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**Readiness assessment for the transition into meeting new requirements of the European Sustainability Reporting Standards.**

By

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The thesis is submitted to the Faculty of Science and Technology  
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## **Abstract**

From 2024, nearly 50,000 organizations will fall within the scope of the EU's new sustainability reporting frameworks. This change represents a substantial increase from the previous scope, which included 11,600 companies. According to recent reports, many organizations need to improve their knowledge of sustainability reporting, particularly at a more comprehensive and detailed level. This research has explored how ready three companies in the oil and gas sector are for the transition to the European Sustainability Reporting Standards (ESRS) by the EU and what frameworks of sustainability are used amongst these companies to this date. Relevant theories and concepts have been used for the readiness assessment and content analysis to provide clear information on how this research is conducted. How to measure the readiness of companies is highly complex, and it is difficult to state what level of readiness of the participating companies firmly. This research has derived a readiness assessment model and scoring methods from supporting research. The main findings from this research indicate that the participating companies should implement further strategic steps to improve readiness for the transition to the upcoming guidelines by the EU. This research is relevant for actors of interest or those in the field of sustainability and environmental, social, and governance reporting.

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# List of abbreviations

BDO	Binder Dijker Otte
CDP	Carbon Disclosure Project
CSR	Corporate Social Responsibility
CSRD	Corporate Sustainability Reporting Directive
EFRAG	European Financial Reporting Advisory Group
ESG	Environmental Social and Governance
ESRS	European Sustainability Reporting Standards
EU	European Union
GHG	Greenhouse Gas
GRI	Global Reporting Initiative
IFRS	International Financial Reporting Standards
IIRC	International Integrated Reporting Council
KPMG	Klynveld Peat Marwick Goerdeler
NFRD	Non-Financial Reporting Directive
PIE	Public interest entity
SASB	Sustainability Accounting Standards Board
TCFD	Task Force on Climate-Related Financial Disclosures
TNFD	Taskforce on Nature-related Financial Disclosures

# 1. Introduction

In the beginning of this chapter, I will start by discussing my motivation for researching the topic. My main goal is to make an effort contribute to a sustainable future for future generations, where sustainability is essential. As a part of the European Green Deal, on the 5<sup>th</sup> of January 2023, new guidelines on sustainability reporting has come into force. These guidelines intend to strengthen and modernize rules and will impact more than 50 000 organizations within the EU [1]. Further research state that this will also impact 1700 Norwegian organizations. Current reports state that Norwegian companies have a long way to go. [2] This chapter will explore relevant theories of sustainability reporting topics, research gaps, research questions and objectives, methodology, thesis scope and structure of thesis.

## 1.1 Topic background and Relevance

For organizations, the description sustainability is commonly used as a descriptive term for managing organizations in a way that will protect the earth and the inhabitants from unrepairable damage brought from activities of human activity. In response to increasing evidence of environmental damage caused by human activities, The Brundtland Commission was formed in 1983 and directed by the prime minister of Norway, Gro Harlem Brundtland. The goal of the commission was to research environmental and economic issues. A final report showed a strong correlation between economics and ecology. The report concluded that both countries and businesses have to be a part of the solution, such as efforts to reduce the effect of human activities on the environment to protect it for future generations [3].

Deloitte states in a report from October 2022 that there is no shortage of different frameworks to use as a basis for sustainability reporting. Deloitte describes GRI, TCFD, and TNFD as the most commonly used frameworks by Norwegian companies. The issue lies within the quality of information within these frameworks within the themes such as nature, circular economy, human rights in the value chain, and the local community. Research from Deloitte points to an upcoming demanding adjustment for Norwegian companies to the EU's comprehensive and detailed reporting requirements and information. Not only are Norwegian companies required to gather more data and information, but the emphasis is also on ensuring the associated relevancy and credibility of the reported information. From the research findings, Norwegian companies have a long way to go to meet the new requirements [2].

Based on research from Revisorforeningen the challenge today is the international lack of standardization and it has been up to the businesses to choose amongst between many voluntarily reporting frameworks. During 2020 the IFRS Foundation and EU announced the start of creating a standardized non-financial reporting framework. The EU commission has set a goal to improve and standardize non-financial reporting and moving on now governing Non-Financial Reporting Directive (NFRD). The Norwegian government have set to comply with EU corporate sustainability reporting directive (CSRD) launched in April 2021. CSRD was in December 2022 published in EU's Official Journal, under the official Directive (EU) 2022/2464. The new directives from EU (CSRD) is designed to and is aimed to bring forward information that will give the reader opportunity to make an assessment to whether a company handles sustainability risk- and effects as reported [4].

## 1.2 State of the art and Research Gaps

Currently, there is a significant amount of research available on the quality of today's sustainability reporting [2], [5]–[7]. However, there is limited information regarding the readiness for the transition to ESRS guidelines by the EU. The main objective of this research is to provide more information on the critical transition to the new upcoming requirements from the EU. Internationally, the emergence of standard-setting institutions for corporate responsibility, sustainability reporting, and environmental management systems has also fueled the growth of non-financial disclosures. The Global Reporting Initiative (GRI) represents perhaps the most crucial driver. The GRI has aimed to induce a process of standardization and harmonization for disclosures by developing a universally accepted framework for sustainability reporting. The framework offers a valuable complement to national social and environmental regulations and is part of an emerging system of 'soft law' for sustainability reporting [8]. In Norway, the requirements for non-financial reporting are described in the accounting law of § 3-3c and especially the accounting law § 3-3a. This law requires businesses to provide relevant information about conditions at the company and including its input factors and products, which may result in a not inconsiderable impact on the external environment [4].

## 1.3 Research question and Objectives

This study aims to measure the level of readiness by analysis for transition to the upcoming reporting standards by the EU for companies in the oil and gas sector in Norway. In other words, how ready are the companies for the upcoming mandatory sustainability reporting

framework, ESRS? In addition to key reporting framework differences in 2022 sustainability reports. This research aims to identify the sustainability reporting framework paradigm shift from traditional sustainability reporting frameworks to ESRS based on the sustainability reports from three companies within the oil and gas sector in the operator and service field.:

- What frameworks are the companies using as a basis for sustainability reporting?
- What are the key differences between these sustainability frameworks?

## Methodology

This research is conducted with a combination of qualitative and quantitative studies. Commonly referred to as a mix-methods research. First step of this research was to decide which research strategy to choose to address company interviews and analyzing sustainability reports. Next step was to collection of data phase and thereafter analyzing the data. The goal of application of mixed-method research is to provide a comparison of descriptive qualitative data.

## Thesis Scope

The scope of this thesis is to conduct research on sustainability reporting and reporting frameworks. In addition, the research attempt to measure the readiness level of the transition to mandatory upcoming requirements and guidelines from the EU.

## Thesis Structure

This research is divided into seven chapters. Chapter one aims to introduce the research by providing information on the topic background and relevance, research gaps, research question and objectives, a brief introduction to the methodology, and the scope of the thesis. Chapter two aims to provide information on relevant theories and topics. Thereafter chapter three presents in-depth information on research methodology. Further, chapter four provides information on data collection. Chapter five aims to present the results and analysis of the data. Chapter six discusses the results of the main research question and sub-questions and provides information on the limitations of the readiness assessment model. Finally, chapter seven presents the conclusions of this research and provides suggestions for further research on this topic.

## 2. Theoretical background

This chapter aims to introduce relevant theories to this research. Starting with sustainability, Corporate sustainability reporting, drivers of sustainability reporting, theories of different sustainability reporting frameworks, EU Regulations, first drafts from the EU, Norwegian regulation, and lastly, readiness assessment modeling. The purpose of presenting this theory is to support chosen methodology to make an effort to answer the main research- and sub-questions as follows.

