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DIFFERENT APPROACHES TO THE MATERIALITY ANALYSIS OF CORPORATE SUSTAINABILITY REPORTING

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"I suppose therefore that all things I see are illusions; I believe that nothing has ever existed of everything my lying memory tells me. I think I have no senses. I believe that body, shape, extension, motion, location are functions. What is there then that can be taken as true? Perhaps only this one thing, that nothing at all is certain."
— Rene Descartes

Abstract

This thesis explores the complex field of corporate sustainability reporting, offering a thorough examination and evaluation of five prominent frameworks: GRI, IIRC, IFRS, SASB, and ESRS. The research carefully examines the different approaches that each framework takes when analyzing materiality, which is a crucial factor in determining the importance and significance of sustainability information revealed by firms. The study uses a qualitative approach to compare different frameworks based on factors such as their conceptual foundations, methods for determining materiality, and procedures for engaging stakeholders. The findings indicate that each framework possesses distinct strengths and areas of emphasis, such as stakeholder inclusivity, financial materiality, integrated thinking, and regulatory compliance. However, there are deficiencies in the harmonization and interoperability across these frameworks. The fragmentation presents difficulties for organizations aiming to achieve comprehensive and cohesive sustainability reporting. The thesis asserts that a collective endeavor to establish a consolidated reporting system is essential for improving the clarity, responsibility, and ability to compare corporate sustainability disclosures. The argument is that aligning with this approach would not only streamline the reporting process for companies, but also enhance the quality of information accessible to stakeholders, enabling well-informed decision-making in support of sustainable development.
Keywords: Corporate Sustainability Reporting, GRI, IIRC, IFRS, SASB, ESRS, Materiality Analysis, Sustainability Frameworks, Stakeholder Engagement.

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Listing of acronyms

CDP .... Carbon Disclosure Project
CDSB .... Climate Disclosure Standards Board
EFRAG .... European Financial Reporting Advisory Group
ESG .... Environmental, Social and Governance
ESRS .... European Sustainability Reporting Standards
GAAP .... Generally Accepted Accounting Principles
GSSB .... Global Sustainability Standards Board
GRESB .... Global Real Estate Sustainability Benchmark
GRI .... Global Reporting Initiatives
IASB .... International Accounting Standards Board
IFRS .... International Financial Reporting Standards
IIRC .... International Integrated Reporting Council
SAG .... Standards Advisory Group
SASB .... Sustainability Accounting Standards Board
SDG .... Sustainable Development Goals
TCFD .... Climate-related Financial Disclosures
TEG .... Technical Expert Group
VRF .... Value Reporting Foundation

1 Introduction

Over the last two decades, the operational backdrop for businesses has witnessed a radical transformation driven by economic growth, global integration, increased consumer demand, and abundant fossil fuel resources. This change has not only amplified businesses' roles as key global providers of goods, employment, and infrastructure but has also significantly increased their impact on vital sustainability issues such as climate change, biodiversity, healthcare accessibility, and labor practices. Moreover, advancements in technology have empowered a wider array of stakeholders, extending beyond traditional shareholders, to hold businesses accountable for their actions. This evolving landscape has underscored the importance of transparently measuring and disclosing sustainability performance as an integral part of effective business management, crucial for maintaining public trust in businesses as agents of societal good. Corporate reporting has thus become a vital tool, enabling stakeholders, including investors, to assess and interpret a company's performance. This is similar to how companies leverage this information for internal decision-making. While financial reporting has advanced significantly under internationally recognized accounting standards, enhancing transparency and accountability in global financial markets, sustainability reporting presents more intricate challenges. These include the diverse objectives of different users of sustainability information, the dynamic nature of sustainability topics, and misconceptions surrounding the relationship between sustainability information and related ratings and indices. These factors have contributed to a prevailing confusion among both producers and users of sustainability information, highlighting the need for a more comprehensive approach to corporate reporting [1].

This thesis aims to explore and compare five prominent frameworks and standard-setting institutions

in the field of corporate sustainability reporting: GRI, IIRC, IFRS, SASB, and ESRS and identify the best approach based on materiality analysis. Each framework offers distinct standards and approaches for sustainability disclosure, including aspects of climate-related reporting. The objective is to dissect and analyze these frameworks, shedding light on their respective contributions to resolving the existing complexities in sustainability reporting and their collective stride towards a unified and effective corporate reporting system. In conclusion, the present study endeavors to advance the state-of-the-art in developing collaborative market guidance, a common vision, and a joint commitment that lead towards the development of a more integrated and effective corporate sustainability reporting system, aligning it closely with established financial reporting standards and fostering broader stakeholder engagement and cooperation [2].

2

Materials & Methods

2.1 Objectives of the Research

Information about businesses' performance on sustainability topics began to be reported over 30 years ago as an accountability initiative driven by stakeholders. In today's world, sustainability disclosure, also known as ESG disclosure or non-financial reporting, holds immense importance for various stakeholders. These include policymakers, consumers, employees, investors, and civil society organizations. Leading organizations and their boards, which are responsible for all corporate reporting, are now trying not just to be accountable to shareholders but also to define their purpose and serve all stakeholders. In recent studies, it has been found that there is a connection between performance on specific sustainability topics and factors that contribute to the creation of enterprise value. Companies and financial capital providers are eager to comprehend and take action on these risks and opportunities. Given the importance of sustainability disclosure, it has become increasingly crucial for investors to make informed economic decisions and for regulators to assess the stability and efficiency of financial markets. When sustainability disclosure standards encompass factors that contribute to enterprise value creation beyond what is already reflected in the annual financial accounts, they become a valuable complement to Financial GAAP, enabling individuals to make informed economic decisions [2].

In regard to it, there are two conceptions of materiality [3] utilized by businesses for the purpose of sustainability disclosure:

1. A company identifies the sustainability topics that are relevant for disclosure by considering its

significant impacts on the economy, environment, and people, as well as their importance to its stakeholders. The information that is generated can be utilized by various users and for different purposes, commonly known as "sustainability reporting."

2. When a company shares information with users who are focused on making economic decisions, such as financial institutions, it identifies the sustainability topics that are relevant for creating enterprise value. This takes into account the fact that some of this performance may already be included in the annual financial accounts.

Figure 2.1 [4] illustrates the concept of "nested" sustainability information that is disclosed by a company. The diagram utilizes dotted lines to highlight the dynamic nature of materiality. It is important for companies to recognize that sustainability topics that were previously deemed unimportant for disclosure can become significant when there is evidence of their impacts on the economy, environment, and/or people. Similarly, certain sustainability topics have the potential to contribute to the creation of enterprise value, whether it be a gradual or rapid process. This includes human capital issues like racial equity and the more recent COVID-19 pandemic.

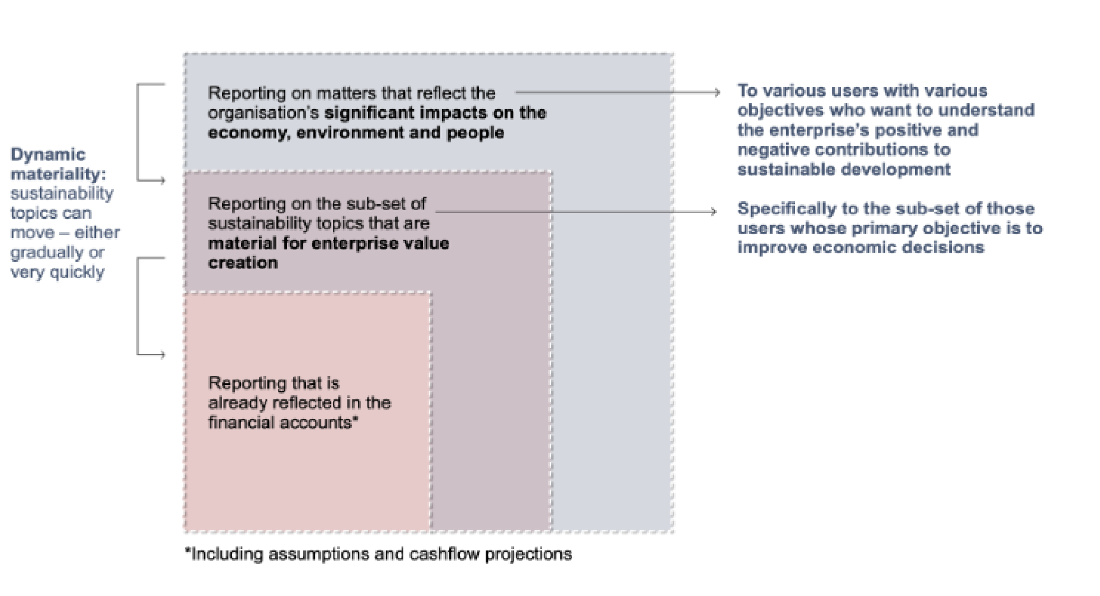

Figure 2.1: Dynamic Materiality

2.2 Timeline of the events

In order to ensure resilient and efficient markets [2] , direct capital to sustainable enterprises, and address the global challenges of inequality, biodiversity loss, and climate change, three trends have come together

to accelerate progress towards the kind of comprehensive corporate reporting system that is utterly needed :

1. There has been a growing interest in exploring the relationship between sustainability topics and financial risk and opportunity, as well as the role of businesses in achieving the Sustainable Development Goals (SDGs). In August 2019, the US Business Roundtable stated the objective of a corporation as fostering an economy that benefits everyone. Several months later, the World Economic Forum (WEF) released an updated version of its Davos Manifesto, emphasizing the importance of measuring a company's performance not just based on its return to shareholders, but also on how it accomplishes its environmental, social, and good governance objectives. Furthermore, BlackRock and State Street Global Advisors, famous asset managers, have recently emphasized the importance of public companies disclosing comprehensive information regarding the financial implications of sustainability issues such as global warming. In letters addressed to CEOs and directors, they have urged companies to provide transparent details on the risks and opportunities related to these topics. During June 2020, the Institute of International Finance (IIF) examined the increasing need for improved ESG disclosures. In line with this, the Canada Pension Plan Investment Board (CPPIB) revised its guidance to endorse SASB and TCFD, stating that it recognizes the importance of considering ESG-related business risks and opportunities in order to enhance long-term value.
2. There is an increasing interest from regulators, policymakers, and the accounting profession to address this demand. Below is a timeline of these important events:

   - In **November 2019**, the International Federation of Accountants (IFAC) released a publication expressing their support for a worldwide approach to standards in order to ensure the provision of narrative information and metrics that are relevant, reliable, and comparable.
   - In **December 2019**, Accountancy Europe proposed a framework for establishing a non-financial standards board (NFSB) within the International Financial Reporting Standards (IFRS) Foundation.
   - In **January 2020**, the European Commission unveiled its proposal to create non-financial reporting standards that align with internationally recognized norms and serve as a benchmark for global consensus.
   - In **February 2020**, the Brydon Review, commissioned by the UK Government, released its recommendation to enhance the audit report's effectiveness in serving the interests of various stakeholders. The aim is to encourage companies to provide meaningful and honest reports on the impact of their operations on the community and the environment.
   - In **March 2020**, the Norwegian Bank Investment Management (NBIM) also released recommendations calling for companies to provide more comprehensive and standardized disclosures. These disclosures would enable investors to evaluate companies' sustainability risks, management practices, and performance.
   - In **April 2020**, the International Organization of Securities Commissions (IOSCO) recognized the crucial role of global capital markets regulation in understanding the correlation

between financial and sustainability information. This understanding is essential for investors and governments to gain valuable insights into company performance.

