear on your screen momentarily. If it does not appear, feel free to answer in the chat box or message the hosts directly.

7. My disclosure plan should consider...

- a. The ISSB Standards only
- b. The ISSB Standards and regulatory requirements
- c. Just regulatory requirements
- d. The ISSB Standards, regulatory requirements and other sources of guidance



The backbone of effective disclosure – processes and practices

IMPLEMENT

IDENTIFY

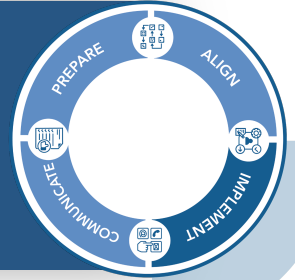
Identifying sustainability-related risks and opportunities

EVALUATE

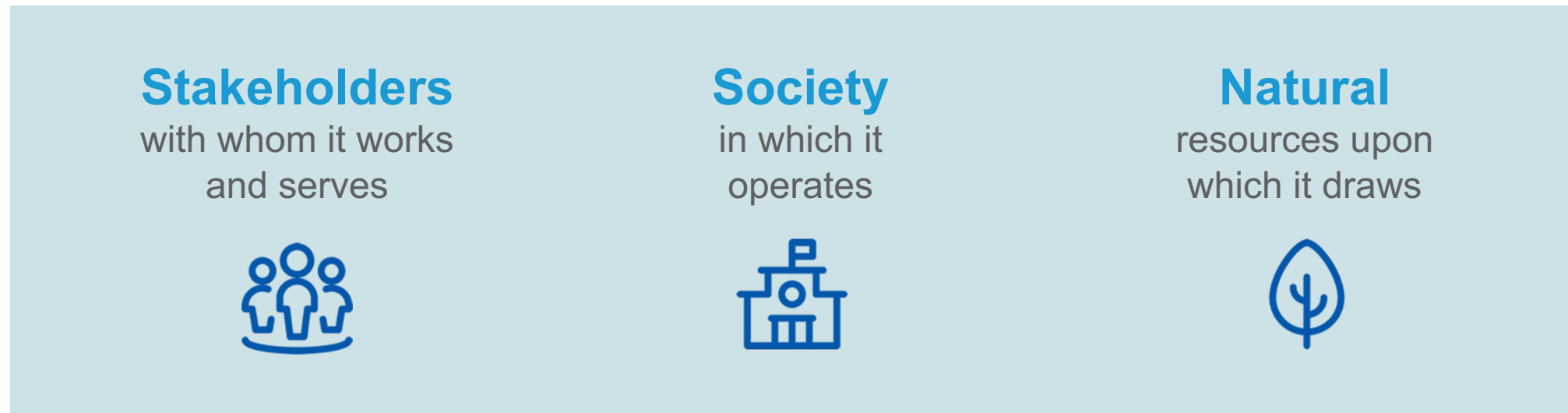
INTEGRATE



Identifying sustainability-related risks and opportunities



Generally, risks and opportunities come from interactions between the company and its:



Together, the company and the resources and relationships throughout its **value chain** form an **interdependent** system in which the company operates.

Connecting the dots



The **resources and relationships** that a company **depends on and affects** can take various forms, such as natural, manufactured, intellectual, human, social or financial.

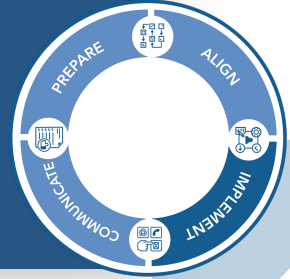


These can be:

- **internal**—such as the ability to attract and retain talent
- **external**—such as relationships with suppliers, distributors and customers

IFRS S1 provides examples illustrating the close relationship between the value a company **creates, preserves or erodes** for others and its own ability to **succeed and achieve its goals**.

Assessing reasonable and supportable

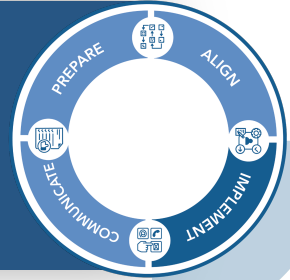


A company is required to use **all reasonable and supportable** information that is available at the reporting date **without undue cost or effort** to disclose sustainability-related financial information.

Reasonable and supportable information is information that:

- is **specific** to the company
- takes account of the **external** environment
- includes information about **past events, current conditions and forecasts**
- in some cases, is **specified** by IFRS Sustainability Disclosure Standards

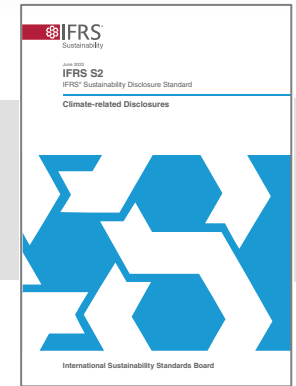
Using sources of guidance



Apply IFRS S1 sources of guidance disclosure requirements



Apply other applicable IFRS Sustainability Disclosure Standards



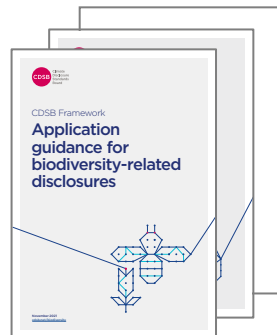
Required to consider SASB disclosure Topics



Required to consider Industry-based guidance on Implementing IFRS S2 Climate-related Disclosures



May consider other investor focused sources of guidance



ZOOM POLL

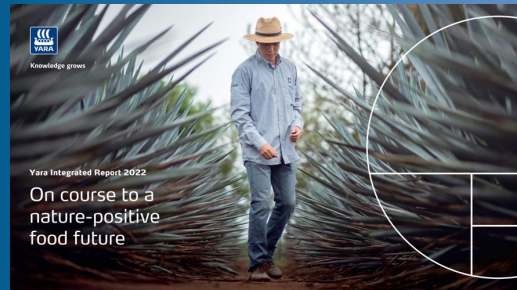
Select the appropriate answer

The zoom poll should appear on your screen momentarily. If it does not appear, feel free to answer in the chat box or message the hosts directly.

8. Water is a vital input to your business, but the ISSB Standards do not currently have a specific standard on water. What do you do:

- a. Do not disclose anything about water.
- b. Consult the sources of guidance listed by ISSB.
- c. Engage a consultancy to help.
- d. Copy your competitors' reporting.

EXAMPLE



MEGATRENDS

Opportunities and risks from t

Megatrends present new opportunities we can actively pursue, as well as risks



Opportunities

- Shifts towards sustainability and transparency, where our crop nutrition offerings provide a good starting point for finding solutions
- Digital tools to enable new market channels and reduce the yield gap through farmer connectivity
- Mainstream adoption of clean ammonia and hydrogen
- Focus on soil health, water use, and biodiversity, where optimal fertilizer use has a positive impact
- New monetization opportunities from increased data access

MEGATRENDS

Global macrotrends inform and influence Yara's market megatrends



Growing and increasingly urban global population

- Sustained and continued global population growth, with biggest magnitude in developing countries, driving growth in consumer demand
- Changing demographic structures, with growing urban population impacting consumer preferences



Geopolitical and trade uncertainty

- Covid-19 and war in Ukraine bringing uncertainty to the globalization and future trade flows, with likely slow-down in globalization
- Increasing importance of resource security across food, energy, and other critical resources

Megatrends that shape Yara's market and value chain



Climate change



Water safety and reliability



Dietary shifts



Soil health



Zero waste and circular economy



Agri and food industry integration



Digitalization

Risks

- Regulatory changes, consumer demand for sustainability, and optimized fertilizer use can lead to lower fertilizer demand growth
- Environmental costs and taxes can increase costs
- Physical climate change risks to our operations and customers
- Reduction in demand, commoditization, and increased price competition can challenge premium fertilizer margins
- Competitive landscape can be disrupted
- Increased uncertainty around the competitive position of our European production

Example source: Yara Integrated Report 2022 pages 17 and 19 –

<https://www.yara.com/siteassets/investors/057-reports-and-presentations/annual-reports/2022/yara-integrated-report-2022.pdf>

EXAMPLE



Summary of “capitals” that Vale SA’s business model needs to create value

Vale Worldwide

Activities map

Vale serves industries, such as steel industry, on all continents

- Americas:** South, Central and North America
- Europe:** Including Türkiye
- Asia and Africa:** considering Middle East, North Africa and India (Mena) – Middle East, North Africa and India
- The Chinese Mainland and Taiwan, Japan, Korea, Southeast Asia:** – Vietnam, Indonesia, Malaysia and Philippines
- Oceania:** Australia

140 Total dams and Tailings Storage Facilities

Energy Consumption Matrix By Source:

Electricity	30.2%
Diesel oil	28.2%

Business model

Financial Capital

- USD 86.9 MM in total assets
- Divestment of 9 non-core assets since 2019, eliminating expenditures of up to USD 2 Bn per year

Human Capital

- +215 thousand employees (own and outsourced)
- 22.1% women in the workforce
- 32.1% black people in leadership positions

Intellectual Capital

- USD 149.3 MM invested in ITV-DS and ITV Mining since 2011
- USD 12.3 MM invested in R&D by ITVs in 2022 alone
- 8 internal innovation hubs and participation in the Mining Hub
- 48 patents granted to Vale since 2011, 10 in 2022