- *How ready are the companies for the upcoming mandatory sustainability reporting framework, ESRS?*
- *What frameworks are the companies using as a basis for sustainability reporting?*
- *What are the key differences between these sustainability frameworks?*

### 2.1 Sustainability and sustainable development

In 1983 the United Nations World Commission published the report *Our Common Future*. In this report we find the most commonly cited definition for sustainable development “*meeting the needs of the present without compromising the ability of future generations to meet their own needs*” [9]. The University of Maine defines sustainability as “*Avoidance of the depletion of natural resources in order to maintain an ecological balance.*”[10]. Accordingly, the two definitions both addresses maintaining over time.

United Nations present three dimensions of sustainable development [11].

1. Climate and environment
  - The world is today facing an increasing degree of climate crisis as a direct result from human greenhouse gas emissions (GHGs), mostly from combustion of oil, coal and gas.
2. Economy
  - The economic side of sustainable development concerns ensuring financial stability for society and people.
3. Social governance
  - This dimension sustainable development aims at ensuring a good and fair basis of a decent life.

These three dimensions is referred to as the abbreviation ESG (Environmental, social and governance) [11].

## 2.2 Corporate Sustainability reporting

In a guideline report, the Global Reporting Initiative defines sustainability reporting such as “*A sustainability report conveys disclosures on an organization’s impacts – be they positive or negative – on the environment, society and the economy.*” [12]. This definition also corresponds with the definition presented in a report, “*A sustainability report is the gathering of sustainability information in a systematic and presentable way such that an easy comparison with the past and progress concerning the target is possible.*”[13].

According to Revisorforeningen, sustainability reporting has traditionally been categorized as “non-financial” reporting. Revisorforeningen points out that the companies who have been reporting on sustainability have published these reports separately in an independent report which has not to have any connection to yearly financial reports. This categorization seems today to be challenged due to new directives from the EU requiring companies to incorporate the sustainability report together with the annual financial report. The gap between financial and non-financial reports is closing in on the rising importance of sustainability from stakeholders, clients, and authorities. Companies are now experiencing direct financial impact from sustainability matters, and thus the increasing relevancy of including sustainability in the yearly financial reports [4], [14]. Records show that sustainability reporting has been existing since the early 1960s in Europe as a result of companies acknowledging their role in society rather than purely profit maximization. Studies show that there is a rising trend in using sustainability reporting. In the year 2000, around 44 organizations used reported on sustainability information. In 2010, the number of organizations rose to 1973. Only one year after, there was found more than 3000 international organizations published sustainability reports [15]. In a survey conducted in 2022 from KPMG, results show that 96% of the 250 world leading companies are now disclosing sustainability reports and the number is expected to rise due to new regulations [16].

## 2.3 Why Sustainability reporting?

The concept of sustainability reporting is currently not a requirement of law in various countries to this date, although studies show that there are several important reasons to implement sustainability. According to research, sustainable development can lead to internal benefits, operational benefits, organizational benefits and financial rewards [3].

Revisorforeningen states that sustainability reporting is an important factor to increase credibility, openness and trust in the business world similarly to a yearly financial report [4].

Some studies claim that sustainability reporting could be considered as a prerequisite for a profitable operation. The reasoning behind this claim stems from Blackrock, the world largest investment manager recommends companies and investors to achieve net zero goals in the upcoming years [17], [18]. According to studies, Sustainability reporting contributes to better risk management, cost savings, decision-making and trust amongst stakeholders. [4] Another important factor to why businesses use sustainability reporting is that it can increase competitiveness on the account of attracting customers, investors or top talent that prioritizes ESG performance [19], [20]. A study published in 2011 [21], finds companies with a well-built performance of sustainability are more probable to attain higher financial returns and draw investors in a long-term perspective [21].

## 2.4 Drivers of Sustainability reporting

According to studies there are three recurring drivers of sustainability reporting. Firstly, a significant driver is stakeholder pressure. A study [22], points to the increasing pressure from stakeholders for companies to have an integrated environmental and social issues to daily operations. Findings from Deloitte also show that stakeholders such as stock exchanges, financial regulators, different governments is increasingly being more attentive to performance of businesses in view of non-financial impacts [23]. Further studies show that the stakeholder theory implicitly states that firms can benefit from CSR activities because it attracts support from stakeholders and reduces the chances of withdrawal of support for the firm [24]. Studies show that another key driver of sustainability reporting is increasing regulatory requirements. An article from BDO it is stated that governments all over the world are increasingly joining in on issuing guidance, incentives, and regulations. BDO further states that organizations worldwide must firmly monitor any potential impacts on daily operations, corporate strategy, accessing capital, and reporting due to legislations connected to sustainability or ESG matters [25]. A recent article from EY also concludes that the EU is steadily increasing focus on sustainability matters and that it needs to be in forefront of business strategies [26].

Studies finds a third key driver, financial performance. In a report [27], states that the gaining concern and attention over the environmental and social impact of companies have caused companies to manage and account for sustainability practices actively. Findings from this study show that since adopting yearly sustainability reports, some businesses improved profitably and ethical policies, which attracted good employees. Other companies observed



that collecting data for sustainability reports acted as a catalyst for future change regarding performance in the organization [27]. McKinsey supports these findings and reports a strong correlation between companies with integrated sustainability into operation experienced benefits and created conditions for a financial success in the long-term perspective [28]. Researchers from Harvard University also state to have proven that businesses with integrated sustainability outperform companies that do not integrate sustainability activities in the long run regarding both accounting performance and the stock market. The researchers conducted research over an 18-year period where 90 “high sustainability companies” outperformed 90 “low sustainability companies” measured in economic indicators that represent financial leverage and economic growth [19].

## 2.5 Sustainability reporting Frameworks

Organizations, regardless of their size, understand the importance of effectively managing stakeholder relationships and minimizing their impact. It's no longer a matter of whether or why organizations should prioritize environmental and social responsibility, but rather how they can do so effectively [29]. There are many globally recognized frameworks for sustainability reporting, such as the most commonly used worldwide; GRI, SASB, CPD, IIRC, TCFD, NFRD [30]–[32]. The purpose of this chapter is to examine sustainability frameworks, compare their advantages and disadvantages, and bring attention to the current issues and limitations within them.

### **GRI - Global Reporting Initiative**

KPMG finds that GRI guidelines, originally from 1997, are the most commonly used sustainability reporting framework from research among the N100 companies and G250 groups. Research shows that there is significant growth in use compared with studies from 2017 [20]. The GRI guidelines aim to enable any small or large organization to report and understand their potential impacts on the environment, economy, and people to raise organizational transparency for reaching sustainable development [33]. Research finds that multi-stakeholder input to GRI guidelines in addition to reputation among stakeholders is considered to be an important reason to growing corporate wide adoption [34] [35]. In addition, the GRI has reported that all disclosure requirements in the NFRD 2014/95/EU are addressed by the GRI [36]. In a negative aspect, observers note that the GRI guidelines are too flexible, which could lead to inconsistent reporting practices and problems comparing organizations based on sustainability reports [37].