- In **April 2020**, the International Monetary Fund (IMF) emphasized the need for global mandatory disclosures on climate change risks to maintain financial stability.
- In **May 2020**, the IFRS Foundation Trustees made an announcement regarding the exploration of the Foundation's involvement in establishing ESG Standards.
- In **May 2020**, the Investor Advisory Committee of the US Securities and Exchange Commission emphasized the growing importance of environmental, social, and governance information in the investment ecosystem.
- In **June 2020**, the Institute of International Finance (IIF) delved into the topic of increasing demand for improved ESG disclosures in their publication.
- In **June 2020**, the IFRS Foundation Trustees made the decision to conduct a public consultation regarding the potential involvement of the Foundation in sustainability standard-setting.
- In **July 2020**, Eumedion, an investor body, urged the IFRS Foundation to expand its scope by incorporating a standard-setter for non-financial information.

3. The independent sustainability standard-setters and the integrated reporting framework [5] provider are working together to establish a foundation for advancing towards a more comprehensive corporate reporting system. We understand the value of our framework and standards in enabling companies to provide users with more comprehensive information. We understand the need to simplify the use of our framework and standards as a unified solution for the market. We are dedicated to collaborating quickly to develop a global, all-encompassing corporate reporting system. We are currently engaged in several collaborative technical initiatives with our five organizations. The aim is to assist all individuals involved in sustainability disclosure in comprehending the ways in which our standards can be utilized collectively.

From a broad perspective, we perceive ourselves as a nested eco-system. Figure 2.2 [2] illustrates the comprehensive perspective of the connection between our standards and frameworks, as well as their association with the International Accounting Standards Board (IASB) and the Financial Accounting Standards Board (FASB).

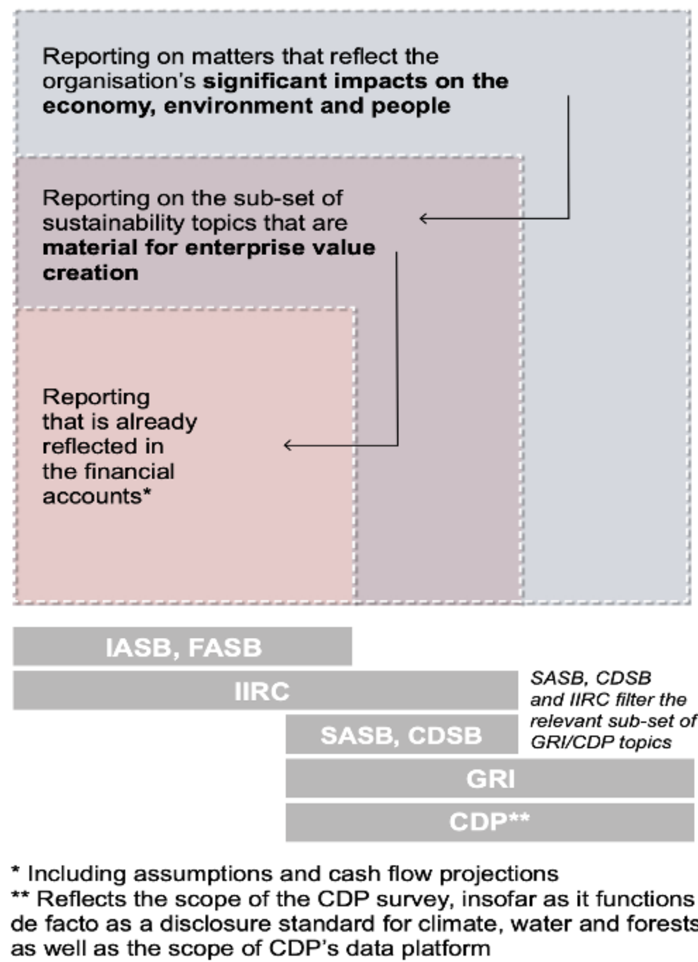

Figure 2.2: Standards address distinctive materiality concepts

2.3 GRI Method

Over the past 25 years, the **Global Reporting Initiative (GRI)** [6] has set the benchmark for sustainability reporting, offering a framework for organizations to report on their impact across environmental, social, and economic domains. GRI facilitates transparency and dialogue with stakeholders, investors, policymakers, and civil society, covering a broad range of topics from waste to emissions, diversity and equality to health and safety. The standards provide a user-friendly modular system for detailing an organization's material topics, their impacts, and management strategies, promoting sustainable development. The GRI framework consists of a comprehensive set of interconnected standards

including the **Universal Standards**, applicable universally and detailing organizational context and governance; **Sector Standards**, which are specific to certain sectors; and **Topic Standards**, for relevant disclosures for specific topics. This structured approach enables organizations to comprehensively report on sustainability, aligning their operations with sustainable development objectives.

GRI Universal Standards: The GRI Universal Standards as shown in figure 2.3 are applicable to all organizations and encompass the following sectors [7]:

- **GRI 1:** Foundation 2021 introduces the GRI Standards framework, emphasizing core principles such as accuracy, completeness, and clarity to ensure quality in reporting. It establishes the basic requirements for adherence to GRI Standards and introduces key reporting principles [8].
- **GRI 2:** General Disclosures 2021 provides information regarding an organization's structure, reporting processes, activities, workers, governance, strategy, policies, practices, and stakeholder involvement. These documents provide valuable information about the organization's profile and size, which helps to comprehend the organization's impacts within a broader perspective [6].
- **GRI 3:** Material Topics 2021 is designed to guide organizations through the identification and prioritization of material topics, which are issues with significant impacts on the economy, environment, and society, including human rights. This standard emphasizes the integration of Sector Standards to enhance the relevance and specificity of the assessment process. It includes a structured approach for organizations to document their methodology for determining material topics, compile a comprehensive list of these topics, and detail their strategies for managing them. This ensures a thorough understanding of an organization's most significant impacts and the actions taken to address them, aligning with broader sustainability goals [6].

GRI Sector Standards: The GRI Sector Standards illustrated in figure 2.3 are designed to elevate the reporting quality, detail, and consistency across various organizations [7]. With plans to develop standards for 40 distinct sectors, starting with those of significant impact like oil and gas, agriculture, and fisheries, these standards aim to provide a detailed perspective on what is materially important for organizations within a specific sector. Organizations using the GRI Standards are required to apply the relevant Sector Standard, offering a deep dive into the sector's characteristics, key activities, and impact-contributing business relationships. Each Sector Standard outlines crucial material topics and effects pertinent to that sector, guiding organizations to the appropriate disclosures within the Topic Standards. Occasionally, Sector Standards may introduce additional disclosures to fully capture the sector-specific impacts not covered by the Topic Standards. This comprehensive approach is supported by thorough research, sector evidence, consultations with global standards, and expert input, ensuring it meets the varied expectations of stakeholders regarding sector impact management [9].

GRI Topic Standards: The GRI Topic Standards include a range of disclosures showed in figure 2.3 aimed at providing comprehensive information on various subjects [7]. Some examples are standards related to waste management, occupational health and safety, and tax. Every Standard includes an overview of the subject matter, along with specific disclosures about how an organization controls the

related impacts. An organization chooses the Topic Standards that align with the material topics it has identified and utilizes them for reporting purposes [10].

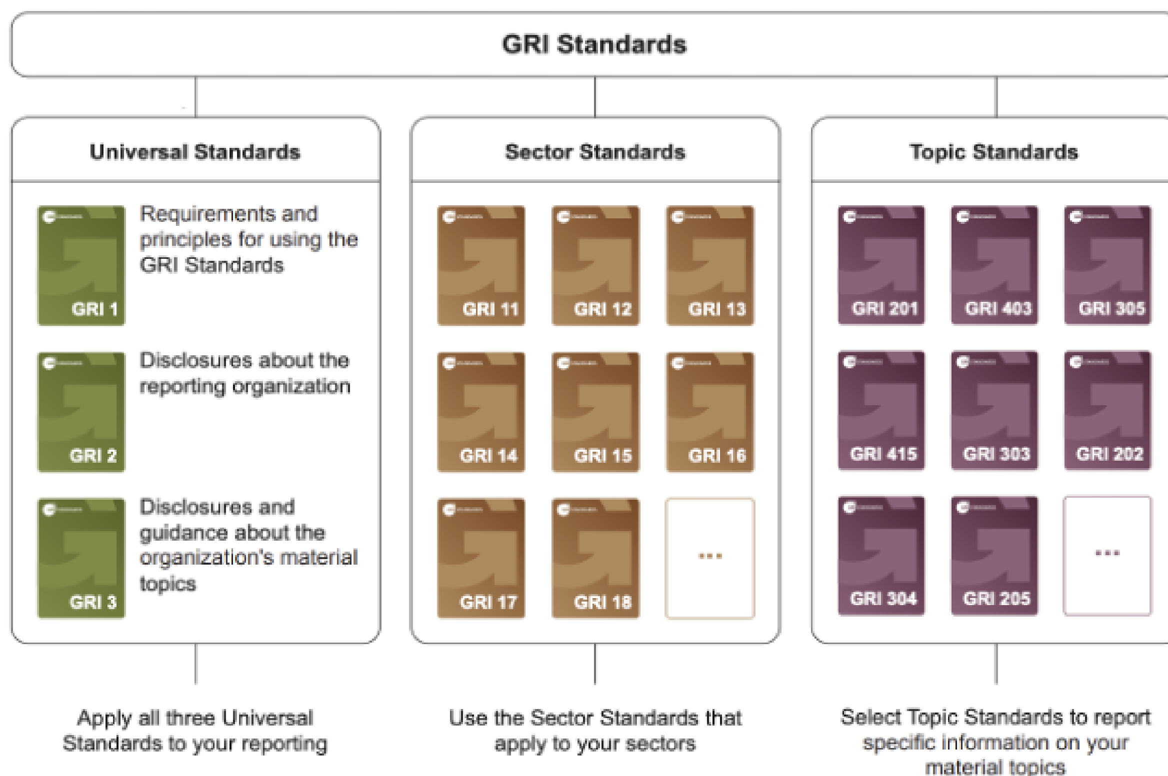

Figure 2.3: GRI Standards: Universal, Sector and Topic Standards

2.3.1 GRI Approach to Materiality

Materiality Application: an organization can identify numerous impacts for reporting purposes. When implementing the GRI Standards, the organization gives priority to reporting on subjects that reflect its most substantial effects on the economy, environment, and people, including implications on their human rights. The GRI Standards outline the material topics of the organization. Material topics encompass areas such as anti-corruption, occupational health and safety, and water and effluents. A topic can encompass implications on the economy, environment, and people, rather than being restricted to any one of these dimensions. For instance, an organization may identify 'water and effluents' as a significant subject matter due to the ecological consequences of its water consumption and the impact on surrounding residents' water availability. The GRI Standards group focuses on certain issues, such as 'water and effluents', to assist firms in reporting comprehensively on various impacts that are

related to the same subject. The organization's ongoing identification and assessment of affects inform the process of identifying material themes. The continuous identification and evaluation of impacts entails actively involving pertinent stakeholders and specialists, and is carried out autonomously from the sustainability reporting process [11].