Manufactured Capital

- Operating units* in 18 countries
- ~2,000 km of own railroads

Natural Capital

- 397 M of m³ of water withdrawal
- 137 thousand TJ of energy consumed (29% renewable)
- 88 thousand ha occupied by our operations
- 965 thousand ha of protected areas

Social and Relationship Capital

- +18,000 suppliers
- USD 11.1 Bn in local procurement (56% of total)
- 1,532 local communities, 26 indigenous peoples and 47 traditional communities mapped

Business activities

Inputs

- Exploration and mineral research
- Marketing and Commercialization
- Mining operations
- Transportation
- Ore processing
- Distribution
- Mine closure and future use
- Industries
- Power generation

Outputs

- Financial Capital**
 - 19.8 Bn of adjusted EBITDA from continuing operations
 - USD 16.8 Bn net income from continued operations
 - USD 7.9 Bn of taxes paid to governments
 - USD 2.4 Bn in social and environmental expenditures, USD 140.5 M in voluntary investments
- Human Capital**
 - 44% reduction in total accident rate since 2021
 - 95 events with injuries to community members
 - 76h of training on average for employees
- Intellectual Capital**
 - 1st most innovative company in Brazil (FDC) and 2nd place (Valor)
 - 77 scientific publications and R&D projects supported by ITV
- Manufactured Capital**
 - 308 Mt of iron ore; 32 Mt of pellets; 253 kt of copper; 179 kt of nickel; 530 kt of sand (reuse of tailings) produced
 - 860 thousand passengers transported by passenger trains
 - 12 decharacterized upstream dams in Brazil
- Natural Capital**
 - 8.9 million tCO₂e emissions (Scopes 1 & 2), a 27% reduction compared to 2017
 - 8.02 TWh of electricity generation (98.6% of which is renewable)
 - 11km² of restored areas in 2022
 - 600.4 thousand t of non-mineral waste generated
 - 373 Mt of mineral waste (waste rock and tailings) generated
- Social and Relationship Capital**
 - Vale Foundation: 1.48 million people impacted
 - Vale Fund: 139 impact businesses supported (about 9,000 families benefited)
 - 30 thousand complaints received from communities**
 - 1,465 families involved in involuntary resettlement processes

Strategic Pillars

- Promote sustainable mining
- Foster low carbon solutions
- Stay disciplined

*Open and underground mines, power plants, ports, railroads, small hydroelectric plants, wind farms, etc.

**Considering Brumadinho's assistance

Provides overview of the company’s operations, with details about operation types

IMPLEMENT



IDENTIFY

EVALUATE

INTEGRATE

Evaluating the materiality of information and using scenarios to test resilience

What is material information?



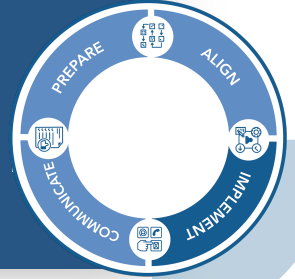
*Information is material if omitting, misstating or obscuring it could reasonably be expected to **influence investor decisions.***

Materiality in IFRS Sustainability Disclosure Standards



- Information is material when it **influences decisions of primary users of general purpose financial reports** and informs their decisions about:
 - providing resources to the company
 - buying, selling or holding equity and debt instruments
 - loans and other forms of credit
 - voting on, or otherwise influencing management's actions that affect the use of the company's economic resources
- Consider the **characteristics of the investors** and the company's own circumstances.
- Different investors can have different and sometimes conflicting information needs. Sustainability-related financial disclosures are intended to **meet the common information needs of investors**.

Potential areas of focus for primary use



Generally, investors may want to understand:

- Effects of environmental degradation and social challenges on **inputs** of resources to the business, key relationships, and risks and opportunities;
- Whether and how the company **is managing sustainability-related risks and opportunities**;
- What **types of assets** the company holds and whether they are at risk of becoming stranded
- How the **governance body takes account** of sustainability-related risks and opportunities when designing strategy and making decisions; and
- How **resilient the company** is to possible future risks in different scenarios.

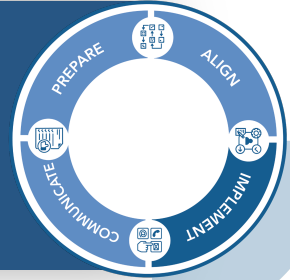
Test of materiality



Making materiality judgements

- Is the information material in the context of the company's sustainability-related financial disclosures taken as a whole?
- Have you considered both quantitative and qualitative factors?
- Have you considered the potential effect of future events on the company's future cash flows?
- Have you considered the range of possible outcomes and the likelihood of the possible outcomes?

Practices in materiality assessments



1. Indicate a clear **purpose**
2. Articulate **time horizons** and **review cycle**
3. Compare **results over time**
4. Articulate **perspectives used**
5. Include and consider a thorough **analysis of stakeholders**
6. Account for divisional and **regional differences**
7. Score topics on **multiple aspects**
8. Identify **ESG risks** associated with each material topic
9. Ensure high-quality information and **support assurance**

Read more here:



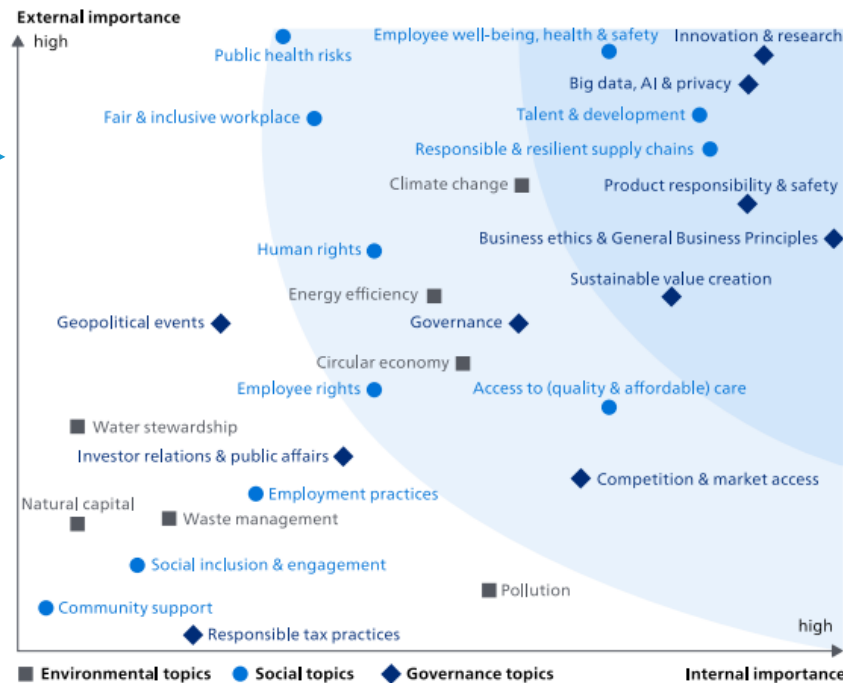
EXAMPLE



Materiality map

3.3 Materiality analysis

We identify the Environmental, Social and Governance topics which we believe have the greatest impact on our business and the greatest level of concern to stakeholders along our value chain, for instance patient safety and quality. We do this through a multi-stakeholder process. Assessing these topics enables us to prioritize and focus upon the most material topics and effectively address these in our policies, programs and targets. We do this with reference to the GRI standard and identify and assess impacts on an ongoing basis, for example through discussions with our customers, suppliers, investors, employees, peer companies, social partners, regulators, NGOs, and academics. We also conduct a benchmark exercise, carry out trend analysis and run media searches to provide input for our materiality analysis. GRI has not yet published a sector standard for the healthcare industry. Philips' impact on society at large is covered through our Lives Improved metric and the Environmental Profit & Loss account, as well as a number of other KPIs addressed in [Environmental, Social and Governance, starting on page 45](#).



Similar to 2021, we used an evidence-based approach to materiality analysis, powered by a third-party AI-based application. The application allows automated sifting and analysis of millions of data points from publicly available sources, including corporate reports, mandatory regulations and voluntary initiatives, as well as news. In our 2022 materiality analysis, we identified a list of topics that are material to our businesses. With this data-driven approach to materiality analysis we have incorporated a wider range of data and stakeholders than was ever possible before and managed to get an evidence-based perspective on regulatory, strategic and reputational risks and opportunities. Topics were prioritized through a survey sent to a large and diverse set of internal and external stakeholders, combined with input from the application.

Public health risks emerged as a new material topic in 2020, as a result of the COVID-19 pandemic, and it was assessed as a material topic in 2022 as well.

Changes in 2022

On the external importance axis, the most significant increases compared to 2021 were Sustainable value creation, Geopolitical events, Responsible and Resilient Supply Chains, Talent & development, and Energy efficiency. On the internal importance axis, there were significant increases on Pollution, Governance, Access to (quality and affordable) care, Competition & market access, and Talent & development.