### **SASB - Sustainability Accounting Standards Board**

SASB is originally founded in 2011 as a non-profit organization to assist investors and businesses follow common language when disclosing sustainability- and financial impacts [38]. This framework is focused mainly on investors where it prompts companies to integrate non-financial sustainability reports with yearly financial reports [39]. SASB wants to provide sustainability reporting standards that support businesses to produce material information for investors in a cost-effective matter. As GRI focuses on multi-stakeholder accountability, the SASB is oriented toward the organizations to manage and identify sustainability performance indicators and thus limited for stakeholders such as communities, employees, and regulators [40].

### **CDP – Carbon Disclosure Project**

Similarly to SASB, CDP is a non-profit organization. SASB aims to manage environmental impacts for companies, investors, states, cities, and regions. CDP motivates businesses and governments to disclose and measure environmental impacts such as water management, deforestation, and greenhouse emissions. According to CDP, they are viewed as “the gold standard” of sustainability reporting, with the largest dataset on city action and corporate action [41]. There is existing research critiquing the CDP framework, noting that it can be viewed as civil regulation, and raised questions regarding the comprehensibility of carbon disclosures. The research further argues that lack of disclosure of types and the real meaning of the reported emissions and the reliability of those data leads to difficulty in gaining insight into reported emissions along with the company's real achievements [42].

### **IIRC – International Integrated Reporting Council**

The first set of the Integrated Report Framework was published in 2013 and is newly revised in a 2021 edition. Businesses use this framework to publish integrated reports to better communicate governance, strategy, prospects, and performance. This framework is principle-based, which has the purpose of accelerating the overall adoption of integrated reports over the world [43]. This framework is relatively new in the area of practice and policy; it is viewed as a more holistic and richer reporting regulation than the traditional financial accounting framework. An advantage to the IIRC is that it can provide reporting businesses

and regulators with insights of value to contribute to the development of practice and policy further [44]. IIRC holds similar characteristics as the GRI, although it differs on focus on the related information needs and interest of financial capital.

### **TFCD – Task Force on Climate-related Financial Disclosures**

The TFCD has in 2017 released recommendations for climate-related financial disclosures, which aim to help businesses provide higher quality information to support informed capital allocation. The TFCD is embodied by 31 members from the G20, where both financial disclosures and preparers are represented [45]. This reporting framework is focused on four key areas: strategy, governance, metrics and targets, and risk management. While other frameworks focus on environmental impacts from organizations' actions, the TFCD focus on financial dependencies or scenarios of climate change [46]. An advantage for businesses reporting on recommendations by the TFCD, it could help organizations better demonstrate foresight and responsibility regarding their considerations of potential climate issues [47]. A negative aspect of TFCD is that it does not provide a “one size fits all” model for companies [48]. In addition, this framework is seen to be of complexity regarding requirements, which could lead to companies having difficulties for reporting [47]. This statement is further supported by a report by the Climate Disclosure Standards Board. The report found that many businesses previously failed to consider the financial and strategic impacts of the risks for their businesses by only having assessed what impact their business has on the climate and environment [49].

### **NFRD 2014/95/EU – Non-Financial Reporting Directive**

In April 2014, the European Union acknowledged the growing importance of non-financial information for many users and agreed upon a directive to harmonize current legislation with non-financial reports. Until October 2014, sustainability and non-financial reporting was voluntary, whereas the EU directive was mandatory and regulated [50] [51]. According to EY Law, the two primary objectives of the directives are first to provide stakeholders, consumers, and investors with non-financial information to evaluate risks and the creation of sustainability for a company. The second objective is to encourage the environmental, governance, and social responsibilities of companies in Europe [52].

The NFRD 2014/95/EU is seen to be a good initial step towards a regulated framework, although research has found the directives to have some challenges. Study shows that the non-financial report based on this directive have challenges regarding reliability and

comparability. The same research points to tracking relevant non-financial data that were found to be challenging to find for users and investors in the reports [4], [50].

## 2.6 EU regulations – Sustainable Finance Package

In April 2021, The European Commission adopted an extensive package of measures to improve cashflow into sustainable activities in the EU. This study will address two of the main components in the sustainable finance package, the EU taxonomy climate delegated act and the Corporate Sustainability Reporting Directive (CSRD) [53]. A report from EY states that this package represents a step further into the transformation of the financial sector into a pivotal drive for sustainable growth in the European Union. In a report from KPMG, the expanded corporate requirement from CSRD for sustainability reports leads to broader governance and social factors [53]. The EU Taxonomy was first published in the Official Journal of the European Union in June 2020. Since then the regulation has gone into force on 12th of July 2020. A key driver for this regulation is the European Green Deal and the EU's energy and climate targets for 2030. The EU Taxonomy aims to guide businesses, policymakers, and investors with definitions for what economic activities are recognized as environmentally sustainable [54].

The EU Taxonomy provides a classification system based on six different environmental objectives:

- Climate Change mitigation
- Climate Change adaptation
- The sustainable use and protection marine and water resources
- Transition to circular economy
- Prevention of pollution and retaining control
- Protection and restoration of biodiversity and ecosystems

[54], [55]

Organizations who is required to report on the NFRD 2014/95/EU and CSRD is also subjected to mandatory disclosing of classification [55].

The second component in the sustainable finance package is the Corporate Sustainability Reporting Directive (CSRD). The goal of the CSRD is to amend the NFRD and to, raise the requirements and raise the quality for sustainability reporting [1]. Undertakings subjected to the previous NFRD must report within 2025 from 2024 data. The CSRD is applicable to many more businesses than the NFRD since requirements have changed. Prior requirements were

organizations with more than 500 employees. The CSRD requires organizations that meet two of three criteria:

- More than 250 employees
- More than € 40 million turnover
- More than € 20 million total assets.

Table 1. Transition of requirements, data derived from [56].

	Transition of requirements from NFRD to ESRS	
	2014/95/EU (NFRD)	CSRD (ESRS)
<b>Who must report?</b>	<p><b>Public listed entities (PIE's)</b></p> <ul style="list-style-type: none"> <li>&gt;500 Employees</li> <li>&gt; Net sheet balance total €17 million</li> <li>&gt;Net turnover €34 million</li> </ul>	<p><b>All listed and non-listed companies where at least two of three criteria are met</b></p> <ul style="list-style-type: none"> <li>&gt; 250 Employees</li> <li>&gt; Turnover of €40 million</li> <li>&gt; Total assets €of 20 million</li> </ul>
<b>Scope of requirements for companies</b>	<ul style="list-style-type: none"> <li>Protection of environment</li> <li>- Social responsibility and treatment of employees</li> <li>- Human rights</li> <li>- Anti-corruption</li> <li>- Diversity</li> </ul>	<p><b>ESRS 1 - General requirements</b></p> <ul style="list-style-type: none"> <li>- Sustainability report integrated in Annual report</li> <li>- Implementing external assurance               <ul style="list-style-type: none"> <li>- Principles of reporting</li> <li>- Timing and format</li> </ul> </li> </ul> <p><b>ESRS 2 - General disclosures</b></p> <ul style="list-style-type: none"> <li>- Strategy, business model and policies               <ul style="list-style-type: none"> <li>- KPI and target</li> </ul> </li> <li>- Sustainability and company governance</li> <li>- Due diligence and double materiality               <ul style="list-style-type: none"> <li>- Risk and opportunity</li> </ul> </li> </ul>

	<p><b>Disclosure topics</b></p> <ul style="list-style-type: none"> <li>- Environmental</li> <li>- Social</li> <li>- Governance</li> </ul>
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Additionally, small- and medium-listed organizations will have to comply with CSRD within 2027 for 2026 data. In a report from KPMG, this has led to an increase from initially 11 600 organizations in the EU complying with the NFRD to about 50 000 organizations impacted by the transition to CSRD in the EU [56]. According to Deloitte, businesses that disclose their sustainability practices using GRI and TCFD are better equipped to meet the new standards set by the EU [2].