Determining Material Topics: After evaluating the importance of its effects, an organization must determine which ones to include in its reporting. In order to accomplish this, it must give priority to the effects. Categorizing the effects into specific subjects (such as 'water and effluents' or 'child labor') simplifies the process, as it identifies which subjects are most significant to the organization's operations - its material subjects [12].

GRI 3 provides a detailed guide on how to systematically arrange this categorization. In order to comply with the GRI Standards, an organization must record the methodology used to identify its significant subjects, and the disclosures provided in GRI 3 support this process. According to figure 2.4 Sector Standards play a role in the process of identifying material topics [7]. An organization should evaluate its selected material topics by comparing them to the topics outlined in the relevant Sector Standard. This aids the corporation in verifying that it has not neglected any subjects that are expected to be significant for the sector. When reporting in compliance with the GRI Standards, organizations are required to apply an appropriate Sector Standard, if one exists. The utilization of Sector Standards should not be regarded as a replacement for identifying material topics, but rather as a helpful tool. Nevertheless, the organization must take into account its unique conditions while choosing its material topics [12].

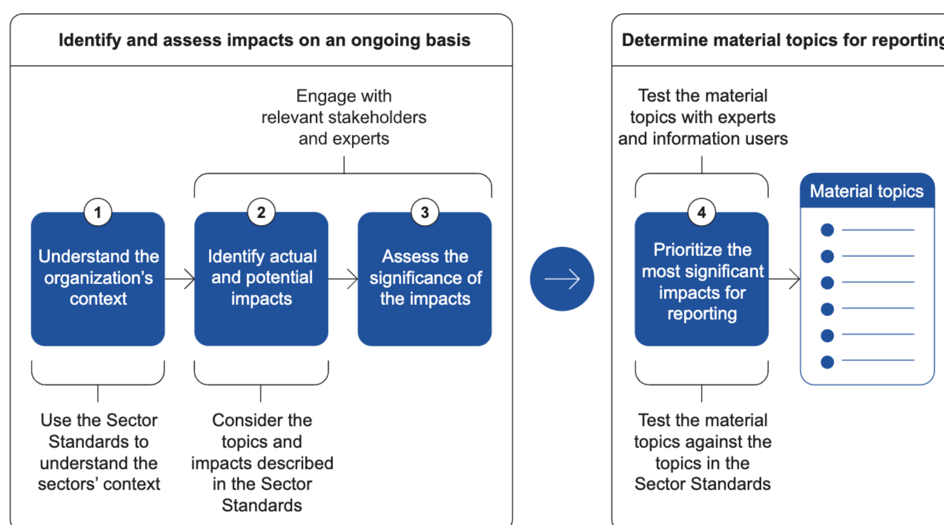

Figure 2.4: Process to determine material topics

2.4 SASB Method

The Sustainability Accounting Standards Board (SASB) [13] facilitates communication between businesses and investors regarding the financial effects of sustainability. SASB Standards help companies globally to recognize, handle, and convey financially material sustainability details to investors. The SASB Standards define the sustainability-related risks and opportunities that could impact an entity's cash flows, access to finance, and cost of capital over different time frames. They also highlight the disclosure topics and metrics that are valuable for investors. These standards are tailored to specific industries and are crafted to be beneficial for investment decisions and economical for businesses. They are formulated through a process that relies on evidence and input from the market. A company's effects on its stakeholders can create both risks and opportunities for the organization, influencing its financial performance and long-term value. Investors are showing a growing interest in sustainability information for this reason. SASB emphasizes the relationship between businesses and investors, the financial effects of sustainability, and how sustainability challenges can either enhance or diminish a company's value. SASB Standards assists organizations in effectively communicating with investors about performance on industry-specific sustainability concerns that are most relevant to risk, return, and long-term enterprise value. SASB's industry-specific standards by emphasizing specific challenges that are expected to be financially material for a company in that sector, identify sustainability-related risks and opportunities that might impact a company's financial health, operational efficiency, and risk exposure. These factors collectively influence the present and future market worth of a company. And, each set of standards complements each other instead of replacing one another.

What sets SASB Standards apart [14]?

- SASB standards reveal data concerning sustainability-related risks and opportunities that are likely to aid investors in making decisions.
- SASB standards are tailored to specific industries because these risks and opportunities differ across sectors.
- SASB standards aim to be economical for companies to implement.
- SASB standards are formulated through an evidence-based and market-informed process, akin to the development of financial accounting standards.
- SASB standards guide preparers towards ISSB implementation.

2.4.1 SASB Approach to Materiality

Materiality Application: SASB's materiality approach is grounded in a financially-focused definition that is widely recognized by global capital markets. The SASB Standards pinpoint sustainability issues that are likely to affect the financial performance and long-term worth of a typical company in an industry. SASB's criteria for including an issue in the Standards necessitates proof of investor interest and financial impact [15]. SASB Standards cover disclosure subjects in five sustainability dimensions: environmental, social, human capital, business model and innovation, and leadership and governance.

SASB Standards aim to standardize disclosure for the sustainability concerns that are most important to investor decision-making across 77 industries.

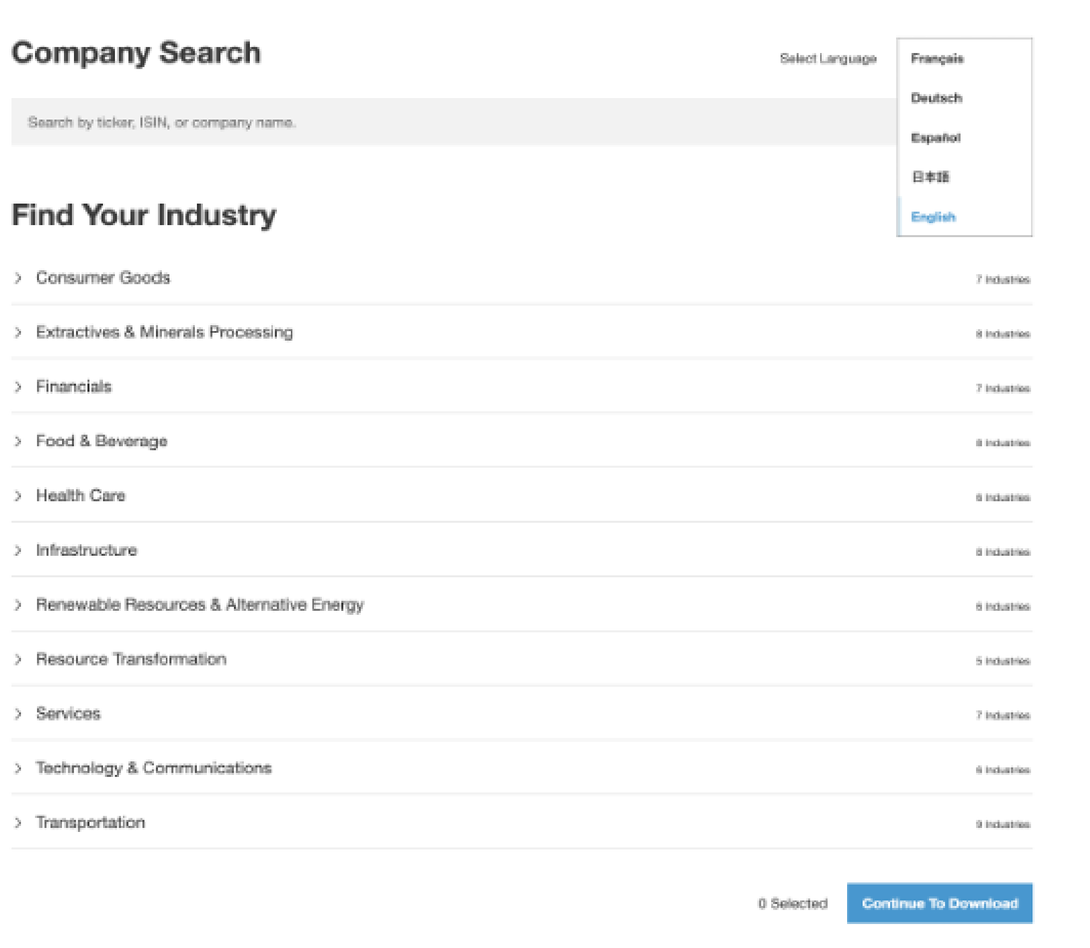

Figure 2.5: SASB Standards for 77 industries throughout 11 sectors

The fastest way to look through and compare the SASB Standards is to use the Materiality Finder

[16]. Anyone can use the Materiality Finder and the SASB Standards for free.

How the materiality finder can be navigated: the fastest way to find SASB Disclosure Topics as shown in figure 2.5 for an industry is provided by the Materiality Finder [16]; All the topics in a SASB standard can easily be seen; Which sustainability issues do and don't appear in a SASB Standard can quickly be identified; Industries can be picked to be viewed side-by-side; A search can be conducted by industry, or a search can be conducted for public companies; Any of the sustainability issues in one or more industries are highlighted [17].

2.5 IFRS Method

The **International Financial Reporting Standards (IFRS)** [18] foundation emerged with the belief that better information results in better decision-making. The foundation's purpose is to supply precise information to individuals, thereby boosting their economic and investment decisions, by formulating high-quality IFRS Standards. These standards are designed to increase transparency, accountability, and efficiency worldwide in financial markets, ultimately aiming to foster trust, encourage growth, and ensure long-term financial stability across the global economy.

IFRS Accounting: [19] Ever since its establishment in 2001, the IFRS Foundation has revolutionized the worldwide financial information scene through the implementation of IFRS Accounting Standards created by the **International Accounting Standards Board (IASB)**. The Standards are now considered the universal language of financial statements, relied upon by investors globally and required for use in over 140 jurisdictions. We are consistently enhancing and refining the Standards.

IFRS Sustainability: [20] In 2021, the IFRS Foundation established the **International Sustainability Standards Board (ISSB)** to address the demand for reliable and comparable sustainability data for economic and investment purposes. The ISSB works in conjunction with the IASB. The ISSB is dedicated to developing IFRS Sustainability Disclosure Standards with the aim of providing a comprehensive set of sustainability disclosures for financial markets worldwide. IFRS Sustainability Disclosure has 2 main standards: **IFRS S1** [21] : General Requirements for Disclosure of Sustainability-related Financial Information, **IFRS S2** [22]: Climate-related Disclosures.

These Standards require entities to disclose details regarding all sustainability-related risks and opportunities and climate-related risks and opportunities that may impact the entity's cash flows, access to finance, or cost of capital in the short, medium, or long term.