Double materiality

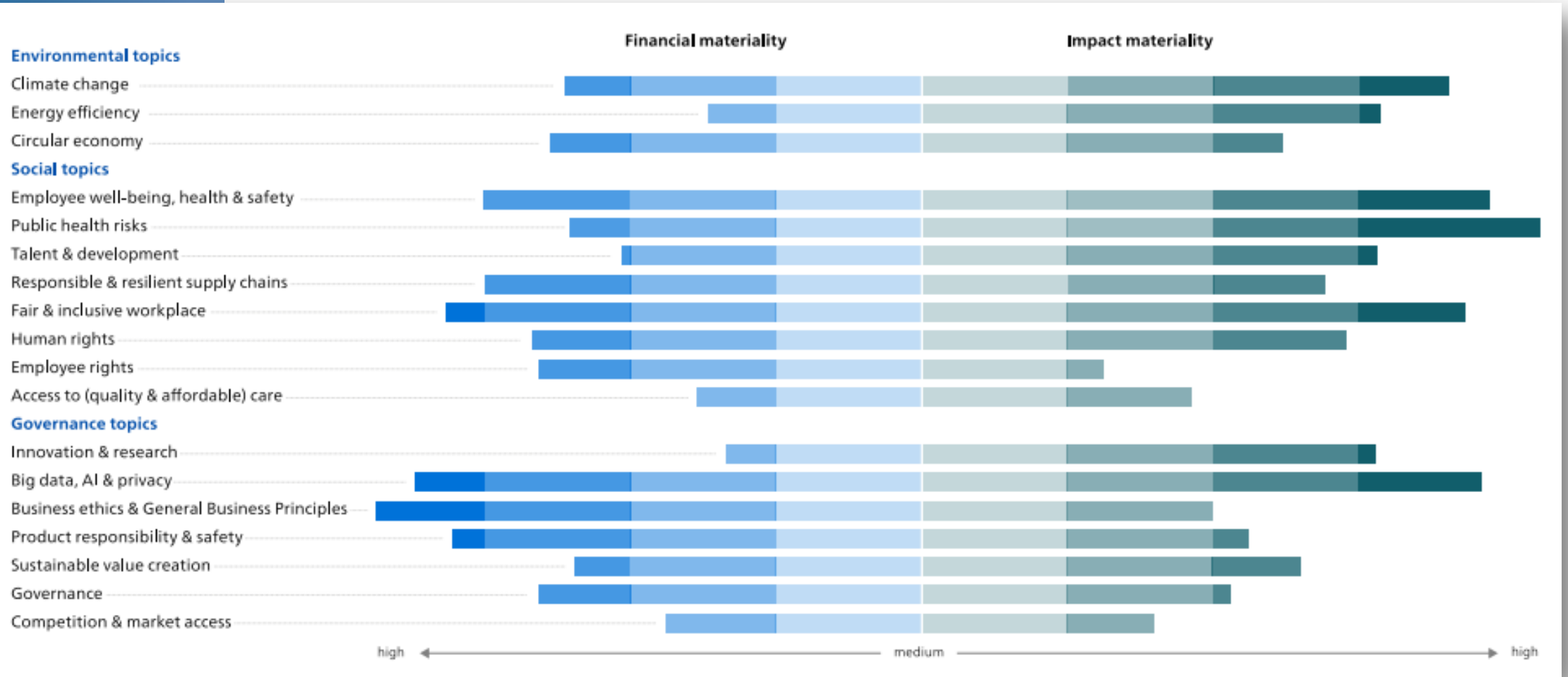
After completing the regular materiality analysis, we completed a preliminary 'double materiality' analysis, in preparation for the upcoming requirements of the EU Corporate Sustainability Reporting Directive (CSRD). The double materiality analysis addresses both financial materiality (the impact of society on Philips) as well as impact materiality (the impact of Philips on society): we only included the high and medium material topics listed above. The data sources used for the financial materiality include corporate reports, mandatory regulations with sanctions, voluntary initiatives by e.g. central banks, and Sustainability Accounting Standards Board (SASB) accounting metrics. For impact materiality, we included sustainability data from corporate reports or sustainability reports, coverage in the news and voluntary initiatives and regulation. The results of the double materiality analysis are depicted below.

Materiality definition

Example source: Phillips' Annual Report 2022 page 14 –

<https://www.results.philips.com/publications/ar22/downloads/pdf/en/PhilipsFullAnnualReport2022-English.pdf?v=20230725135335>

EXAMPLE



Example source: Phillips's Annual Report 2022 page 14

<https://www.results.philips.com/publications/ar22/downloads/pdf/en/PhilipsFullAnnualReport2022-English.pdf?v=20230725135335>

Future events and uncertain outcomes



When judging whether information about possible future events with uncertain outcomes is material, a company is required to consider:

- **All pertinent facts and circumstances** that could affect possible outcomes;
- Potential effects on **the amount, timing and uncertainty** of the company's future cash flows over the short, medium and long term;
- **Low-probability and high-impact outcomes**;
- The effect of potential risks **individually and in aggregate**; and
- Materiality judgements – **reassess at each reporting date**.

ZOOM POLL

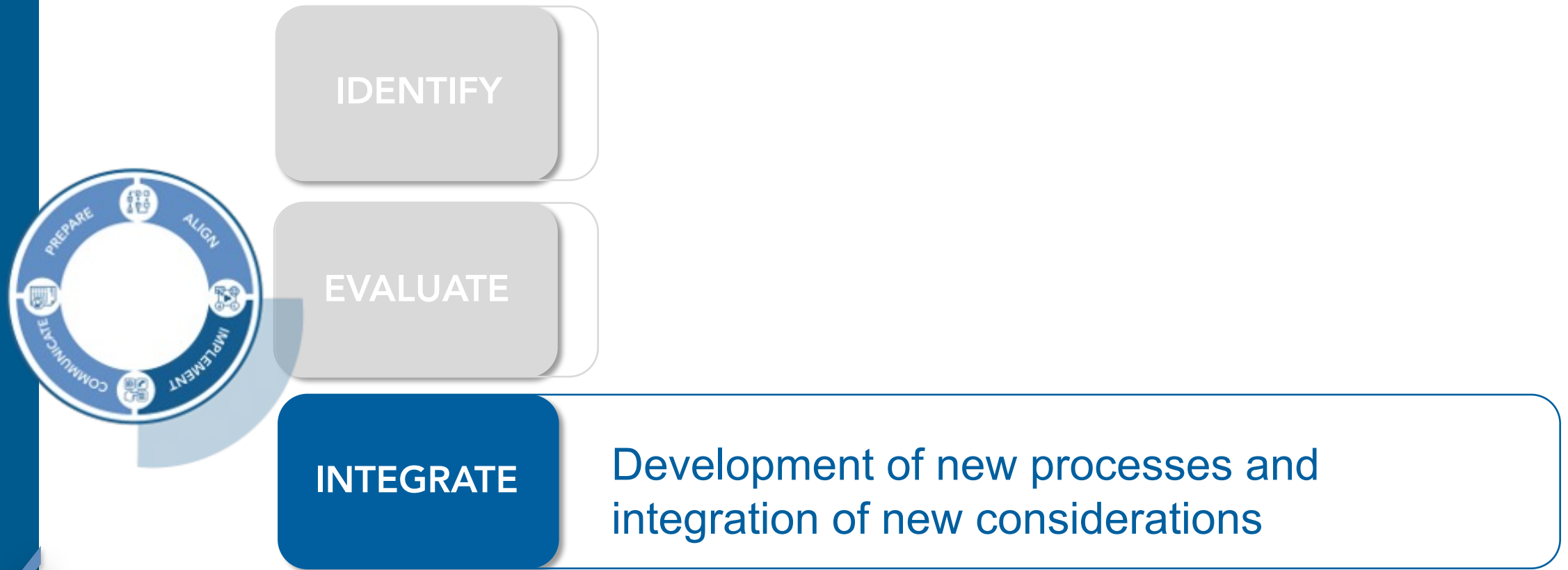
Select the appropriate answer

The zoom poll should appear on your screen momentarily. If it does not appear, feel free to answer in the chat box or message the hosts directly.

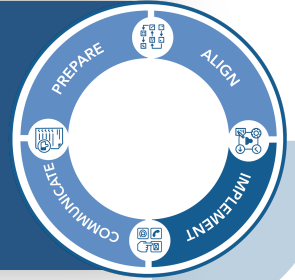
9. Information should be disclosed when applying ISSB Standards if...

- a. Omitting that information could reasonably be expected to influence investors' decisions
- b. It could reasonably be expected to affect the entity's cash flows
- c. It relates to the entity's performance in relation to sustainability-related risks and opportunities

IMPLEMENT



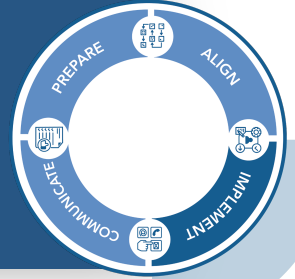
Developing new processes and adapting existing processes



A company's management should assess existing systems and processes or determine whether new systems and processes are needed. Management may consider:

- **Gap analysis** –check for gaps in existing systems and processes;
- **Suitability** – evaluate existing processes for identifying sustainability-related risks and opportunities;
- **Prioritisation criteria**, e.g.: likelihood, impact, vulnerability, speed of onset;
- **Controls** – evaluate existing internal risk controls;
- **Contributors**, i.e. departments with relevant processes and expertise to contribute;
- **Interconnections** between different internal and external factors; and
- **Uncertainties** from sustainability-related risks and opportunities.

Using a disclosure plan



A stand-alone strategy or as part of a wider disclosure plan.

- **Take control of your narrative**
- **Supports internal collaboration**, knowledge sharing and cross-functional team discussions with staff
- Acts as a **reference point and audit trail**, including where and how judgements have been made

ZOOM POLL

Select the
appropriate answer

The zoom poll should appear on your screen momentarily. If it does not appear, feel free to answer in the chat box or message the hosts directly.