**2.7 First drafts of European Sustainability Reporting Standards**

As previously mentioned, stakeholders such as investors, society, and other users raised questions about the NFRD 2014/95/EU directives. Based on this background information, the EU Commission assigned the European Financial Reporting Advisory Group (EFRAG) a role as technical advisor to investigate possibilities for European non-financial standard [57]. EFRAG signed an agreement with GRI to work together in the development for a common European standard but also the intent to an international collaboration [4].

March 21<sup>st</sup>, 2021, EFRAG published the first set of draft under the name of European sustainability Reporting Standards (ESRS). These set of draft underwent from June 2021 to April 2022 comments and feedback and were approved by the European Parliament in 10<sup>th</sup> November 2022 [58]. This resulted in 12 standards whereas 2 of them are general requirements and disclosures of reporting, this can be found in overview figure below.

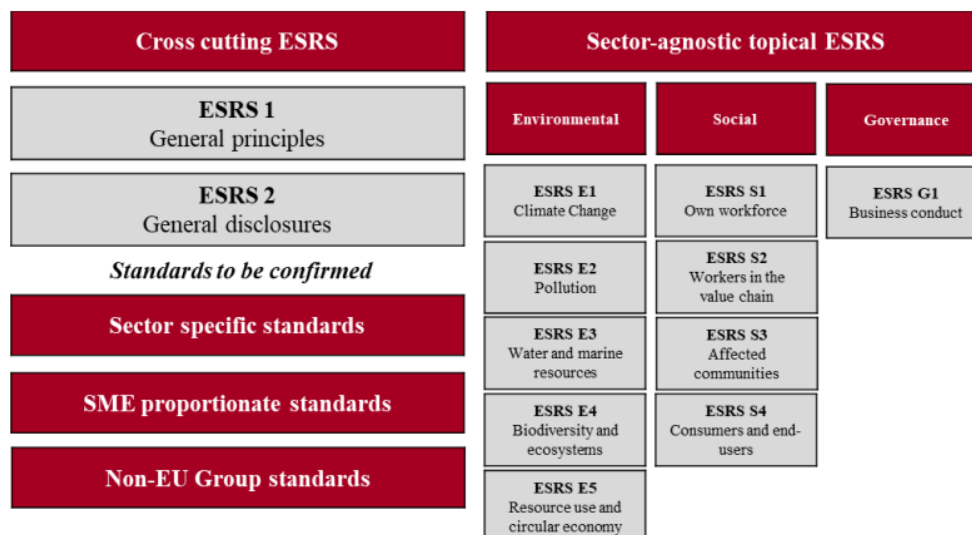


Figure 1. Overview to the ESRS guidelines [59]

The remaining ten standards contain reporting requirements within the three sustainability themes; Environmental, Social and Governance [57].

## 2.8 Current Sustainability reporting regulation in Norway

The requirements and regulations for sustainability reporting as non-financial disclosures has up until 2022 been described in the accounting Act § 3-3. Further, Revisorforeningen points to the two relevant subsections § 3-3a and § 3-3c [4], [60].

### § 3-3a

This subsection of the Accounting Act sets requirements for companies to disclose information about conditions at the company, with products and input factors included, which may have a not inconsiderable impact on the external environment. The potential environmental effects must be stated, and which measures have been implemented or are planned to be implemented to reduce or prevent negative environmental effects [4]. Further, information regarding the working environment has to be provided in addition to an overview of measures that have been implemented that impacts the working environment. Next, information regarding accidents and work-related injuries, in addition to providing information about sickness absence if the company has employed five or more employees full-time [60].

### § 3-3c

In 2013 the Accounting Act of § 3-3 was revised to where subsection § 3-3c was updated. In this requirement, large companies must report on social responsibility, which addresses the

environment, working environment, social conditions, non-discrimination, and equality to comply with human rights and battle corruption and bribery. The information has to provide clear information where it can be found an understanding of the company’s development, position, results, and consequence of the operations to the company [60], [61]. This subsection sets a minimum requirement for what must be disclosed but does not set concrete demands to how to report. Most companies use sustainability reporting frameworks come in to provide reporting guidelines [61]. Subsequently, both Revisorforeningen and Regnskap Norge express a lack of standardization in sustainability reporting in Norway.

**Norway – Adopting EU regulations**

The CSRD is yet to be implemented in the Norwegian Accounting Act. The Non-Financial Directive - NFRD 2014/95/EU is accounted for in § 3-3c, whereas the Norwegian Government aims to replace this directive with CSRD within 5. July 2024 [62].

Further, the EU Taxonomy was 1. January 2023 implemented in the Norwegian Accounting Act under § 3. Taxonomy regulation. This means the first year of reporting will occur in 2024 based on the financial year of 2023 [63].

**2.9 Sustainability- and organizational readiness**

The Cambridge Dictionary defines readiness as follows “willingness or a state of being prepared for something” [64]. According to [65], Organizational readiness is the relationship between individuals, systems, processes, and performance measurement. Further, a company should put resources into people and processes to communicate and facilitate changes to achieve readiness for change. There needs to be more data to find how to build a readiness assessment model for the upcoming sustainability requirements from the EU. Therefore, this study relies on models proposed in research from other fields, such as digital transformation. PwC has constructed a self-readiness assessment tool where the intention is to provide organizations with a tool for assessing their own capabilities. Further, to map out an organization's strategy for change is the first of five steps on how to achieve readiness and maturity [66].

Practical steps					
Step 1	Step 2	Step 3	Step 4	Step 5	Step 6
Map out your Industry 4.0 strategy	Create initial pilot projects	Define the capabilities you need	Become a virtuoso in data analytics	Transform into a digital enterprise	Actively plan an ecosystem approach

Figure 2. Readiness assessment tool from PwC [66]



Similarly, a company named Impuls has developed a free model for assessing a business's readiness for digital transformation. This model was created through extensive literature research and workshops focused on digital transformation. The process begins with a questionnaire that covers relevant topics and serves as the initial step for evaluating an organization's capabilities [67].

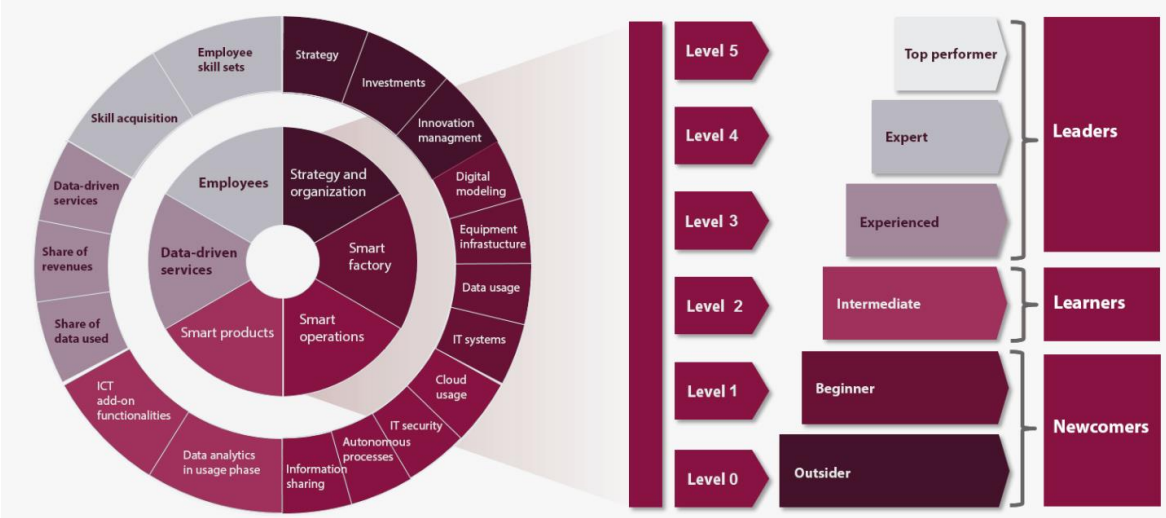


Figure 3. Readiness assessment tool from Impuls [67]