IFRS Accounting Standards and IFRS Sustainability Disclosure Standards are created through a comprehensive and transparent due process. The two boards guarantee that their work is interconnected to successfully integrate the Standards, enabling companies to align their sustainability disclosures with

the financial accounts. The IASB and ISSB collaborate to enhance integrated reporting and management commentary principles.

2.5.1 IFRS Approach to Materiality

In October 2018, the International Accounting Standards Board (IASB) refined the materiality concept within IFRS by amending IAS 1 and IAS 8. These amendments clarified the definition of materiality to ensure consistency across IFRS Standards and related publications. The updated definition emphasizes the importance of material information in the context of influencing the economic decisions of users of financial statements. By aligning the definitions used across the standards, the IASB aims to improve the decision-usefulness of financial reporting, ensuring that entities provide financial information that is genuinely impactful to stakeholders' decision-making processes [23].

IAS 1, known as "Presentation of Financial Statements," [24] establishes the basic guidelines for the format and presentation criteria of general-purpose financial statements. This standard attempts to guarantee comparability with both the entity's financial statements from earlier periods and with the financial statements of other businesses. The document sets out general criteria for how financial statements should be presented, outlines the format they should follow, and specifies the minimum content they must have. Key concepts involve adhering to fair presentation and compliance with IFRS, using the going concern basis of accounting, applying the accrual basis of accounting, and recognizing the significance of materiality and aggregation in financial reporting.

IAS 8, "Accounting Policies, Changes in Accounting Estimates and Errors," [25] offers instructions on choosing and implementing accounting rules, as well as on identifying and rectifying errors. It explains the procedures for managing alterations in accounting estimates and underscores the need of maintaining uniformity and precision in financial statements. This standard guarantees that financial statements accurately represent the genuine economic occurrences of a business, hence improving their reliability and significance for decision-making.

The revised definition of material is: **IAS 1** defines **materiality** as information is material if omitting, misstating or obscuring it could reasonably be expected to influence decisions that the primary users of general purpose financial statements make on the basis of those financial statements, which provide financial information about a specific reporting entity [26].

2.6 IIRC Method

The **International Integrated Reporting Council (IIRC)** [27] was established in 2010 through a joint initiative involving businesses, investors, policymakers, accountants, and civil society on a global scale.

The governance of the IIRC is overseen by its Board of Directors, which provides strategic, financial, and operational guidance to the organization, including appointing members to the International Integrated Reporting Framework Board. This board plays a critical role in recommending updates to the reporting framework. In 2021, the IIRC collaborated with the SASB Foundation to create the Value Reporting Foundation (VRF), with the goal of improving global reporting standards. This merger led to the establishment of a cohesive board in charge of both the strategic direction and operational oversight of the newly created entity.

The International Integrated Reporting Framework, together with its Integrated Thinking Principles, is widely acknowledged in 75 countries for encouraging comprehensive communication on how organizations generate, preserve, or diminish value. This framework prioritizes the strategic distribution of resources to promote financial stability and encourage sustainable growth. The goal is to improve the quality and availability of financial information, standardize corporate reporting practices and strengthen accountability in all forms of capital. It also facilitates decision-making processes that enhance value creation in the short, medium, and long term, overseen by the IFRS Foundation. The principles-based approach encourages organizations to embrace integrated reporting, connecting financial performance with sustainability initiatives to offer a comprehensive perspective of their impact and value creation over time [28].

2.6.1 IIRC Approach to materiality

The materiality concept [29] within the IIRC framework highlights the significance of integrated reporting in explaining how organizations generate value over time, with a focus on important issues to improve decision-making. Emphasizing the importance for organizations to fully understand and clearly define their value creation process, taking into account internal and external factors, prior to determining report content. Discussing materiality in this context requires pinpointing key issues that significantly affect an organization's ability to create value over time. The goal is to generate meaningful reports that address essential issues, eliminate non-essential information, and provide clear, easily understandable information. The approach enables critical evaluation by boards and management of trends and factors that may impact the organization's direction, fostering integrated thinking and decision-making in line with value creation. The framework adeptly addresses the challenges as presented in figure 2.6 by different materiality definitions in various reporting standards, highlighting the importance of context, purpose, audience, and scope in defining materiality to ensure reporting practices are in line with the organization's value creation narrative [30].

Materiality Concept in IIRC: A topic is material if it substantively affects the organization's ability to create value over the short, medium and long term [30].

	Financial reporting			
	Financial statements	Narrative report*	Sustainability reporting	Integrated reporting
Purpose	Communicate financial performance, position and cash flows in a specific reporting period	Provide context for financial statements and forward-looking information through the eyes of management	Communicate the entity's broader social and environmental impacts, strategies and goals	Explain to providers of financial capital how value is created over time
Audience	Current and prospective investors, lenders and other creditors	Current and prospective investors, lenders and other creditors	Investors (when including sustainability data in investor-focused communications) or multi-stakeholder (when preparing a stand-alone sustainability report)	Providers of financial capital. Others interested in the organization's ability to create value will also benefit
Scope	Information about: • Recognized assets • Liabilities • Equity • Income • Expenses • Changes in equity • Cash flows	• Risk exposure • Risk management strategies and the effectiveness of those strategies • Effect of beyond financial statement factors on operations and financial statement performance	Significant impacts in the following performance areas: • Economic • Environmental • Social, including labour practices, human rights and broader societal influences • Governance	Content Elements: • Organizational overview and external environment • Governance • Business model • Risks and opportunities • Strategy and resource allocation • Performance • Outlook • Basis of preparation and presentation

Figure 2.6: Comparison of common business reporting standards

Determining Materiality: Materiality determination in the International Integrated Reporting Council (IIRC) framework involves a strategic approach where organizations evaluate risks, opportu-

nities, and potential outcomes that have a significant impact on their value creation over time, going beyond traditional financial metrics. This systematic approach shown in figure 2.7 involves defining materiality parameters, assessing significant issues based on their influence on strategy, governance, and performance, and then determining the report's scope to effectively convey the organization's value creation process [30]. This strategy is in line with overall business objectives and caters to stakeholder concerns by highlighting the significance of comprehending and conveying the relationships among different operational and financial elements.

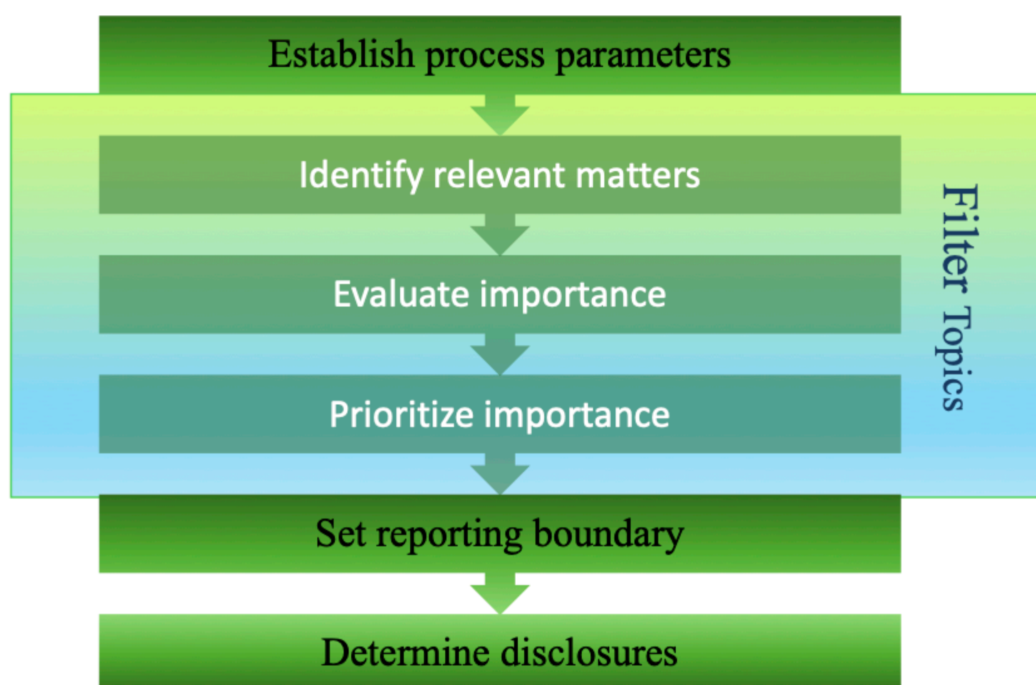

Figure 2.7: Developing report content

Establishing the process parameters: The initial phase involves setting its boundaries, distinct from determining the specific disclosures. This foundational step, not explicitly outlined but inherently necessary within the IR Framework, requires clarity on the process's scope. It begins with analyzing the financial entity's activities, including control or influence over subsidiaries, joint ventures, and investments. By understanding the entity's operational impacts and relationships (with suppliers, partners, communities, etc.), organizations can better identify value-creating inputs, activities, and outputs. This comprehensive approach extends beyond conventional financial reporting to encompass broader value influences, urging consideration of supply chain impacts, product lifecycle, and consumer value in the materiality assessment [30].

Filtering topics: The second step involves a detailed assessment to ensure the report focuses on the

most critical topics. This phase requires organizations to first identify which issues could significantly impact their value creation. Next, these identified matters are evaluated for their significance in affecting the organization's strategic, governance, performance, or future outlook aspects. Finally, the organization prioritizes these issues, determining which ones are most crucial for stakeholders to understand the entity's value creation journey. This methodical approach ensures that reporting is comprehensive, focusing on matters that truly matter to value creation and stakeholder interests [30].

- **Identifying relevant matters:** This stage involves identifying key factors that impact an organization's potential to create value. This entails evaluating their influence on strategy, governance, performance, and future outlook. Matters discussed by governance bodies, reflecting stakeholder perspectives, are considered highly relevant. This stage involves addressing issues that may appear controllable in the short term but could become substantial challenges if neglected.The dynamic nature of identifying relevant matters requires continuous engagement with changing stakeholder expectations and aligning them with strategic objectives. Comparisons with peers and clear communication about stakeholder significance and materiality judgments are crucial for this understanding.
- **Evaluating the importance of relevant matters:** To evaluate the significance of relevant matters, the process starts by discerning if these matters might influence the organization's capacity for value creation, taking into account their potential impact on strategic, governance, performance, or future aspects. This evaluation encompasses both the magnitude of the effect and its probability of occurrence, considering both quantitative and qualitative aspects from various perspectives such as financial, operational, strategic, reputational, and regulatory. The essence of this step is to prioritize matters based on their potential to significantly affect value creation, which might require both objective and subjective judgment, especially when dealing with uncertainties or long-term effects.
- **Prioritizing relevant matter:** Prioritizing relevant matters is essential after evaluating their importance to the organization's value creation ability. This step involves ranking issues based on their significance, focusing on those with the most substantial impact. The International <IR> Framework guides this prioritization, emphasizing the need for management and the board to rigorously assess and rank matters to highlight critical value-creating factors. This disciplined analysis aids in making informed decisions and ensures the integrated report is concise and focuses on material issues, facilitating better stakeholder understanding.