10. A disclosure plan is required by the IFRS Sustainability Disclosure Standards.

- a. Yes
- b. No

ZOOM POLL

Select the appropriate answer

The zoom poll should appear on your screen momentarily. If it does not appear, feel free to answer in the chat box or message the hosts directly.

11. A disclosure plan can help a company to: (Select all that apply)

- a. Take control of its narrative within general purpose financial reports
- b. Support collaboration, knowledge-sharing and cross-functional team discussions
- c. Act as a reference point and audit trail for disclosure preparation
- d. Skip full disclosure as prescribed by the ISSB

EXAMPLE

Hammerson

ESG Databook
2022

1.1 INTRODUCTION

Our Basis of Reporting (BoR) sets out the basis under which we report on the environmental and social impacts of our business activities, covering the period 1 January 2022 to 31 December 2022. It provides information on the approach and scope used for data collection and verification of ESG performance data as published in our Annual Report 2022, ESG Report 2022 and ESG Databook 2022, including mandatory Greenhouse Gas (GHG) emissions and our annual voluntary non-financial reporting.

Our primary environmental disclosures are reported on a location based methodology, albeit in certain disclosures we also provide market based figures for transparency.

PRESENTATION OF INFORMATION

MANDATORY GHG DISCLOSURES

We have reported mandatory GHG emissions since 2008. These are calculated on an absolute 100% asset basis for all properties under the Group's management plus our corporate offices.

2022 emissions are available on page 27 of our Annual Report 2022 and Section 2 of this ESG Databook 2022.

PROPORTIONALLY CONSOLIDATED DISCLOSURES

The Group's property portfolio comprises properties that are either wholly owned or co-owned with third parties. The Group evaluates the performance of its portfolio for internal management purposes by aggregating its share of results for properties under the Group's management based on the proportionally ownership of each property.

This is the basis of environmental reporting adopted for our Net Zero pathway and 2021 Sustainability Linked Bond.

PREMIUM OUTLETS

Our reporting excludes the Group's premium outlet property interests held through the investment in Value Retail (and also prior to 2020, VIA Outlets). These interests are excluded as these are independently managed and financed by their third party owners. This approach is consistent with our approach for disclosing the Group's financial and operational performance.

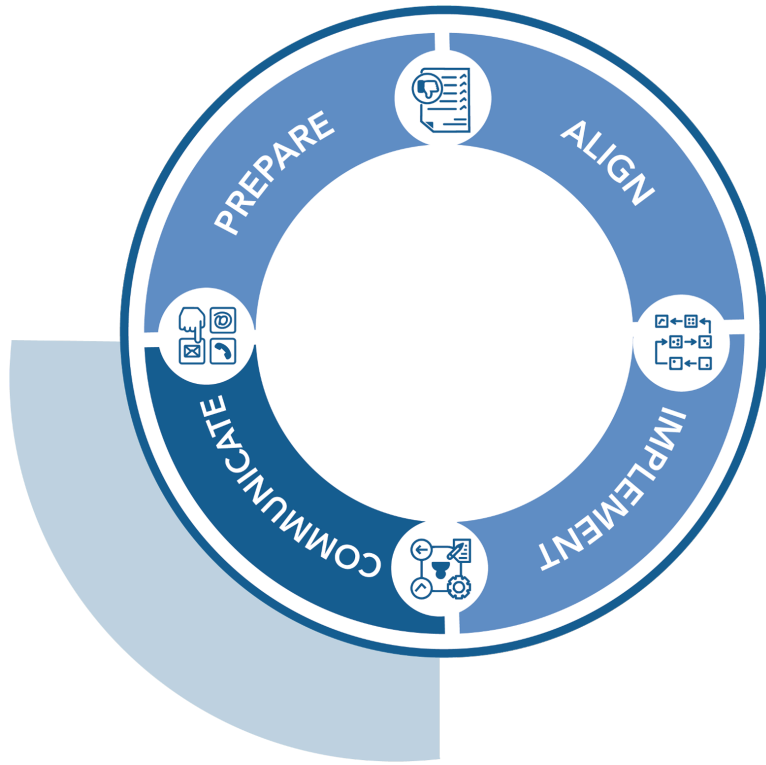
VOLUNTARY NON-FINANCIAL DISCLOSURES

Our ESG Report 2022 and ESG Databook 2022 meets the core requirements of Global Reporting Initiative (GRI) standards and the EPRA Sustainability Best Practice. Any relevant tables throughout the Databook are labelled with the appropriate reference and the GRI symbol.

Our GRI index provides the full index of where relevant information can be found.

Example source: Hammerson ESG Databook 2022 page 7 –

<https://www.hammerson.com/sites/hammerson-corp/files/hammerson-corp/sustainability/reporting-benchmarking/esg-db-22.pdf>



Communicating with investors – what, where and how

COMMUNICATION

LOCATION / TIMING

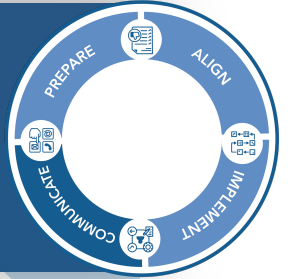
Where disclosure should appear and frequency of reporting

EFFICIENCY

CONFIDENCE



Disclosing material information

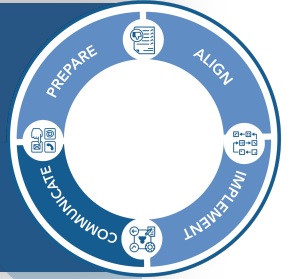


How to disclose material sustainability-related financial information

- Make it clearly identifiable [and do not obscure it]
- Use clear language
- Avoid scattering material information about a particular issue across disclosures
- Provide additional (non-material) information IF necessary – but distinguish additional information from material information

Note: No need to disclose information if it is not material (IFRS S1.B25)

Where to report sustainability-related financial information



Information is to be reported in the company's **general purpose financial reports**, with associated financial statements.

Different requirements may apply in different jurisdictions.

No requirements on exact placement of information.

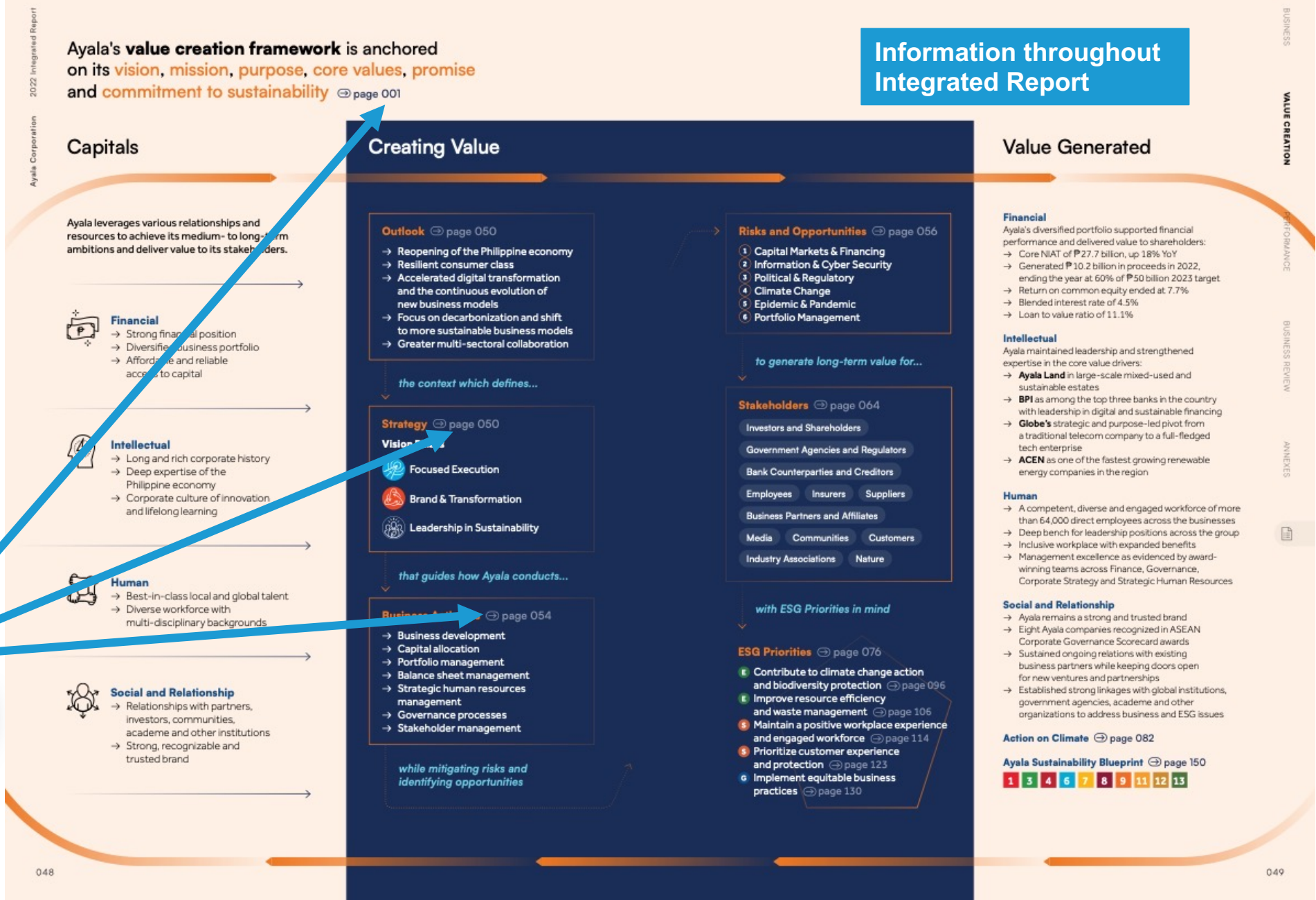
Examples of corporate approaches in practice:

- Integrate
- Separate
- Navigate

EXAMPLE

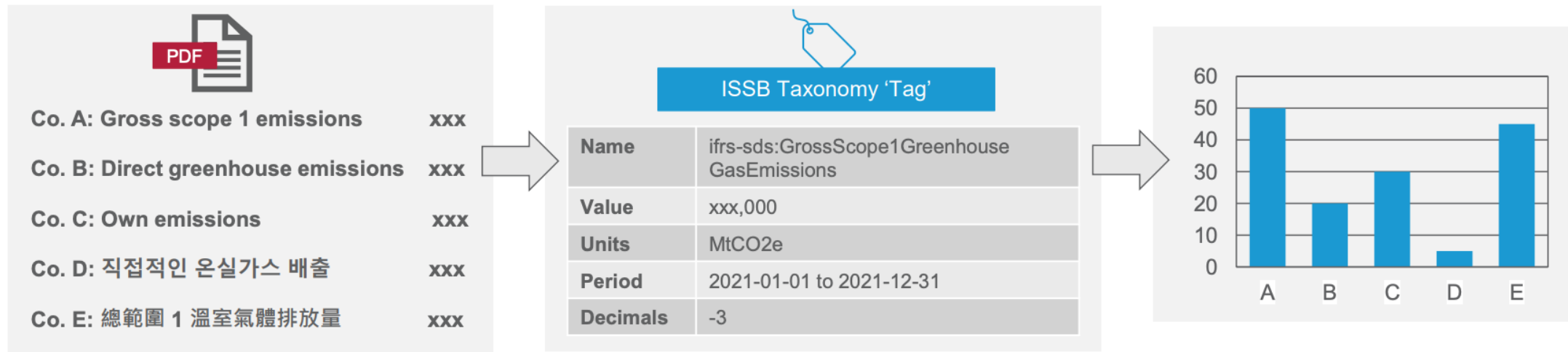


Page references



Example Source: Ayala, Integrated Report, pages 48-49 – <https://ayala.com/investor-relations/annual-reports/>

Evolution towards digital reporting

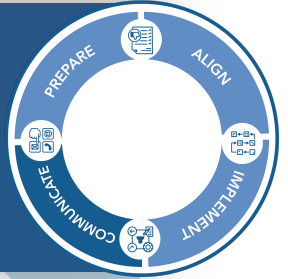


- **The ISSB Taxonomy** provides the common elements (or 'tags') needed to make sustainability disclosures machine-readable
- By tagging disclosures, computers have the context to identify information, making analysis easier



Reporting taxonomies are different to green taxonomies used to classify environmentally sustainable economic activities.

Mechanisms that support adoption

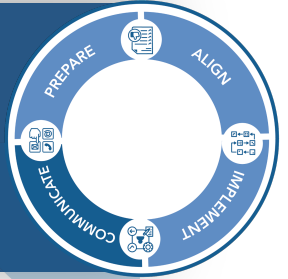


- Use of well-known terminology and concepts
- Proportionate e.g. use reasonable and supportable information available without undue cost or effort, qualitative scenario analysis permitted, plus consideration of skills, capabilities and resources
- Reliefs in first year e.g. climate first (followed by other sustainability disclosures), later reporting with half-year results, scope 3 not required, GHG Protocol not required if alternative in place, no comparative info required
- Guidance and other resources

COMMUNICATION



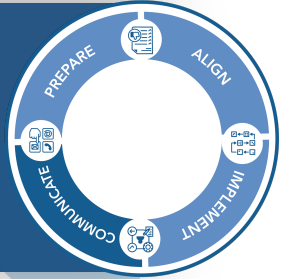
Effective Communication



This section sets out how a company might disclose its material sustainability-related financial information so that information is:

- Clear
- Distinguishable from other information
- Connected
- Comparable over time
- Succinct

Quality of information disclosed



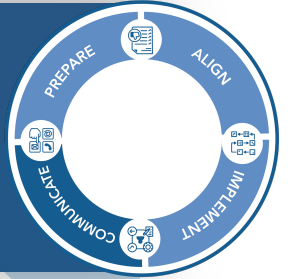
It is required that information disclosed be:

- Material
- Connected
- Aggregated or disaggregated, as appropriate

And it is required that:

- Comparative information be provided
- Errors from previous years be corrected
- Duplication be minimised
- Cross referencing to other reports meets conditions

Reminder – why we report

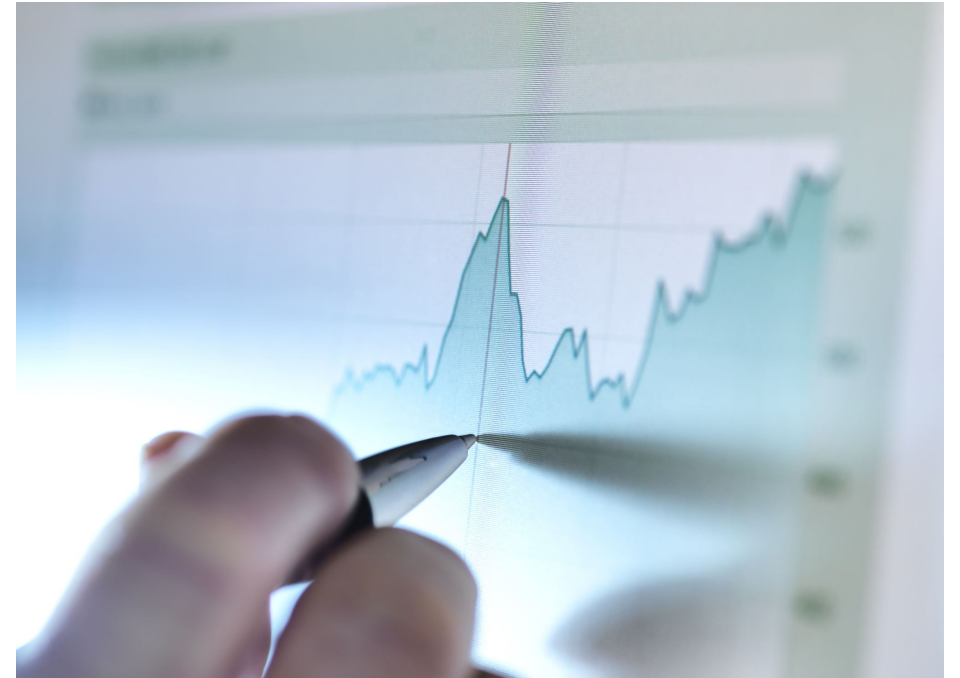


Around the world, sustainability factors are becoming—if they are not already—a mainstream part of investment decision-making.

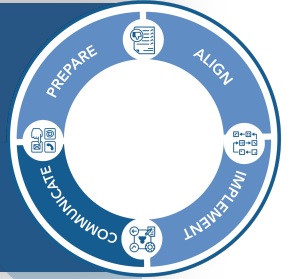
These factors are also increasingly central to how companies plan, manage and report.

Reports can:

- Satisfy compliance requirements
- Reflect management's objectives
- Conform with peer practice



Cross-referencing and minimising duplication



To keep general purpose financial reports succinct, companies can cross-refer to other reports they publish, provided that:

- Cross-referenced information is available on the same terms and at the same time as sustainability-related financial disclosures;
- The complete set of sustainability-related financial disclosures is not made less understandable by cross referencing;
- The information included by cross-reference meets all the requirements of IFRS Sustainability Disclosure Standards;
- The cross-referenced information is authorised in the same way as information in the general purpose financial report;
- It is clear where the cross-referenced information is located and how it can be accessed.

EXAMPLE

Connectivity with TCFD disclosures

Note expands on capital expenditures, cash flows, businesses impacted and more

Note explains considerations and assessment for decarbonization strategy

Note states climate change and policy risk considerations

Impact of Climate Change and Carbon Emissions Reduction Targets

Climate change risks including the impact of achieving the Group's carbon emissions reduction targets and the risks identified in the TCFD disclosures on pages 56 to 59 have been considered and assessed in the preparation of the Consolidated Financial Statements for the year ended 31 December 2022. There has been no material impact identified on the estimates and underlying assumptions made in the preparation of the Group's Consolidated Financial Statements as a result of climate change risks. In line with the application of our accounting policies, estimates and underlying assumptions are reviewed on an ongoing basis as we continue to develop and implement our strategy to meet our carbon emissions reduction targets. The table below provides details of where further information has been provided in these Consolidated Financial Statements.