Findings from researchers and experts point to similarities in managing upcoming change. The first step of a roadmap to readiness is by determining organizational readiness for change. KPMG points to the importance of analyzing upcoming requirements of ERSRS and CSRD to determine who and what will be impacted by new regulations. This strategy should be implemented in order to develop an effective roadmap to comply with the new regulations from the EU [68]. In a report on how companies can tackle the changes of requirements from CSRD, every small company within the EU or other countries impacted by scope of CSRS must start their plan to transition and prepare for the first year of reporting on new requirements [69]. The NFRD was required to report for 11600 companies, whereas, with the new guidelines for reporting by the CSRD, this number increased to 50 000 companies, which is more than 75% of organizations in Europe. The report further implies that due to the highly detailed and comprehensive reporting requirements, most of these companies will not be familiar with how to report on the sustainability reporting frameworks [69].

### 3. Research Methodology and design

Methodology is viewed as a plan for how the research advance, by combining theory and methods [70]. This chapter aims to formulate methodology, research strategy, research design, the population of organizations, methodological criticism, and reliability and validity. Further, an extensive rationale behind readiness assessment and analysis of the chosen frameworks.

#### 3.1 Research strategy

In this study I have chosen a combination of qualitative and quantitative studies. This is also referred to as a mixed-methods research, which is a specific combination is considered to have an effective way to provide insights of value for the different types research question [71]. According to [72], qualitative research is a so called umbrella term for a broad variation of different approaches to methods of a research. Author of [73], describes a definition of qualitative research is as follows; understanding and exploring the meaning groups or individuals assign to a human or social problem. Utilizing large populations and samples, the quantitative research aims to predict or determine as opposed to the qualitative research method where it often utilize lower amount of populations or samples although it provides more in depth and diligent process to find results [72]. A structured interview method can generally produce results that are of the quantitative sort [74]. If the researcher collects qualitative and quantitative data simultaneously and thereafter merge the total database with the use of conversion of qualitative subjects to counts. In return those counts have the ability to provide a comparison with descriptive quantitative data, which is often referred to as triangulation based framework as seen below [73].

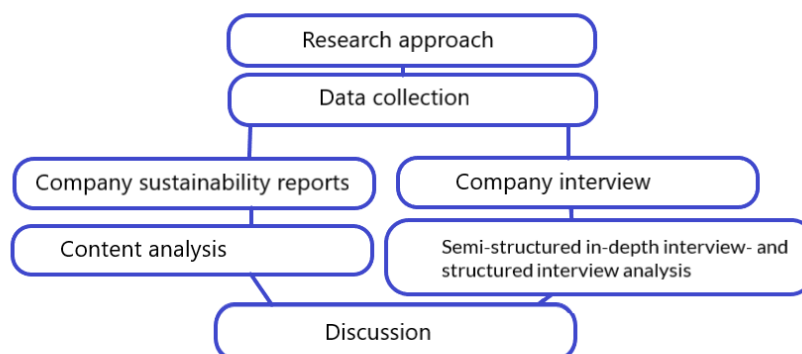


Figure 4. Visual representation of research strategy

This paper is built on qualitative and quantitative research whereas the readiness assessment is a structured interview and content analysis is performed on sustainability reports. This aligns with the description of content analysis from [72], whereas content analysis is defined as a organized way of examining visual data or texts. Further, the readiness assessment of the companies in the population is viewed as a mixed-methods research, which essentially taking use of data in the form of both quantitative and qualitative, to provide meaningful and strategic analysis [72] Findings from research indicate by implementing multiple approaches in order to gain deeper understanding of phenomenon or theories is often referred to as triangulation based framework [75]. This is supported by other articles stating that by using multiple resources the results will gain validity because of strengths to one method might offset the limitation to the other research method [71].

Research on the quality of sustainability reporting has in the recent years been increasing, also specially research on Norwegian companies has emerged [5], [6], [76]. These researches supports the need for improving quality of sustainability reporting, but less research is found on the transition to the new EU frameworks, ESRS. Research and information on how organizations can prepare for this transition is mostly published from consulting agencies such as PwC, Deloitte, Accenture, Ernst & Young, KPMG Consulting [2], [2], [45], [56], [77], [78].

Sustainability reporting is now moving from being mostly voluntarily to mandatory and companies must prepare on the challenging task of increased scope and comprehensive extent of the upcoming years of sustainability reporting [4]. According to [74], interviews are thought of being a familiar way of collecting data for qualitative research as opposed to other strategies. The interview process of this research is performed as a “structured interview”. This interview type is where the interviewer limits the respondent to a predetermined set of questions and a fixed number of answer choices [79]. The research of [80], notes that structured interview is helpful way to reduce potential bias and raise reliability in qualitative research. In addition to structured interviews, qualitative content analysis has been performed on three sustainability reports amongst the same population in the interviews which are organizations from the oil and gas sector. Content analysis is regarded as being one of many qualitative approaches to gain meaning and derive analysis from data. Looking from a validity perspective, how the final results are achieved is vital to report due to high relevancy [81].

Researchers find that readers of researches demand ability follow a precise trail of analysis prior to ending conclusion [81].

### 3.2 Research design

Research design points to the overall strategy which is further used for incorporating multiple components in a research in a coherent and logical way to assure that the research question is addressed constructive matter [73]. Research design is preeminent for the validity and credibility to a study and functions as a roadmap to guide a research process [82].

Additionally, a type of research design called attention research design can be implemented to create and form questions such as why, what, and how [83]. In this research paper, I will try to answer the main research question and sub-questions by performing a content analysis on sustainability reports and measuring the level of readiness based on interviews.

### 3.3 Methodological criticism, reliability and validity

In a research study, the question of research need to be specific and clear to assure the interviewees have a homogenous experience connected to the chosen topic, in any case of a subject matter [74]. When performing research, it is vital to take into consideration that there are several effective strategies and methods to address various matters. Incorporating this idea will help reduce the risk of self-affirmation or bias and raise awareness of the importance of having a wide perspective [84]. The structured interview aims to ask all participants the same questions in the same context and order. This allows the results to be analyzed and compared in a consequential way. By ensuring consistency across the process of interviews, one will improve and achieve accurate results [85]. On the other hand, there are numerous research that state that there are limitations to this approach of interview. One of the negative is that perspectives such as participants are required to classify their experiences and emotions according to the researcher's predetermined categories [86]. Other reports finds that structured interviews may exhibit loss of spontaneity in addition to the risk of having interviewers attributes and characteristics influencing the replies from the interviewee [85]. Regarding the mixed method approach to research finds that using the mix method for data collection and analysis may require more expertise and resources, in comparison to utilizing one method. Further, the mixed method approach will increase complexity of interpreting results from non-identical choice of methods [87]. When researcher performs relational analysis, it is required to possess high interpretation skills, to reduce potential inaccuracies [88]. Concludingly, I must address the theoretical limitations to the chosen methodology to the degree where the

approach might impact accuracy of results. In addition to theoretical limitations, I must acknowledge the limitations of the conducting researcher of this study.