Setting the reporting boundary: For the third step in determining materiality, the concept is to establish a reporting boundary that encompasses both the financial reporting entity and any external risks, opportunities, and outcomes from other entities or stakeholders that significantly impact the organization's value creation capability. This involves considering the financial reporting entity as the core of the reporting boundary, including all subsidiaries, joint ventures, and associates under its control or significant influence. It also entails extending the boundary to include external factors that materially affect the organization's ability to generate value, which may involve re-evaluating the boundary based

on stakeholder engagement and a review of disclosures. This process ensures the integrated report reflects a comprehensive view of the organization's value creation process.

Determining disclosures: The final step in the materiality process focuses on creating report content that clearly communicates key material matters and how they relate to value creation. This step emphasizes the value of transparency in the materiality determination process, highlighting management quality and the integration of stakeholder engagement in business practices. Integrated reports should not only detail what matters are included but also explain the process of how these matters were identified, evaluated, and selected for inclusion, emphasizing the roles of governance and key personnel in this process. This approach ensures that reports provide insights into both the outcomes and the underlying processes that contribute to an organization's ability to generate value over time.

2.7 ESRS Method

The European Sustainability Reporting Standards (ESRS) aim to provide a comprehensive outline of the sustainability data that companies are required to disclose in accordance with the directives from the EU Parliament and Council directive. Adhering to ESRS is not exempt from other legal responsibilities, but it requires disclosures about the significant environmental, social, and governance (ESG) impacts, risks, and opportunities. ESRS requires reporting on material sustainability issues while allowing businesses to omit non-material ESG topics. This framework helps stakeholders understand an organization's ESG contributions and their effects on its development, effectiveness, and reputation. It also provides details on ESRS's framework, core principles, and the necessary steps for creating and presenting sustainability data in accordance with the directive.

The ESRS framework comprises three types of standards to ensure comprehensive sustainability reporting across different dimensions of business operations:

Cross-cutting Standards: These include ESRS 1 and ESRS 2, which set the foundation for sustainability reporting by detailing general requirements, disclosure norms, and overarching principles applicable to all sectors. They guide how organizations should structure their sustainability reports, ensuring consistency and comparability across industries.

Topical Standards: Focused on specific sustainability topics, these standards are divided into environmental, social, and governance categories. They delve into precise areas of sustainability, outlining detailed reporting requirements for each topic and its sub-categories, ensuring that organisations address a wide range of sustainability issues relevant to their operations.

Sector-specific Standards: Tailored to particular industries, these standards recognize the unique impact and sustainability challenges of different sectors. While the framework is still under development,

these standards aim to provide industry-specific guidance, complementing the cross-cutting and topical standards to ensure a thorough representation of sustainability performance.

Together, these standards aim to standardize sustainability reporting, making it easier for stakeholders to understand an organization's sustainability impacts, risks, and opportunities comprehensively.

The European Parliament and the Council have successfully negotiated a two-year delay in the implementation of the European Sustainability Reporting Standards (ESRS) for specific sectors and certain undertakings outside the EU. This adjustment effectively modifies the Corporate Sustainability Reporting Directive (CSRD). This development is noteworthy because it grants companies additional time to adapt to the forthcoming ESRS, which are now set to be implemented in June 2026, marking a two-year extension from the initially planned date.

2.7.1 ESRS Approach to Materiality

The **European Sustainability Reporting Standards (ESRS)** [31] emphasize a comprehensive sustainability reporting process through the "double materiality" principle, encompassing both the impacts of an organization on sustainability matters (impact materiality) and the effects of materiality. The ESRS mandates full disclosure of this materiality assessment process, including methodologies, assumptions, and the rationale behind decisions, ensuring alignment with both internal and external sustainability management practices. When organizations assess their sustainability impacts, risks, and opportunities, they may prioritize them for management. However, for transparency in reporting, they must disclose all material aspects, whether addressed by actions or plans. The ESRS framework requires a nuanced judgment to decide on materiality, without setting hard thresholds. This judgment is crucial when evidence on the materiality of impacts, risks, or opportunities is not clear-cut. Transparency in how criteria are applied, thresholds are set, and conclusions are reached is mandated, ensuring accountability in the materiality assessment process.

The ESRS materiality assessment emphasizes rigorous evaluation and disclosure of sustainability-related information, grounded in the concept of double materiality. This involves scrutinizing an organization's sustainability impacts, risks, and opportunities, to determine their relevance for reporting. Undertakings must identify and report on all material aspects across their operations and value chain, regardless of current action plans. The process demands judgment to set materiality thresholds and transparency in how these decisions are made. Outcomes and methodologies used in the materiality assessment must be disclosed, ensuring consistency across reporting and alignment with broader sustainability goals and legal requirements. This approach ensures comprehensive coverage of material issues, reflecting both impact on sustainability matters and financial implications. Sustainability matters on the organization (financial materiality). This dual approach ensures transparency in reporting all

significant sustainability-related impacts, risks, and opportunities within and beyond an organization's direct operations, including its value chain. Organizations must undertake a materiality assessment to identify and disclose these elements, guided by specific criteria but without predetermined thresholds, necessitating judgment in determining [31].

Key concepts for the materiality assessment: The materiality assessment process involves a detailed evaluation across various levels of sustainability matters, including topics, sub-topics, and sub-sub-topics. Its primary goal is to pinpoint the significant impacts, risks, and opportunities for reporting. This entails recognizing when a matter becomes material due to its substantial impacts or financial effects, guiding the type of information disclosed. The process tightly connects material factors with the organization's strategy and business model, emphasizing the need to disclose material implications, risks, and opportunities. The undertaking is tasked with disclosing all material matters, using aggregation only when it enhances relevance without obscuring crucial information. This comprehensive approach balances both impact and financial materiality, necessitating a careful identification of material matters from multiple perspectives. Once identified, the material matters are then elaborated on using specific disclosure requirements from the ESRS. Additionally, if certain matters are deemed material but aren't adequately covered by existing standards, entity-specific disclosures are mandated. The assessment may start from either the impacts, risks, and opportunities or directly from the sustainability matters, leading to a detailed disclosure at the matter level aligned with ESRS requirements [32].

The criteria for determining material information are based on the materiality assessment, applied at the disclosure or datapoint level, with a focus on relevance and decision-usefulness. Assessing the significance of information regarding depicted matters and its usefulness for decision-making by individuals interested in financial aspects or the impacts of the undertaking. When matters are materially impactful and financially relevant, the information meets the needs of investors as well as those interested in environmental or social effects. Furthermore, material information must meet standards of relevance, faithful representation, comparability, verifiability, and understandability, with explicit explanations on material information determination and threshold application required [33].

Performing a materiality assessment: The materiality assessment in the ESRS framework is a flexible process tailored to each organization's unique context, including its economic activities, structure, and value chains. It involves considering all relevant sustainability matters from a double materiality perspective, integrating both impact and financial materiality. The process typically begins with identifying material impacts, which then inform the financial materiality assessment [34]. The four illustrative steps shown in figure 2.8 for conducting a materiality assessment are [32]:

- understanding the context;
- identification of the actual and potential impacts, risks, and opportunities related to sustainability matters;

- assessment and determination of the material impacts, risks, and opportunities related to sustainability matters;
- reporting.

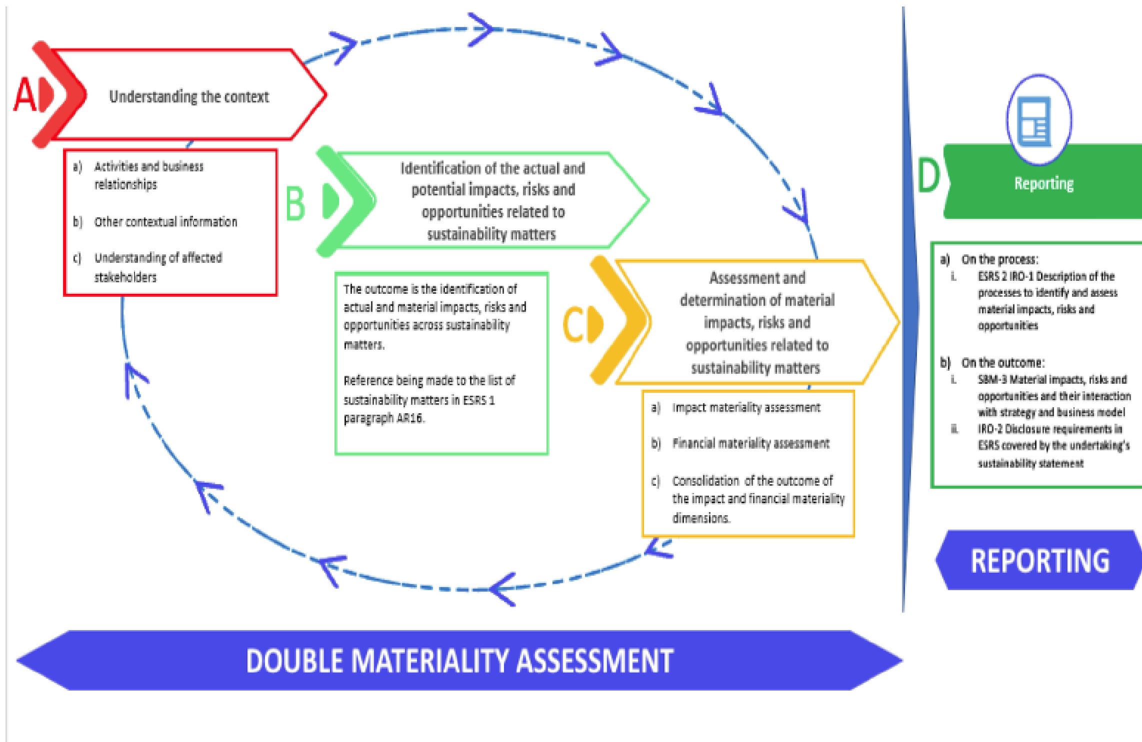

Figure 2.8: Example of a materiality assessment process

3 Comparison & Discussion

The global trend towards sustainability reporting is rapidly growing, becoming a crucial requirement for large and listed companies worldwide. Various players have distinct roles in the realm of sustainability information, such as sustainability and financial standard-setters like GRI, SASB, IIRC, IFRS for-profit data aggregators, and ESG rating providers. Understanding how these various players contribute to a comprehensive ESG information ecosystem can be quite challenging. Every stakeholder in the ecosystem needs access to consistent and trustworthy data. The world of sustainability disclosure may seem overwhelming. In this section, sets of standards will be compared to each other with practical examples.

3.1 GRI Approach

The utilization of materiality: The GRI reporting framework recommends that organizations choose report topics that highlight their most substantial economic, environmental, and social impacts, with the viewpoint of their stakeholders properly considered. These topics range from issues with direct financial implications to those affecting broader societal and environmental concerns. Such concerns comprise emissions, human rights, and supply chain ethics, among others [35].