Climate Change and Carbon Emissions Reduction Targets	Pages
Impairment testing of goodwill and property, plant and equipment	182, 211
Useful lives of assets	186, 209
Provisions for liabilities	183
Inventories	187
Retirement Benefit Obligations	234

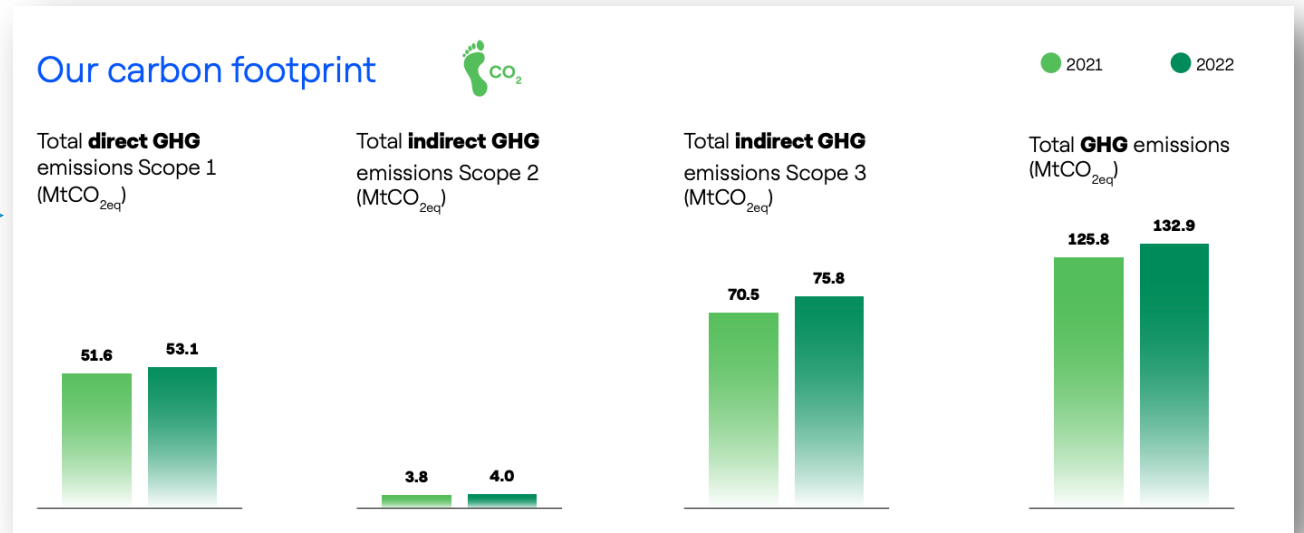
The Directors are aware of the ever-changing risks attached to climate change and regularly assess these risks against judgements and estimates made in the preparation of the Group's Consolidated Financial Statements.

In early 2023, the Science Based Targets initiative (SBTi) validated the alignment of our existing Scope 1 and Scope 2 carbon emissions reduction target to a 1.5°C warming scenario. The target previously aligned to a well below 2.0°C scenario. The Group's assessment is that the impact of the adoption of this updated target will not have a material impact on the estimates, judgements and assumptions set out in the relevant disclosures referenced above. The overall absolute Scope 1 and Scope 2 carbon emissions reduction target by 2030 is consistent with the previous target.

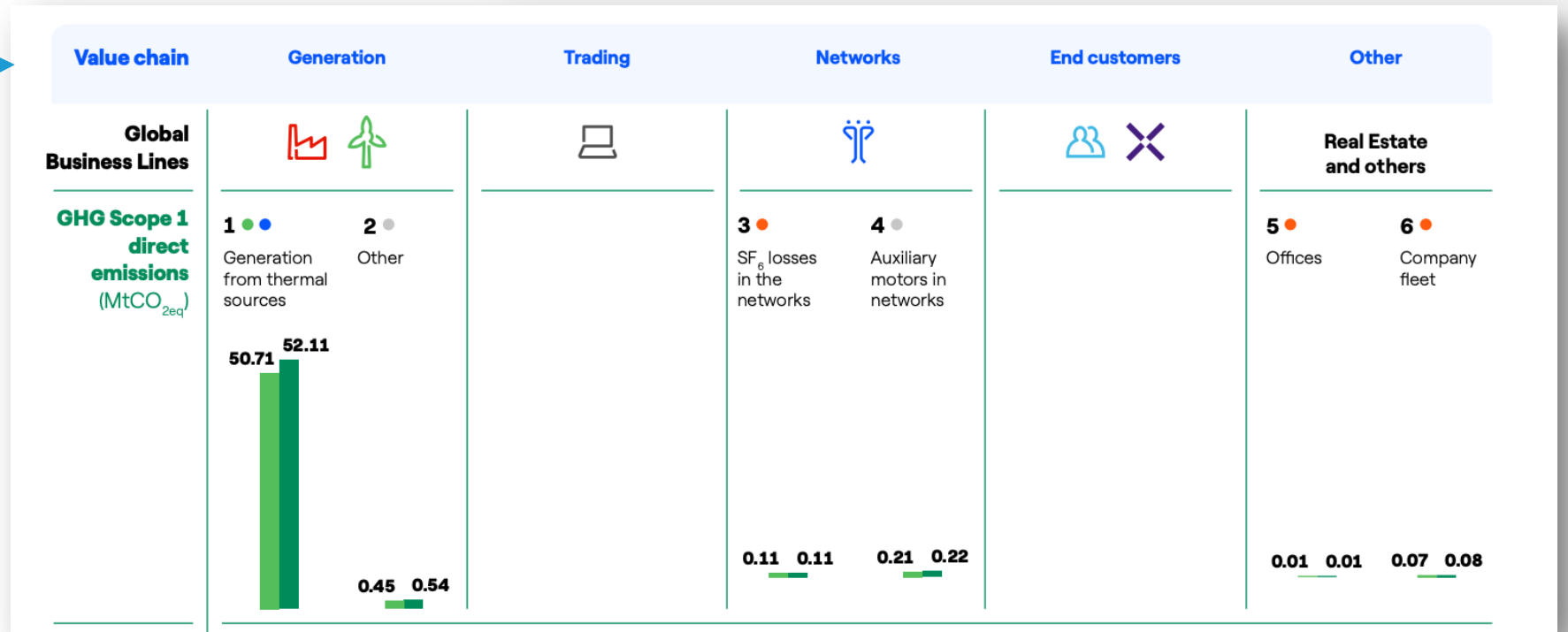
Cross reference to where targets have been considered in the financial statement

EXAMPLE

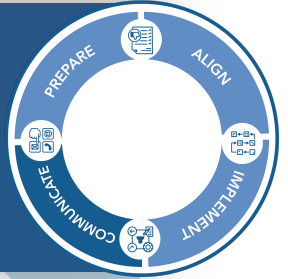
GHG emissions breakdown by type



GHG emissions breakdown by source



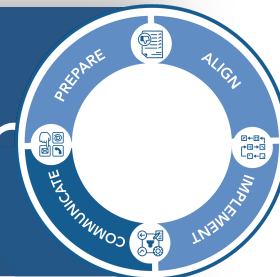
Consistent disclosures



The disclosures are:

- Prepared for the **same** reporting **company** and reporting **period** as the financial statements
- Provided at the **same time** as the financial statements, as part of the general purpose financial reports
- Include **data** and **assumptions** that **are consistent** with those in the financial statements, to the extent possible.

Aggregate or disaggregate information



- *Aggregate* information to minimise scattering and increase understandability
- Do not let aggregation reduce understandability or obscure material information
- *Disaggregate* information to e.g.:
 - Show the breakdown of sustainability-related risks by location; or
 - Distinguish resources drawn from environmentally stressed vs abundant areas

ZOOM POLL

Select the
appropriate answer

The zoom poll should appear on your screen momentarily. If it does not appear, feel free to answer in the chat box or message the hosts directly.

12. Information disclosed in accordance with the ISSB Standards should be:

(Select all that apply)

- a. Decision-useful
- b. Material
- c. Misleading
- d. Comparable

ZOOM POLL

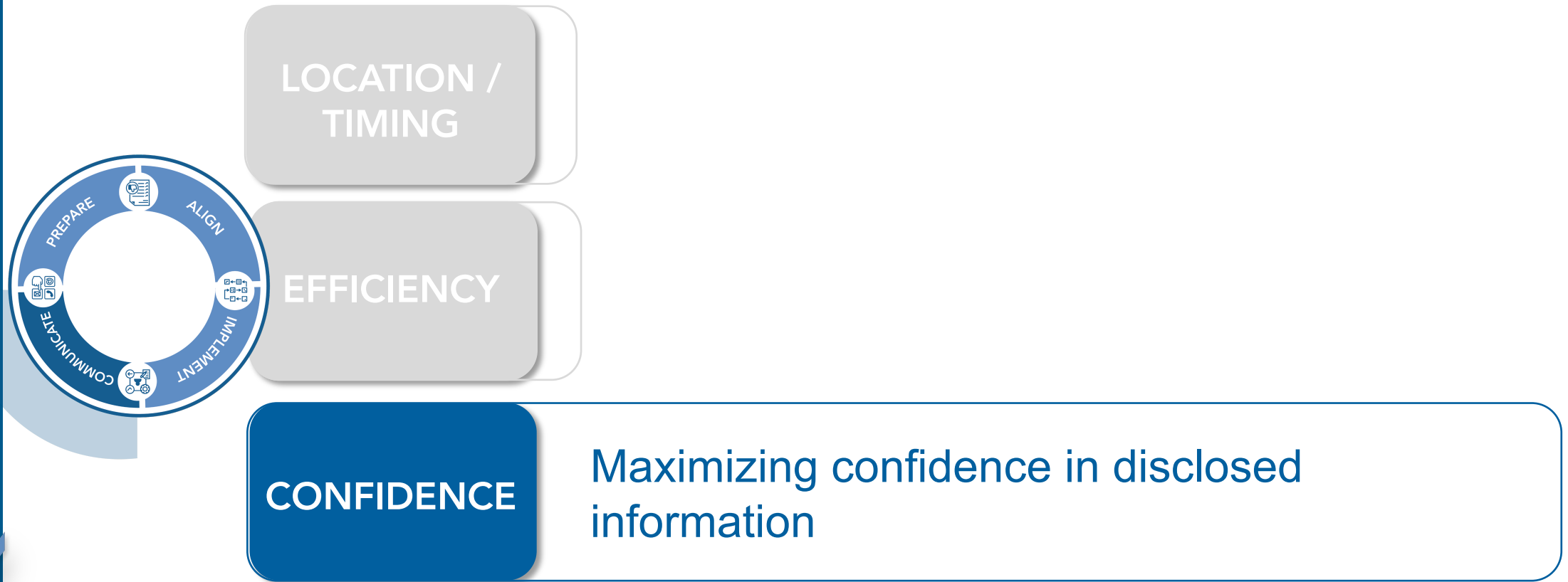
Select the
appropriate answer

The zoom poll should appear on your screen momentarily. If it does not appear, feel free to answer in the chat box or message the hosts directly.