Considering findings from [84], the researcher's results might be influenced by their beliefs, experience or motivation. If a task is not at the level of a predetermined standard of performance, it can be viewed as a human error. Human errors can in some cases cause delays in different ways such as problems, incidents and/or failures [89]. Like humans, I am not perfect and can make mistakes. However, in an effort to improve the accuracy of this study, I have gathered insights from various sustainability experts and followed a rigorous methodology.

Another limiting factor for this study is that there currently is limited data and research on how companies can achieve readiness for the CSRD guidelines. This is because, as previously stated in the theory section, companies have yet to report on ESRD standards. The first year of reporting will be 2024, with data from the previous year. Even so, the CSRD might revise disclosures and change requirements this time. For further research, the amount of data on how ready and how companies perform sustainability reporting will become more apparent after the first year of reporting. Further research on this basis could improve the accuracy of results. The methodology of interviews should also be addressed as a limitation of the research. According to [90], Although formal, structured interviews may save time on coding, they often provide limited insight into qualitative data. During a semi-structured interview (SSI), interviewers have the flexibility to explore various themes and topics with the researcher. This interactive approach allows for open-ended responses from the interviewee [91].

### 3.4 Population and selection

A critical factor is to incorporate a right size of a sample, considering some researchers finds that sample size should not be too large or small [92]. Other researchers can often be distressed with the size of samples instead of analyzing the actual outcomes of examinations or interviews [93]. For population and selection I intend to provide information on why and which companies are studied. I have chosen companies among the oil and gas sector in Norway. According to [94], in the selection process I have taken the use of a purposive sampling approach. By purposive sampling approach, it is based on selecting participants because of their expertise, knowledge or expertise in the field to be studied. This type of

approach is referred to as a non-probability sampling method. In addition, the selection process for the chosen companies is based on the following criteria:

- Company must meet two of three criteria to report on the EU regulations by CSRD. This includes companies with more than 250 employees, turnover of €40 million and/or total assets of €20 million. This means the first year of reporting will occur 2024 based on the financial year of 2023 [91].
- The company must have at least two accessible sustainability reports. The rationale behind this is more available data to include in the research.
- Norwegian companies who operate in the oil and gas sector. The rationale behind this is my personal interest of the sector and the chosen companies.

Additionally, the content analysis on the sustainability reports will be performed on the same three companies in the readiness assessment. The reason for choosing three companies is the limited research time and the depth of evaluation of each participant.

Table 2. Overview of participants, organization and department

<b>Interviewee</b>	<b>Sector</b>	<b>Company</b>	<b>Department</b>
Interviewee 1	Oil and gas, Operator	Company A	Sustainability
Interviewee 2	Oil and gas, Operator	Company B	Sustainability
Interviewee 3	Oil and gas, Service	Company C	Sustainability
Interviewee 4	Oil and gas, Service	Company C	Sustainability

These companies are public and listed on the Oslo stock exchange [95]. Information has been retrieved from official websites about their activities, investor relations, and reports. Sustainability reports for each company can also be found on their official websites.

### 3.5 Delimitations

I have made some limitations to this research. For the qualitative content analysis, I will research which sustainability reporting frameworks the companies have used and the key difference between these. Further, the sustainability reports published in 2023 based on information from 2022 are a part of this study. Sustainability reports from previous years will not affect any results of this research. When considering the readiness assessment, I have gathered data from experts on what could be done by organizations to improve the transition to CSRD and the ESRS guidelines.

### 3.6 Data collection

For collecting data for the study, I have used a mixed-method research strategy. I have performed one semi-structured interview and three structured interviews. Two of the interviewees are in the same company, thus only three participating companies in total. In addition, content analysis on sustainability reports. The interview data collection process started from February 2023 to May 2023. I have chosen experts within the chosen organizations as key informants, and the length of the interview varied from 20-40 minutes. This form of data collection is referred to as a self-administered questionnaire [73]. During the interview, the respondents were asked to select one of four fitting answers to each of the prepared sets of questions. These interviews took place digitally due to the geographical distance between the participants. Data will be collected through multiple sources to include interviews, observations and document analysis, this is referred to as triangulation of data [73].

### 3.7 Interview guide

Before conducting interviews, I made an interview guide listed below in the appendix section. A standard interview method in quantitative and qualitative research is the structured interview. This type of interview consists of consistent use of identical predetermined questions to all of the interviewees according to the order [96]. By having a consistent process of data gathering, the information comparison across interviews will be more straightforward with various environments and subjects [97]. The predetermined set of questions aligns with a positivist research method, due to having the emphasis on replicability, consistency and objectivity [80]. The positive aspect of this method is that it leads to enabling collecting measurable data which is derived from interviewees to analyze and compare in a statistical

manner [82]. Structured interviews can in addition provide qualitative insights of value. By making use of a standardized questionnaire, the researcher can look into perspectives and previous experience of the interviewee which lead to descriptive data [98]. In order to have an efficient data collection of desired value, one should implement refining and piloting the interview guide [99].

The interview guide for the semi-structured and structured interview is explained in this section. The questions in the interview are the same ones that are described in the rationale section, and they are connected to the theory section. By conducting this as a structured interview, the questions are presented in the same order and content to every interviewee to increase the simplicity of analyzing the data. On the other hand, some questions were deemed invalid due to the similarities amongst themselves. Question 12 is an example of this, where it was given feedback from two of the interviewees that this question is too similar to question 1. Taking into consideration feedback from the interviewee could act as a validation of the assessment model. Moreover, for one of the companies, the interview was conducted twice. Additionally, the concurrent triangulation approach involves collecting both quantitative and qualitative data at the same time. The researcher then compares the two sets of data to identify any similarities, differences, or a combination of both [73]. Thus, incorporating concurrent triangulation in the research, it can help raise validity and enhances the objectivity of data.

### 3.8 Assessment model - Measuring readiness

Research find organizational readiness can be interpreted in several ways, including organizational levels in addition to groups/individuals being able and willing to implement change [100]. Researchers has identified organizational readiness to be among the most important facilitator for adoption of new policies, programs and practices [100], [101].

KPMG states in a report that under the new Corporate Sustainability Reporting Directive increasingly more EU based businesses needs to prepare substantial sustainability reports which has to be included in their management reports [69]. This statement is also supported by EY which further report that since the reporting framework is broad and will gradually progress over time, they will have significant impact on businesses [102]. Based on reports from consulting agencies on how businesses can prepare their readiness to the mandatory EU sustainability reporting, this research paper has prepared a readiness model to hopefully provide a more trouble-free transition for the participants.



This model was developed based on a study referenced as [66]. The researcher collected data from five other readiness assessment studies to create the model. However, due to time constraints and limited information on readiness assessment to meet EU sustainability reporting requirements, the model in this research is simplified.

Smart Business Processes R&D—Product Development	
Principles	Technologies
Real time data management (Collection/Processing/Analysis/Inference) Virtualization Agility	Data analytics and Artificial intelligence simulation communication and Networking Cybersecurity additive manufacturing virtualization technologies cloud RFID and RTLS technologies
<b>Questionnaire</b>	
1. To what extent are the manufacturability and terms of use of the product simulated during product development?	
None	
Low	
Medium	
High	

Figure 5. Example of readiness assessment from digital transformation [66]

Validation, reliability and verification process of the readiness assessment model is found in the discussion section.

The set of questions in the questionnaire will be presented below, and rationale for each question will be presented in the next subchapter 3.9.