Characteristics and extent of the disclosure: GRI provides organizations with a framework consistent with reporting principles on a variety of sustainability aspects. It incorporates subject-specific standards that address 34 critical sustainability issues in addition to universal standards for fundamental organizational details. In addition to providing recommended and obligatory disclosures, these stan-

dards also offer reporting guidance. These insights provide a comprehensive analysis, incorporating both present and past data, and have broad applicability across all industries. GRI is also in the process of developing sector-specific standards for industries that have substantial impacts in order to improve the comparability of reports through the specification of sector-specific impact areas [36].

Interests of the audience and stakeholders: The primary function of the GRI Standards is to effectively convey the effects of sustainability to a wide-ranging audience, encompassing corporate entities, investors, employees, civil society, and governmental entities. The reporting framework established by these guidelines is intended to be universally applicable, encompassing diverse sectors and organizational structures. Their objective is to respond to the concerns and interests of all stakeholders through the provision of a structured approach for disclosing an organization's sustainability performance. This framework guarantees transparency and accountability in the reporting of information regarding economic, environmental, and social matters [37].

Standard-setting procedure: The Global Sustainability Standards Board (GSSB), an independent organization supported by the GRI Secretariat, is responsible for developing the GRI Standards. The GSSB operates for the benefit of the public, and its procedures are monitored by the Due Process Oversight Committee (DPOC). By employing a consensus-based methodology, standards are formulated by diverse, expert working groups that ensure the representation of a broad range of stakeholders. Transparency characterizes development processes, which includes public consultations for proposals. Standards that have been finalized are disseminated across various languages and are in accordance with fundamental international standards of responsible business conduct [38].

3.2 SASB Approach

The utilization of materiality: The SASB Standards prioritize the financial materiality of sustainability subjects, identifying those that have the potential to influence the financial state or performance of firms operating in the same industry. SASB addresses sustainability across five dimensions—environmental, social, and human capital, business model and innovation, leadership and governance—by mandating both investor interest and evidence of financial impact for inclusion. This increases transparency and informs investors of material risks and opportunities [39].

Characteristics and extent of the disclosure: SASB establishes reporting standards for sustainability in 77 industries and 11 sectors, identifying sustainability issues that have the potential to substantially impact a company's value and financial performance. Every industry standard establishes around six disclosure topics and thirteen reporting metrics, with approximately seventy-five percent of these metrics emphasizing quantitative data. By incorporating activity metrics and technical protocols for data standardization, these standards intend to supply financial capital providers with comparable, consistent,

and dependable data for the purpose of making investment and stewardship decisions [40].

Interests of the audience and stakeholders: Securing financial investor-company communication is a priority for the Sustainability Accounting Standards Board (SASB). Its primary objective is to give investors vital information that enables them to make well-informed decisions, with a special focus on the financial dimensions of sustainability [41].

Standard-setting procedure: The process by which the SASB established standards is a rigorous, evidence-based, and inclusive methodology designed to identify sustainability issues that have the potential to significantly impact the financial performance of a company. An extensive array of viewpoints is ensured by the Standards Advisory Group (SAG), which comprises approximately 300 members. This group comprises corporate, investor, and expert representatives. The procedure, overseen by an independent Standards Board and evaluated for adherence to due process and outcomes prioritizes transparency and involvement of the public. To reduce reporting burdens, SASB seeks harmonization with existing metrics and bases its standards development on references to more than two hundred organizations [42].

3.3 IFRS Approach

The utilization of materiality: Information is deemed material if its omission, misrepresentation, or obscurity could reasonably be expected to influence the decisions made by the primary users of general-purpose financial statements, based on the financial information about a specific reporting entity. This definition is part of the amendments to IAS 1 and IAS 8 issued in October 2018 by the International Accounting Standards Board (IASB), which sought to refine the definition of materiality to improve clarity and ensure consistency across IFRS Standards [43]. The amendments aim to:

- Align the wording of the materiality definition across IFRS Standards and other publications, making minor adjustments to enhance understanding;
- Incorporate certain aspects of IAS 1 Presentation of Financial Statements into the definition to increase their visibility;
- larify the accompanying explanation of the definition of material.

These changes are designed to aid entities in making more accurate materiality judgments without substantially altering existing requirements. The new definition emphasizes the potential influence on decision-making by primary users, addressing past concerns about entities potentially including immaterial information in financial statements. Furthermore, the amendments tackled specific concerns by modifying phrases like "could influence" to "could reasonably be expected to influence," incorporating the concept of "obscuring information" within the materiality definition, and clarifying that

the term "users" refers to the primary users of general-purpose financial statements as described in the Conceptual Framework. This harmonization and clarification process aims at enhancing the precision and usefulness of financial reporting, fostering greater transparency and comparability across different reports and entities.

Characteristics and extent of the disclosure: The IFRS Standards for sustainability reporting, specifically the S1 and S2 standards, aimed at providing high-quality, transparent, and comparable information regarding sustainability-related risks and opportunities. These standards, developed by the IASB (International Accounting Standards Board), facilitate disclosures on how sustainability matters, including climate-related risks, may impact a reporting entity's financial performance, value, and strategic decision-making over the short, medium, and long term. They are structured to give investors and other financial capital providers the necessary information to make informed decisions. The scope of disclosures under these standards is extensive, covering governance, strategy, risk management, and metrics and targets. These disclosures are guided by principles such as materiality, fair presentation, and the necessity for information to be decision-useful for investors. The disclosures should reflect the entity's assessment of sustainability risks and opportunities, grounded in all reasonable and supportable information available without undue cost or effort. The guidance suggests utilizing various data sources, including those used for financial statements preparation, while also emphasizing the balance between the cost of obtaining information and the benefits to users. The disclosures required under IFRS S1 and S2 are aligned with the framework established by the Task Force on Climate-related Financial Disclosures (TCFD), ensuring a standardized approach across different jurisdictions. This alignment facilitates comparability and consistency, enabling stakeholders to understand and assess the sustainability performance and risks of reporting entities more effectively [44].

Interests of the audience and stakeholders: These standards, designed for utilization by companies and other entities responsible for reporting, aim to establish financial reporting frameworks that are of high-quality, easily understandable, enforceable, and universally acknowledged. More precisely, this refers to the development, purpose, and application of these guidelines, providing resources for comprehending and implementing them efficiently in the context of financial reporting [45].

Standard-setting procedure: The IFRS Foundation defines an elaborate procedure for setting IFRS Standards, with the objective of ensuring high quality, transparency, and worldwide recognition. This process, guided by the values of transparency, comprehensive and equitable consultation, and accountability, entails public deliberations and consultations. The operations of the International Accounting Standards Board (IASB) and the IFRS Interpretations Committee are carried out in a public manner, permitting stakeholders from all over the world to examine and provide input. This ensures that the standards are formulated from a variety of global perspectives. Participant opinions are solicited during public consultation phases, and every contribution is accessible online. The IASB and the

Interpretations Committee conduct audits and presentations that clarify the reasoning behind decisions, the potential consequences, and the cost-benefit ratio. This helps increase confidence and credibility in the standards. In excess of 140 jurisdictions, IFRS Accounting Standards function as a mandatory accounting language on a global scale. They are developed with the assistance of technical personnel and advisory bodies by the IASB. In the same way, the IFRS Sustainability Disclosure Standards, which were established by the International Sustainability Standards Board (ISSB), seek to facilitate communication between investors and companies by providing disclosures of a global nature that are practical for making informed decisions regarding sustainability. As with the IASB, the ISSB is staffed with technical experts and advisory bodies to ensure that the standards satisfy the information requirements of investors [46].

3.4 IIRC Approach

The utilization of materiality: The International Integrated Reporting Council (IIRC) priorities a comprehensive approach to materiality that takes into account not only financial aspects but also environmental, social, and governance (ESG) factors. The objective of this strategy is to discover topics that have the potential to impact the decision-making process of multiple stakeholders, not just investors. The framework developed by IIRC promotes the evaluation of both the positive and negative impacts of an organization's actions on the creation of value over the short, medium, and long term periods. In the context of the IIRC, materiality is a dynamic concept that requires continuous assessment to accurately represent changing external circumstances and the expectations of stakeholders [47].

Characteristics and extent of the disclosure: The International Integrated Reporting Council (IIRC) framework places significant emphasis on the type and scope of disclosure. It advocates for comprehensive reporting that combines both financial and non-financial data in order to provide a complete picture of an organization's performance and its future outlook. This encompasses the organization's prospects, governance, performance, and strategy in relation to its external environment and its ability to create value in the short, medium, and long term. The IIRC promotes disclosures that are relevant, concise, reliable, and consistent with the intention of informing a wide array of stakeholders—including investors, employees, customers, and the general public. The goal is to support sustainable decision-making and enhance accountability and stewardship [48].

Interests of the audience and stakeholders: The primary focus of the Integrated Reporting Council (IIRC) is to address the interests and concerns of financial capital providers. However, it is acknowledged that other stakeholders who are interested in the organization's capacity to generate value will also find the integrated report beneficial. This particular viewpoint places significant emphasis on the communication of an organization's value creation process, specifically to financial capital providers. However, it also recognizes the wider interest of numerous stakeholders in comprehending

value creation [49].

Standard-setting procedure: The IIRC's approach to standard-setting [50] involves a collaborative, stakeholder-inclusive process aimed at enhancing integrated reporting that encapsulates an organization's value creation. This methodology includes multiple key steps:

- Initial Planning and Agenda Setting: Identifying crucial areas for guidance or standards, reflecting on the broader reporting landscape and stakeholder input to target essential developments that accurately represent value creation.
- Formation of Working Groups: Assembling groups of experts and stakeholder representatives to craft initial standards or modifications, leveraging their expertise and collected feedback.
- Public Consultation: Subjecting drafts to public scrutiny for a broader range of feedback, enhancing transparency, and ensuring the standards' relevance and applicability.
- Review and Finalization: Integrating received feedback into the final standards, which then undergo review by the IIRC's governing bodies to assure thoroughness and adherence to due process.
- Release and Implementation Guidance: Publishing the approved standards globally, supported by resources to facilitate implementation, aiming for consistent and comprehensive reporting practices.
- Ongoing Evaluation and Improvement: Continually assessing the application of these standards and seeking feedback for potential updates to keep them relevant and effective amidst evolving business and environmental contexts.

This structured process demonstrates the IIRC's dedication to developing standards that support organizations in reporting their strategy, governance, performance, and outlook, reflecting on their impact within the commercial, social, and environmental spheres, fostering a more integrated and efficient corporate reporting framework [50].

3.5 ESRS Approach

The utilization of materiality: The European Sustainability Reporting Standards (ESRS) implement materiality in a manner that emphasizes double materiality, which consists of considering not only the financial ramifications of an organization's environmental and social impacts, but also the financial consequences of those impacts on the organization. By adopting this dual viewpoint, organizations are able to guarantee that their reporting encompasses not only the impact of sustainability issues on their financial performance but also the organization's influence on external factors. This process aids in the identification of significant subjects that require disclosure. The evaluation takes into account present and potential future impacts, with a particular focus on the involvement of stakeholders and

the applicability of disclosed data to a diverse range of individuals and groups, such as investors and the general public [51].