**13. Information is decision
useful if it is...**
(Select all that apply)

- a. ...relevant and faithfully represent what it proports to represent
- b. ...comparable
- c. ...verifiable
- d. ...timely
- e. ...understandable

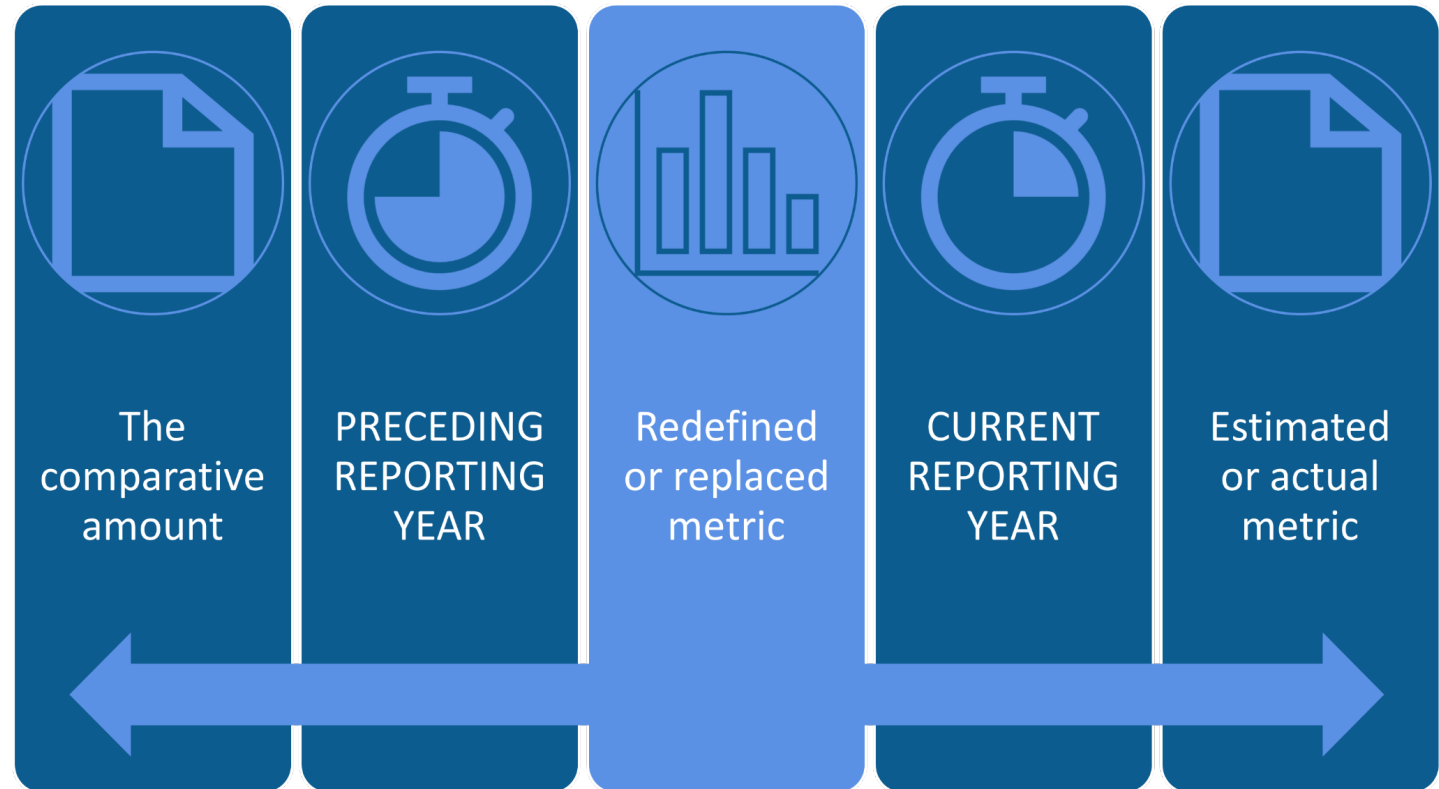
COMMUNICATION



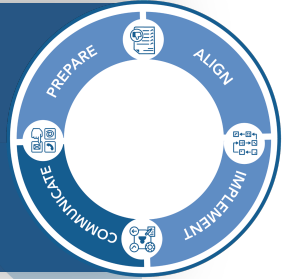
Comparative information



- Disclose comparative information for the preceding reporting period *for all amounts* disclosed;
- For estimates: revise comparatives according to new information and explain differences.
- Specific requirements apply to redefined, replacement and new metrics.
- If it enhances understanding, provide narrative information for the preceding reporting year



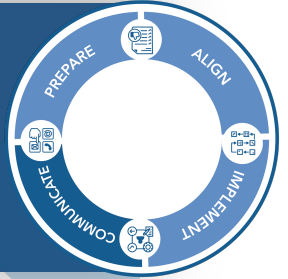
Commercially sensitive information



Companies are not required to disclose commercially sensitive information provided that:

- the information is **not already** publicly available;
- disclosure of the information could reasonably be **expected seriously to prejudice** potential economic benefits;
- there is no other way of disclosing the information **to limit or remove that risk**;
- the company **discloses the fact** that it used the exemption for commercially sensitive information; and
- the company **reassesses** at each reporting date.

Using reasonable estimates



Companies can use reasonable estimates and assumptions when preparing sustainability-related financial information – it does not have to be perfectly precise in all respects. Judgement can be used. However:

- Estimates should be based on information of **sufficient quality and quantity**;
- Estimates should be **clearly identified** as such and information provided about the inputs and methods used to produce the estimates;
- Information about judgements must reflect both the judgements made and the **information on which they are based**;
- Special requirements apply to **measurement uncertainty** and what to do when past assumptions and estimates change.

Statement of compliance



- Companies are required to make an explicit and unreserved statement of compliance when they have met all the requirements of IFRS Sustainability Disclosure Standards.
- Commercially sensitive information can be omitted if conditions are met.
- Information prohibited from disclosure by applicable local laws and regulations can be omitted.

Things to remember



❖ Ensure **information** is:

- relevant
- material
- represented faithfully
- comparable
- verifiable
- timely
- understandable

❖ Ensure that investors are able to understand **connections** between:

- Sustainability-related risks and opportunities
- Disclosures on core content
- Sustainability-related financial disclosures and financial statements

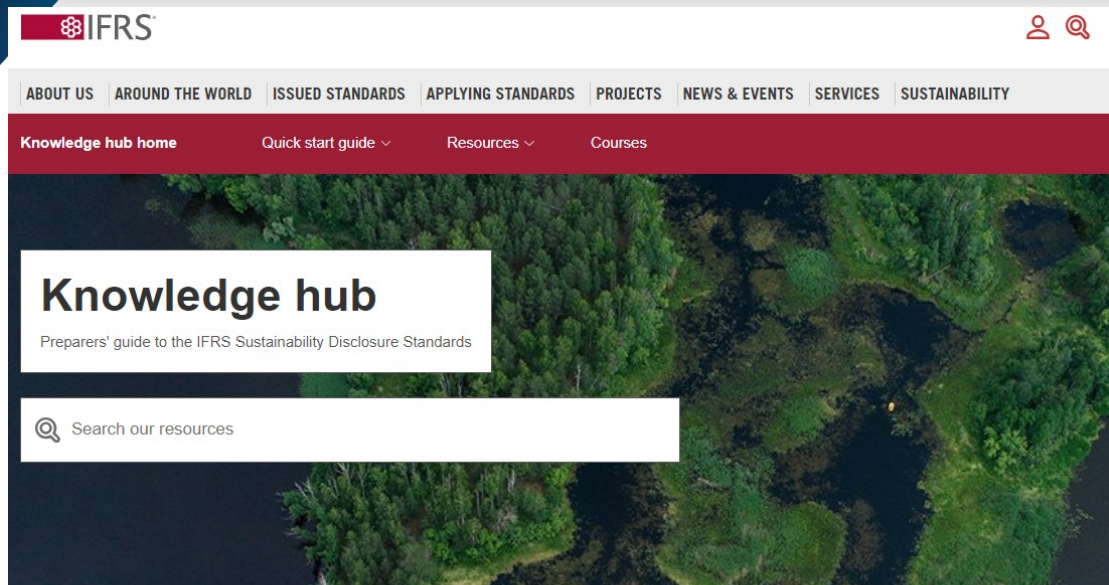
❖ Are the sustainability-related financial disclosures **for the same period and same reporting company** as the related financial statements?