The basis for of measuring level of readiness is lister below:

**Yes:** 1 point

When the participating company have implemented the readiness step in question, they receive 1 point.

**Not yet:** 0,5 points

When the participating company have yet to implement the readiness step in question, but intends to do so before 2024, they receive 0,5 points.

**Not sure:** 0 points

When the participating company does not know if the readiness step in question has been implemented or not, they receive 0 points,

**No:** 0

When the participating company has not implemented the readiness step in question, they receive 0 points.

Studies have developed assessment tools to gauge a company's readiness to integrate corporate social responsibility into its change management process. They use a scoring system based on "Fuzzy comprehensive evaluation method," a calculation method that utilizes fuzzy mathematics. This approach is most effective for solving complex problems that can't be expressed in precise mathematical terms [103]. In line with this, our research aims to create a simplified version of this model due to time constraints. We will use Table 3. as a tool to evaluate the scores obtained, which will be presented in the results section.

Table 3. Evaluation of readiness level [103]

Qualitative value	Numerical value	Corresponding readiness level	Definition of maturity level
Very low	20%	No readiness for change	The organization is not ready for change.
Low	40%	Low readiness for change	The organization displays insufficient readiness for change.
Medium	60%	Average readiness for change	The organization has basic readiness for change.
Good	80%	Good readiness for change	The organization displays good readiness for change
Excellent	100%	Excellent readiness for change	The organization displays excellent readiness for change

### 3.9 Assessment model rationale

The purpose of this subsection is to provide a clear rationale for each of the in total twelve questions in the readiness model. The purpose of this assessment is to gain a better understanding on what and how the participating companies can facilitate adoption of ESRS standards.

**Question 1:** This question is accounted for from a statement in a report from Deloitte, which is found in a report in the section called “what businesses should focus on going forward.” [2] The reasoning behind this selection is in according to the quantity of research supporting the statement. PwC points to that comparison between expected business outcomes and objectives can lead to a so called “gap” in the performance across those two [104]. In the same report argues that proceeding to compliance to the ESRS standards by CSRD must start with a gap

analysis of the organization. Thereafter, the information which is extracted from gap analysis will create a basis for a roadmap to compliance but also enlighten key personnel who are to reduce this data with the use of a plan over a time period [105].

**Question 2:** The ESRS guidelines which has been published in the form of a draft by EFRAG, it is stated that for organizations to produce an extensive sustainability report, the data from internal and external perspective is highly relevant. This is accordingly referred to as double materiality which is key element of the standards. What information that does meet criteria for materiality is also determined from the ESRS to all sectors [106]. Thus, for reaching compliance with the CSRD, there is a need for organizations to administer an assessment of the double materiality in initial stages. By incorporating the double materiality assessment, sustainability information for the organization and stakeholders can be further addressed [107].

**Question 3:** The CSRD aims to gather information from stakeholders such as what the company potential impact on environment and the people could be, including opportunities and sustainability risks. This is a contrast to previous frameworks of sustainability reporting, where organizations gather information from stakeholders on their preferred choice of topics. Study finds that stakeholder may find this process to be challenging if there is no previous experience with sustainability reporting [107]. Boston Consulting Group finds that it is highly important for organizations to identify key stakeholders and engage them in the process of assessment of the materiality. By not including stakeholders, organizations risk producing results of low accuracy that does not extensively address upcoming risk and opportunities. BCG argues that this step is vital for materiality assessment to reach a satisfactory result [108].

**Question 4:** In the first two standards of the set, ESRS 1 and the ESRS 2, organizations find how the interaction of value chain can be established. The set of standards has a goal of identifying the organizations value chain in addition to key features accordingly, on the reasoning that there is potential for the value chain becoming a material impact or risk [58]. This is further supported in a report from KPMG, where it is stated that organizations must implement an assessment of their entire value chain to align with the EU sustainability reporting requirements [109]. Latham & Watkins indicate in a report that considering CSRD, the impacted organizations must disclose information on more than their on operation, all of the value chain is now relevant [59]. By these means, is now necessary for companies to

disclose information on risks, impacts and opportunities across value chain upstream and downstream.

**Question 5:** The ESRS which is introduced by the EU sets requirements for organizations to provide detailed information about risk and effects which lead to changes and strategic decision in the corporate model. These requirements are thoroughly consistent in the standards [2]. In addition, the standards state that for achieving compliance with regulations, organizations must disclose a transition plan into detail. This entails outlining goals and to measure progress in addition to providing a description of limitations and potential challenges. In order for the organization to improve sustainability matters, the data which is to be reported should incorporate material impacts and own operations in the value chain. By doing so, businesses will enable better understanding of the supply chain to work together with customers and suppliers [110]. Concludes that this is needed in order to apply change in a positive matter.

**Question 6:** Deloitte states that companies must optimally disclose in a unbiased and transparent report on how the potential impacts and risks which are beyond immediate control in addition to list if they are accounted for on a strategic level [2]. In a report from Rambøll, it is found that if companies identify what is potential sustainability risk and effects, the company will gain appeal and future-proof impression for customers and investors.[111] This statement is supported by KPMG which adds the following; by having sustainability information integrated in the strategy and operations of the company, it could lower risk and appeal to potential talent, investments and customers [112].

**Question 7:** The CSRD sets requirements for companies to have the goals and future targets that must be justified and supported by acknowledged scientific models. Deloitte states in a report that most companies who claim to have action plans and goals for achieving the upcoming net zero emissions, but most of these companies has a less clarity in documented assumptions to what scientific models the company has ambition to align with. Deloitte finds that it is a long road ahead when considering organizations accountability and transparency in the mentioned area [2]. The Carbon Disclosure Project (CDP) asserts in a report that companies must disclose mandatory requirements on how the business strategy and model is aligned with the goal of achieving a limited global warming of 1.5 °C [113].

**Question 8:** The EU Technical Expert Group has published a report on sustainable finance, where it is found that the EU taxonomy could potentially provide insight the strategy of a

company and further improve resilience and performance for environmental matters in addition to helping investors gain understanding on the organizations investment in new assets [114]. Accordingly, EY state that besides satisfying obligation of reporting, the disclosures want to enable strategic considerations for sustainability in the business model of the organization itself. The ESRS guidelines is expected to raise pressure to organizations when it comes to sustainability performance [55].

**Question 9:** In the ESRS guidelines, it requires organizations to disclose how the policies meet EU requirements on relevant topics. Additionally, organizations must draw a visible outline of the measures and goals and allocate necessary resource for reaching the stated goals and determine which resource is responsible for the measures is on track. The organizations must also disclose how the large restructuring and strategic initiatives is organized. This is a way to help users understanding information and evaluate the ability of the organizations actual performance on carrying out the strategies [2]. The international classification company DNV GL also reports that in the transition to ESRS guidelines, companies has to have clear definition on policies for achieving the goals of target [115].

**Question 10:** The rationale behind this question is identifying sections where improvement of the organizations existing use of frameworks to the ESRS guidelines, by using checklists and tools. This could also be referred to as a framework gap analysis. The framework gap analysis will help organizations identify areas where there is a need for improving performance, in addition to developing future development [116].

**Question 11:** In an analysis conducted by PwC, there was an observation that the use of digital software is vital due to the significant amount of expended data requirements over the years by regulations. Features of the ESRS guidelines is currently developing, although incorporating the use of software is expected for integration to the organizations decision-making [117]. Deloitte find that by adopting an analytical approach which is datadriven, the organization will effectively address any external or internal sustainability risks and impacts. Additionally, this will require the organization to quantify financial effects of potential risks [2].