Characteristics and extent of the disclosure: The ESRS framework requires organizations to provide disclosures that include both qualitative and quantitative information. These disclosures aim to provide insights into the organization's sustainability practices, performance, and impact. The disclosure requirements mandated by ESRS are organized based on distinct sustainability topics with the aim of capturing the organization's most substantial influences on the environment and society, as well as the sustainability risks and opportunities it encounters. The identification of these topics is determined through a materiality assessment process that takes into account their financial implications for the firm as well as their broader societal or environmental impact. This dual perspective guarantees that the disclosure provided is relevant to both financial stakeholders and other individuals who are interested in comprehending the organization's sustainability impact. In addition, ESRS disclosures have been designed to be forward-looking, providing stakeholders insights into the organization's sustainability strategy, objectives, and progress in achieving these objectives. This forward-looking strategy is enhanced by a retrospective analysis that evaluates previous achievements, allowing stakeholders to assess progress over a period of time [48].

Interests of the audience and stakeholders: The European Sustainability Reporting Standards (ESRS) require extensive sustainability disclosures that meet the interests and information requirements of a wide range of stakeholders. This diverse audience includes several stakeholders like investors, employees, customers, regulatory authorities, civil society organizations, and the general public. ESRS ensures that organizations report on environmental, social, and governance (ESG) concerns in a way that accurately represents their importance to various stakeholder groups by considering both financial and non-financial effects. The guidelines aim to offer stakeholders comprehensive information regarding an organization's sustainability strategy, practices, impacts, and performance. Transparency enables stakeholders to comprehend how firms handle their ESG concerns, how these concerns impact the organization's long-term viability and financial performance, and how they contribute to wider societal and environmental objectives. ESRS disclosures provide vital information for investors and financial capital providers, helping them evaluate the sustainability risks and opportunities that companies face. This information can possibly impact investment decisions. These disclosures offer employees, customers, and society at large a comprehensive understanding of the organization's dedication to sustainability, its influence on the environment and communities, and its endeavors in achieving sustainable development. ESRS seeks to fulfill the information requirements of various stakeholders by advocating for transparency, accountability, and comparability in sustainability reporting. This, in turn, enables well-informed decision-making and encourages dialogue between organizations and their stakeholders regarding sustainability issues [52].

Standard-setting procedure: The ESRS standard-setting process prioritizes inclusivity and thoroughness by engaging various stakeholders to guarantee that the standards are comprehensive and feasible [53]. Here is a concise summary:

1. Need Identification and Scope Definition: Begins by acknowledging the need for new or revised standards, taking into account sustainable trends, stakeholder input, or legislative changes.
2. Establishment of the Technical Expert Group (TEG): TEGs, which include specialists and individuals with a vested interest, have the task of formulating standards by integrating a diverse array of knowledge and expertise.
3. Stakeholder Engagement and Public Consultation: This crucial stage involves gathering a wide range of perspectives through public engagements, in order to refine the standards and guarantee that they are widely applicable and accepted.
4. Review and Approval: After the consultation, the feedback is included, and the final standard is examined and authorized by the ESRS regulatory body to guarantee adherence to set protocols and objectives.
5. Publication and Implementation Support: Once standards are approved, they are made available to the public along with further assistance to assist businesses in adopting them. This ensures that organizations can successfully incorporate the standards into their reporting procedures.
6. Continuous Improvement: The process of continuously evaluating and receiving input from stakeholders is essential for upgrading standards to remain relevant in the face of changing sustainability problems.

This efficient procedure ensures that ESRS standards continue to be effective and accurately address the current requirements for sustainability reporting, promoting openness and responsibility [53].

4
Standards Integration

4.1 Integration of GRI and SASB Standards

The GRI and SASB standards provide distinct approaches on materiality in sustainability reporting, designed to meet the needs of various stakeholders and reporting objectives.

The **GRI** framework focuses on a wide variety of impacts, prompting organizations to report on various subjects that influence the economy, environment, and society, including human rights consequences. It promotes a holistic perspective, identifying material topics like anti-corruption, health and safety, and environmental impacts such as water usage based on their significant influence on stakeholders and the broader community. This approach includes ongoing involvement of stakeholders and a repetitive process of identifying and evaluating impacts, guaranteeing the inclusiveness and significance of the reported data. **SASB** concentrates on financial materiality by addressing issues that are expected to impact the financial condition or operating performance of enterprises in a particular industry. The tool highlights sustainability topics in five dimensions: environmental, social, human capital, business model and innovation, and leadership and governance, which are crucial for investors' decision-making. SASB offers a simplified method for recognizing and disclosing sustainability issues that directly affect finances, aiding investors in analyzing and comparing companies and sectors. While GRI promotes a holistic view of an organization's impact, SASB narrows the focus to financial relevance, catering specifically to investor interests [54].

Organizations can earn the trust of their stakeholders, particularly investors, through being transpar-

ent. For this reason, it is crucial for businesses and other organizations to provide the data that each stakeholder needs. For such disclosures, GRI and SASB offer standards that are consistent with one another. Both sets of standards are helpful to one another and serve distinct functions. To better serve their target markets, businesses can use either the GRI Standards or the SASB Standards. Disclosures made by organizations in line with both the GRI and SASB criteria are powerful in the eyes of asset owners and managers. In a post-pandemic era, businesses and other reporting entities will be under growing pressure to reveal their sustainability performance, which can impact risks and opportunities both inside and outside of their organization. Reporting based on the GRI and SASB Standards offers a comprehensive level of disclosure that meets the needs of all stakeholders in an organization [55].

4.2 Integration of SASB and IIRC

The merging of the Sustainability Accounting Standards Board (SASB) with the International Integrated Reporting Council (IIRC) in November 2020 resulted in the establishment of the Value Reporting Foundation (VRF). The decision to make this change was motivated by the need for a unified approach to developing standards and the goal of finding a comprehensive reporting solution that can be used worldwide. The merger highlights a dedication to a consolidated reporting system, as stated in their joint "Statement of Intent to Collaborate Towards Comprehensive Corporate Reporting" with CDP, CDSB, and GRI [56].

The combination between SASB and IIRC aims to streamline the field of sustainability reporting by combining SASB's expertise in sustainability disclosure for investors with IIRC's integrated reporting methodology. The objective is not only to expand their global impact by combining SASB's strong position in the US with IIRC's international presence, but also to meet the comprehensive requirements of investors and participants in the capital market by providing a more comprehensive assessment of business performance and future potential. Furthermore, the merger aims to use reporting as a means to improve corporate governance and make well-informed investment decisions. It also aims to comply with GRI standards for more efficient reporting and accelerate progress towards a comprehensive corporate reporting structure. This involves continuous cooperation with CDP, CDSB, and GRI to assist regulatory and standard-setting organizations in sustainable reporting [56].

The Value Reporting Foundation presents itself as a respected international organization that supports the integrated reporting framework and advocates for integrated thinking. It also establishes sustainability disclosure guidelines with the goal of enhancing value generation for businesses. This project represents a substantial advancement towards a consolidated and consistent corporate reporting system, particularly crucial in tackling the difficulties presented by the worldwide pandemic, climate change, and increasing inequality. Capital markets must prioritize sustainability and recognize the value

of intangible assets in order to generate long-term shareholder value and promote a sustainable future [56].

The integration of SASB and IIRC enhances the momentum towards integrated reporting in the corporate reporting ecosystem. The SASB Standards and the Framework are intentionally designed to complement each other, improving communication with investors and providing advantages to a broader range of stakeholders. A primary objective for the Value Reporting Foundation is to align the six capitals of the Framework with the five sustainability characteristics of the SASB Standards. The foundation is dedicated to upholding the concepts of integrated reporting and thinking, which involves considering several forms of capital, and implementing rigorous standard-setting processes. Additionally, the foundation prioritizes disclosures that cater to investor requirements and serve the larger interests of stakeholders. The foundation's dedication to independence and effectiveness is evident in its governance, structure, and culture, which are designed to ensure the integrity and success of the Framework and SASB Standards development processes [57].

5
Case Studies

This section will analyze two renowned companies that utilize an integrated set of standards. It will also address the question of whether using two different ESG frameworks leads to the same conclusion on what is considered material and what is not.

5.1 General Motors, an automaker (USA)

General Motors (GM) is a leader in the automotive sector's transition towards a more sustainable future, having implemented both GRI and SASB Standards and providing comprehensive sustainability reporting. GM, through its more than two decades-long dedication to transparency, has been a pioneer in the implementation and advancement of sustainability standards.General Motors initiated its sustainability reporting endeavors more than two decades ago by incorporating the SASB Standards into its reporting framework in 2018 and implementing the GRI Guidelines in 2000. By being an early adopter, GM not only demonstrated its commitment to sustainability but also established itself as a significant contributor to the advancement of these frameworks. Since 2018, when it transitioned from core to comprehensive reporting in accordance with GRI Standards, GM has generated three reports that utilize both GRI and SASB Standards concurrently. GM's reporting strategy is around actively involving a wide range of stakeholders, including NGOs, government agencies, customers, employees, and investors. The GRI Standards have played a crucial role in organizing GM's reporting in response to the diverse requirements and interests of various groups. Specifically, the investor

community has had a substantial impact on GM's approach to reporting, encouraging the corporation to provide more targeted and specific information in line with the SASB Standards.GM employs a diverse approach to connect with investors, which includes both formal and informal interactions, board reviews, and proactive communication through its sustainability reports. This approach ensures continuous communication with investors, enabling a more profound understanding of environmental, social, and governance (ESG) factors and their implications for GM's strategy obviously, particularly with its transition to electric vehicles.GM employs both GRI and SASB Standards to offer an integrated view on its sustainability performance, effectively connecting sustainability and financial reporting. By adopting this dual-standard approach, GM is able to meet the informational requirements of many stakeholders and effectively communicate a comprehensive account of its sustainability progress. This is achieved by combining qualitative insights with quantitative data. The reporting process at GM is distinguished by a comprehensive cross-functional collaboration, which includes more than 125 subject-matter experts from different divisions. GM's sustainability disclosures are influenced by external inputs, such as investor inquiries, which complement this collaborative effort. The company's dedication to openness and ongoing enhancement is apparent in its proactive response to input from stakeholders and its initiatives to develop environmental, social, and governance (ESG) knowledge throughout the business. GM's sustainability reporting demonstrates a comprehensive evaluation of both financial and ESG (Environmental, Social, and Governance) significance. The company recognizes the changing nature of sustainability issues and aims to tackle both the long-standing and developing concerns that are important to its stakeholders. This strategy highlights GM's acknowledgment of the wider socioeconomic and environmental consequences of its operations and its dedication to ethical business practices [58].

General Motors (GM) utilized a comprehensive materiality analysis to determine the most significant sustainability issues, taking into account both the Global Reporting Initiative (GRI) and the Sustainability Accounting Standards Board (SASB) standards. This analysis considered the broader impact on stakeholders (GRI) as well as the financial importance of these issues (SASB). By employing a dual-framework approach, GM was able to address a broad range of important issues, taking into account the varied interests of its stakeholders and the unique concerns of investors regarding the company's financial and operational performance [59].