❖ Do the disclosures cover **all material information** that investors need, including on core content?

❖ Have **comparatives** been provided?

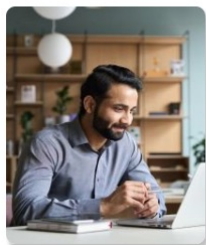
❖ Is there a **statement of compliance**?

CONTINUE YOUR LEARNING



The IFRS knowledge hub is a free online resource for preparers designed to support them in understanding and getting ready for IFRS S1 and S2. It incorporates an easy to navigate and searchable repository of resources, e.g. e-learning, case studies, good practice guidance, webinars, research, publications, FAQs on the standards and their implementation. The curated content will evolve over time.

Videos



IFRS S1 Introduction

General overview of IFRS S1 presented by ISSB Vice-Chair Sue Lloyd and Acting Executive Technical Director Bryan Esterly

[Watch video](#)

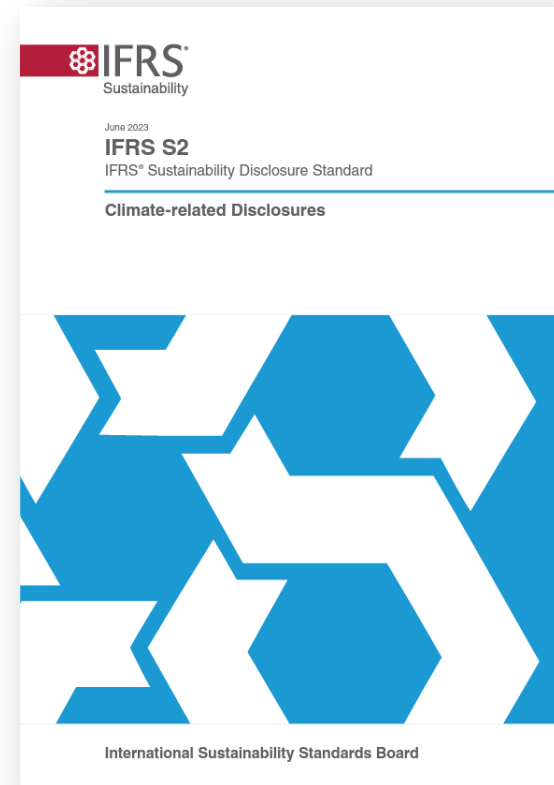
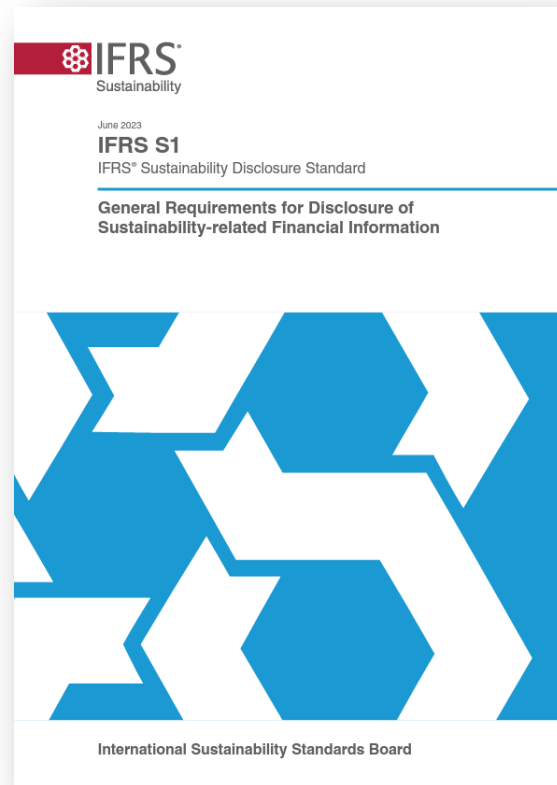


IFRS S2 Introduction

Key features of IFRS S2 presented by ISSB Vice-Chair Sue Lloyd and ISSB Technical Staff—IFRS S2 Lead Caroline Clark-Maxwell

[Watch video](#)

CONTINUE YOUR LEARNING



Download your copy:

<https://www.ifrs.org/issued-standards/ifrs-sustainability-standards-navigator/>

IFC Beyond the Balance Sheet



One-stop-shop

one-stop shop providing guidance and a framework to improve sustainability and climate reporting tailored to emerging markets.

Toolkit & learning

tools and resources comprising a digital toolkit, e-learning opportunities, company self-assessments, and extensive information resources to navigate the sustainability reporting landscape.

Public good

public good for companies and banks, providing resources to enhance their sustainability reporting journey.

public good for regulators and stock exchanges, providing resources to enhance disclosure and transparency regulations and practices.

<https://www.ifcbeyondthebalancesheet.org/>



Beyond
the Balance Sheet



AN INNOVATION OF

IFC

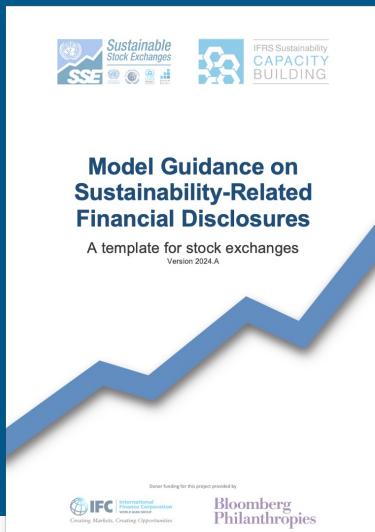
**International
Finance Corporation**
WORLD BANK GROUP



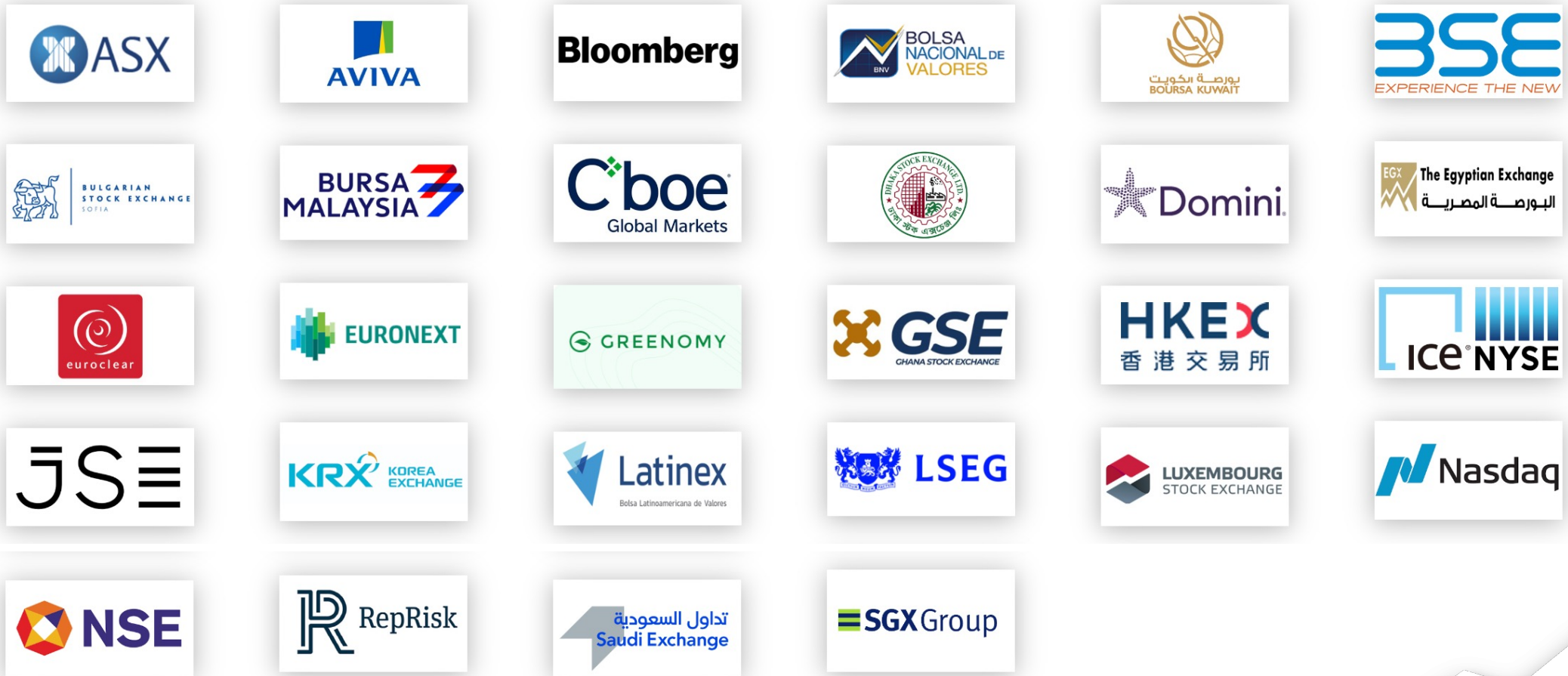
SSE



UN SSE TOOLKIT



THANK YOU TO OUR OFFICIAL SUPPORTERS





**Sustainable
Stock Exchanges**



CONTACT DETAILS

SSE: training@sseinitiative.org

IFRS Foundation: capacitybuilding@ifrs.org

IFC: rgermanova@ifc.org



Creating Markets, Creating Opportunities



IFRS Sustainability
**CAPACITY
BUILDING**

Thank you!