Material issues identified through GRI: GM utilized the GRI framework to identify significant concerns that include a wide spectrum of economic, environmental, and social effects. These encompassed several aspects, such as human rights consequences, measures against corruption, policies promoting health and safety, and actions focused on environmental stewardship, specifically water management. GRI's focus on materiality encompasses a broad perspective on the importance of effects on stakeholders and the wider community, promoting a comprehensive understanding of sustainability

[59].

Environmental stewardship: encompasses refuse management, water conservation, and emission reduction.

Social welfare: encompasses human rights, community involvement, labor practices, and consumer safety.

Governance and ethics: encompass regulatory compliance, ethical business practices, and anti-corruption measures.

Material issues identified through SASB: In contrast, the SASB standards enabled GM to identify significant concerns that have clear financial consequences. These issues are classified into five categories: environmental, social, human capital, business model and innovation, and leadership and governance. This approach is in line with SASB's objective to support investors in evaluating and comparing companies based on sustainability criteria that have a significant impact on financial performance [59].

Environmental Dimension: Emphasis is placed on the advancement of electric vehicles (EVs), energy efficiency in manufacturing, and emissions control in vehicles. Social and human capital: emphasizing talent retention, diversity and inclusion, and workforce safety.

Business Model and Innovation: Emphasizing sustainable technology innovation, specifically in the domains of electric vehicles (EVs) and autonomous vehicles.

An Examination of Leadership and Governance: An Analysis of Executive Compensation, Corporate Governance Structures, and Strategic Resilience to Climate-Related Risks.

Commentary on the integration of GRI and SASB material issues: GM's materiality analysis, which used both the GRI and SASB frameworks, displays a complex understanding of materiality that includes a wide range of sustainability consequences as well as specific financial implications. While some of the themes described by both frameworks—such as environmental stewardship and governance—are similar, the issues' focus and depth differ. GRI's broad lens includes a wide range of impacts on stakeholders and the environment, demonstrating a commitment to comprehensive sustainability reporting. In contrast, SASB focuses on challenges with direct financial ramifications, providing investors with clear insights into how sustainability influences GM's financial performance and strategic direction. This dual-framework approach does not always converge on a single set of material issues, but rather complements one another to create a more complete picture of what is relevant to GM. It emphasizes the complexities of sustainability in the automobile industry, as corporations must reconcile wide environmental and social duties with the financial imperatives of shifting to a more sustainable business model, such as electric vehicles. In summary, using both GRI and SASB standards allows GM to express a full and multifaceted understanding of materiality. This strategy guarantees that GM's sustainability reporting is robust, meeting the requirements and concerns of a varied stakeholder group while also delivering targeted information to investors interested in financial materiality. It demonstrates

that, while different ESG frameworks may prioritize different aspects of sustainability, combining them can provide a more comprehensive understanding of a company's material sustainability issues, improving disclosure quality and enabling informed decision-making by all stakeholders.

5.2 Enel Energy, a multinational energy firm (Italy)

Enel, a prominent player in the energy industry, is leading the way in promoting sustainability and transparency by incorporating the reporting standards of the International Integrated Reporting Council (IIRC) and Sustainability Accounting Standards Board (SASB) into its procedures. Enel's strategic approach demonstrates its dedication to promoting a sustainable future and emphasizes its position as a leader in the energy industry's transition towards more responsible and comprehensive sustainability reporting [60].

Enel began its integrated reporting journey by adopting the IIRC framework, demonstrating its comprehensive perspective on creating business value that goes beyond solely focusing on financial performance. Enel's adoption of SASB standards is a major advancement in its commitment to better align its sustainability disclosures with the requirements of investors. This move allows for a transparent, succinct, and comparative understanding of Enel's environmental, social, and governance (ESG) activities and effects [61].

Enel has incorporated the SASB standards into its reporting structure, resulting in the production of several reports that utilize the insights and methodology of both IIRC and SASB simultaneously. Enel's use of a dual-standard approach allows for effective communication of its sustainability strategy, accomplishments, and obstacles. This method provides stakeholders with a thorough and detailed understanding of Enel's ESG performance and the process by which it creates value [62].

Enel's reporting strategy is distinguished by its proactive involvement with a wide range of stakeholders, including non-governmental organizations (NGOs), regulatory agencies, consumers, employees, and especially investors. The corporation acknowledges the crucial influence of the investor community in determining its reporting strategy, emphasizing the requirement for focused and precise information that conforms to the SASB requirements. Enel engages in open and transparent communication with its investors through multiple channels, such as formal presentations, stakeholder consultations, and sustainability reports. This interaction enhances comprehension of ESG factors and their consequences for Enel's long-term strategy, particularly in relation to its dedication to renewable energy and sustainable development. Enel demonstrates an integrated view of company sustainability performance by including both IIRC and SASB standards, successfully connecting sustainability and financial

reporting. This strategy not only meets the varied information requirements of its stakeholders but also demonstrates Enel's advancements in sustainability in a clear and comprehensive manner [62].

Enel's sustainability narrative is enhanced by combining qualitative insights with quantitative data, resulting in a transparent and comprehensive depiction of company actions and impacts. Enel's reporting process is characterized by intensive collaboration across several departments, involving more than a hundred subject-matter specialists. Enel's internal collaboration is enhanced by external inputs, including comments from investor questions, to ensure that their sustainability disclosures are thorough and tailored to stakeholder interests. The company's dedication to openness and ongoing enhancement is apparent in its proactive engagement with stakeholder feedback and its initiatives to promote environmental, social, and governance (ESG) knowledge throughout the organization. Enel's sustainability reports offer a comprehensive evaluation of its financial and ESG (Environmental, Social, and Governance) importance, demonstrating the company's understanding of the changing sustainability problems. Enel exhibits its cognizance of the wider socio-economic and environmental consequences of its activities by tackling both enduring and emergent concerns that are significant to its stakeholders. This strategy highlights Enel's commitment to ethical and sustainable business practices, as well as its contribution to a future of energy that is responsible and environmentally conscious [61].

Enel Energy adopted both the International Integrated Reporting Council (IIRC) and the Sustainability Accounting Standards Board (SASB) standards. To determine the most important sustainability issues, the company performed a materiality study. Enel utilized a dual-framework approach to effectively address a wide range of important challenges, taking into account the various demands of its stakeholders and the specific financial impacts of sustainability on its operations [63].

Material issues identified through IIRC: Enel used the IIRC framework to identify important concerns that cover all six types of resources (financial, manufactured, intellectual, human, social and interpersonal, and natural). This analysis has probably emphasized the significance of renewable energy advancement, involvement of the community, welfare of employees, and the creation of innovative sustainable technology. Enel was motivated by the IIRC's emphasis on integrated thinking and value creation over time to assess the influence of its operations and strategy on many capitals. This approach helped Enel develop a sustainable business model that contributes to long-term value creation for all stakeholders [63].

Material issues identified through SASB: Under the SASB framework, the Enel company was instructed to prioritize industry-specific sustainability concerns that have a significant impact on financial matters. These encompassed environmental management practices, energy efficiency and access, labor practices, and governance frameworks. SASB's focus on financially relevant sustainability aspects enabled Enel to identify the ESG issues that are most likely to impact its financial situation or operating performance. This information is valuable for investors and financial stakeholders [63].

Commentary on the integration of IIRC and SASB material issues: The incorporation of IIRC and SASB standards into Enel's materiality analysis demonstrates the need of using several ESG frameworks to achieve a comprehensive understanding of material sustainability challenges. While IIRC promotes a broad view of how a company interacts with and impacts many capitals, SASB focuses on the financial materiality of specific sustainability challenges in an industry context. This dual-framework approach does not necessarily focus on the same set of material issues; rather, it provides a more layered and detailed perspective that includes both the broad impacts on stakeholders and the environment (IIRC) and the specific sustainability issues that may influence financial performance (SASB). For Enel, this strategy guarantees that sustainability reporting is inclusive of stakeholder interests while also focusing on the sustainability elements that are most important to investors and the company's financial success. To summarize, Enel's usage of both the IIRC and SASB frameworks indicates that, while different ESG frameworks may highlight different aspects of sustainability, combining them can provide a full and nuanced knowledge of materiality. This approach enables Enel to effectively communicate its sustainability strategy, achievements, and challenges, meeting the needs of a wide range of stakeholders while also addressing investors' specific concerns about the company's sustainability performance and impact on financial health.

6
Conclusion

This thesis has conducted a comprehensive investigation into the materiality analysis in corporate sustainability reporting, clarifying the complexities and implications of the GRI, IIRC, IFRS, SASB, and ESRS frameworks. The inquiry highlights the crucial importance of materiality analysis in improving transparency, responsibility, and sustainability in corporate reporting. It has highlighted the importance for companies to cover a wide range of environmental, social, and governance (ESG) factors in their reporting efforts. By analyzing and comparing various frameworks, the study emphasizes the need to fulfill the diverse needs and expectations of stakeholders.

Although each reporting framework has unique benefits and areas of emphasis, there is an urgent requirement for an integrated approach that leverages their strengths to offer a more holistic perspective on corporate sustainability. Utilizing advanced methodologies in materiality analysis, which involve engaging stakeholders and considering both financial and non-financial impacts, is essential in developing reports that accurately depict company sustainability performance. This study emphasized key strategies for conducting materiality analysis in sustainability reporting. These strategies include involving stakeholders, considering the sustainability context, and recognizing the dynamic and iterative nature of determining materiality. Implementing these best practices is crucial for ensuring meaningful and effective sustainability reporting.

Nevertheless, it has also brought attention to a notable deficiency in the coordination and standardization across the various frameworks, resulting in difficulties in achieving comparability, consistency, and comprehensiveness in sustainability reporting. The absence of a standardized reporting framework presents challenges for organizations aiming to fulfill the diverse demands of international stakeholders

and restricts the advancement towards comprehensive corporate sustainability reporting. Hence, it is crucial for future research to prioritize closing these disparities, improving the compatibility of sustainability reporting systems, and advocating for the development of a consistent global standard that reflects the evolving landscape of corporate sustainability.

Furthermore, the examination of General Motors and Enel Energy case studies provided useful observations regarding the practical implementation of these frameworks. These observations highlight the possibility for combining various standards to effectively tackle the wide-ranging sustainability objectives. These instances demonstrate the significance of embracing inventive strategies for sustainability reporting, utilizing technological advancement, and investigating novel methodology for materiality analysis. Ongoing research and development are necessary to keep pace with the quickly changing global sustainability challenges and stakeholder demands in corporate sustainability reporting.

In conclusion, this thesis advocates for a collaborative effort among standard-setting bodies, corporations, and stakeholders to foster the advancement of a harmonized and comprehensive framework for corporate sustainability reporting. By embracing the principles of integrated reporting and leveraging the strengths of existing frameworks, corporations can enhance the quality and impact of their sustainability reports. This collaborative approach is essential for driving sustainable development, ensuring corporate accountability, and contributing to a more sustainable global economy. The journey towards an integrated and universally accepted corporate sustainability reporting standard is complex, but it is a crucial step in achieving transparency, accountability, and sustainability in the corporate world.

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