**Question 12:** This question is decided to be discarded, given the similar question 1 whereas both require a gap analysis. Thus, the data from this question is regarded to lack validity and therefore removed.

### 3.9.1 Ethical considerations

As for the mixed-methods approach to the research, ethical considerations are important because of human involvement and making use of different data types. Complete alignment with ethical guidelines sets precedence for welfare and protection of a research interviewee in addition to the resulting data. Further, the researcher has to attentively negotiate any unforeseen ethical dilemmas through the process of a research [118]. Furthermore, by including content analysis which is a qualitative method, and structured interview which provide quantitative information, the complexity will increase when both method is incorporated in the research [119]. Before conducting structured interviews, I have ensured prioritization of ethical considerations. This includes matters such as informed confidentiality, consent, anonymity, and regard for the interviewee's dignity and rights in this process. The interviewees of this research will remain anonymous, and the interviews is neither recorded. In the initial stage of each interview, I informed the interviewees about the research and what the participation comprises of before consent.

## 4. Analysis and Results

This chapter will provide analysis and results from the content analysis and readiness assessments based on chosen methodology. The methodology consist of qualitative and quantitative research such as a mixed-method research which is referred to as triangulation-based framework. This chapter will start out with the main thesis question will be addressed. First, semi-structured interview is conducted in order to receive important feedback on improvement of the model in relation to validity and reliability, then structured interviews are conducted. The readiness assessment will attempt to measure level of readiness for the upcoming requirements from EU, the ESRS frameworks. Next, the sub-question of identifying what frameworks of sustainability reporting the involved companies have used this current year. Thereafter identifying what the key differences are to the identified frameworks.

### 4.1 Main research question Readiness assessment

- *How ready are the companies for the upcoming mandatory sustainability reporting framework, CSRD?*

In order to answer the main research question, this study will try to measure level on readiness of the participating companies. This will be measured based on results from the company interviews. The first interview will be conducted by a semi-structured interview where the results will be transcribed below, the other two interviews are conducted as a structured interview, where the questionnaire is presented.

#### **Interview 1 – Semi structured interview**

**Question 1:** Has a gap analysis been carried out for data against requirements in ESRS and has a plan been drawn up over time to reduce this gap?

- *Company A: Yes, we have initiated the work of the GAP analysis. I will receive a report from a one of our consulting agencies within this or next week. The consultant agency will analyse the gap between our sustainability report of 2022 and the ESRS guidelines. We have yet to receive the results, and thus we are currently not able to draw a plan of reducing this gap. This will be done as soon as we can.*

**Question 2:** Over time, ESRS requires a more precise and data-driven materiality analysis based on the effects and risks the company faces. Has a systematic assessment of double materiality been established?

- Company A: *No, we have not yet implemented a software specifically for assessment of the double materiality.*

**Question 3:** Are stakeholders involved in assessing the company's materiality analysis?

- Company A: *Yes, although this question is somewhat difficult to answer within the frame it is presented. Our approach is to have an ongoing dialogue with stakeholders throughout the year. Still, this dialog might not be only considering the materiality of the company.*

**Question 4:** Has a plan been established to collect data in the value chain for the significant areas?

- Company A: *This question addresses an issue we are having with the new ESRS guidelines. We do not have overview on what will become our value chain at this moment. This is because of the ongoing discussions in the preparing work of the upcoming requirements for oil and gas sector. Experts point to the complexity for operators who have shared ownerships in assets. The question becomes then, where is the line drawn between the assets? An example of this could be two operators of a single oil platform, how much in-depth knowledge do they have into each other's value chain? Because of this, the last suggested reporting criteria is that oil and gas companies move over to a specific due diligence in those situations. Thus, the resulting answer to this question must be no.*

**Question 5:** Are there numerical targets and an established plan to reduce potential negative effects in the value chain?

- Company A: *Yes, we have numerical targets and established plan on some of the value chain, although not on the entire value chain as of yet.*

**Question 6:** Have strategic steps been taken to manage the complexity and magnitude of indirect sustainability effects and risks?

- Company A: *No, we have not taken the strategic steps in this perspective yet.*

**Question 7:** Have scientific models been established that are used to set the goals that are presented?

- Company A: *The scientific goals are specifically aligned with the science-based target initiative. The current issue as of now is that the implementation of specific goals for the oil and gas sector. This means that we do not have the relevant*



*information we need at the moment. We will report on science-based targets, but still it is not available for us.*

**Question 8:** Is the EU taxonomy used as a strategic planning tool?

- Company A: *No, we do not have too many activities that are included in the EU taxonomy.*

**Question 9:** Have policies and procedures been reviewed against substantive requirements in ESRS?

- Company A: *Yes, we have had internal review and external support by consultants to review the requirements in the ESRS.*

**Question 10:** Has a difference been mapped between upcoming specific requirements in ESRS versus their current existing sustainability reporting?

- Company A: *Our main sustainability reporting framework is the GRI. But we still have included the SASB, TCFD, CDP. We have to a degree reviewed a certain amount of the differences, of what we have identified to be key changes. Although we have not yet had a systematic difference mapping of all content as of yet. To assist our sustainability reporting we have engaged four different consulting agencies. We plan to do this work meanwhile working on the sustainability report of 2024.*

**Question 11:** Have contractual arrangements been made with third parties to obtain data?

- Company A: *Yes, we have made contractual arrangements to assist collect relevant data.*

### **Interview 2 and 3: Structured interviews**

**Question 1:** Has a gap analysis been carried out for data against requirements in ESRS and has a plan been drawn up over time to reduce this gap?

- Company B: *Yes*
- Company C: *Yes*

**Question 2:** Over time, ESRS requires a more precise and data-driven materiality analysis based on the effects and risks the company faces. Has a systematic assessment of double materiality been established?

- Company B: *No*
- Company C: *Not yet*

**Question 3:** Are stakeholders involved in assessing the company's materiality analysis?

- Company B: *Yes*
- Company C: *Yes*

**Question 4:** Has a plan been established to collect data in the value chain for the significant areas?

- Company B: *Not yet*
- Company C: *Not yet*

**Question 5:** Are there numerical targets and an established plan to reduce potential negative effects in the value chain?

- Company B: *No*
- Company C: *No*

**Question 6:** Have strategic steps been taken to manage the complexity and magnitude of indirect sustainability effects and risks?

- Company B: *Not yet*
- Company C: *Not yet*

**Question 7:** Have scientific models been established that are used to set the goals that are presented?

- Company B: *Not yet*
- Company C: *Not yet*

**Question 8:** Is the EU taxonomy used as a strategic planning tool?

- Company B: *No*
- Company C: *No*

**Question 9:** Have policies and procedures been reviewed against substantive requirements in ESRS?

- Company B: *Yes*
- Company C: *Not yet*

**Question 10:** Has a difference been mapped between upcoming specific requirements in ESRS versus their current existing sustainability reporting?

- Company B: *Not yet*
- Company C: *Yes*

**Question 11:** Have contractual arrangements been made with third parties to obtain data?

- Company B: *Yes*

- Company C: *Yes*

Table 4. Overview of resulting answers

Question	Company A	Company B	Company C
1	Yes	Yes	Yes
2	No	No	Not yet
3	Yes	Yes	Yes
4	No	Not yet	Not yet
5	Yes	No	No
6	No	Not yet	Not yet
7	Not yet	Not yet	Not yet
8	No	No	No
9	Yes	Yes	Not yet
10	Not yet	Not yet	Yes
11	Yes	Yes	Yes

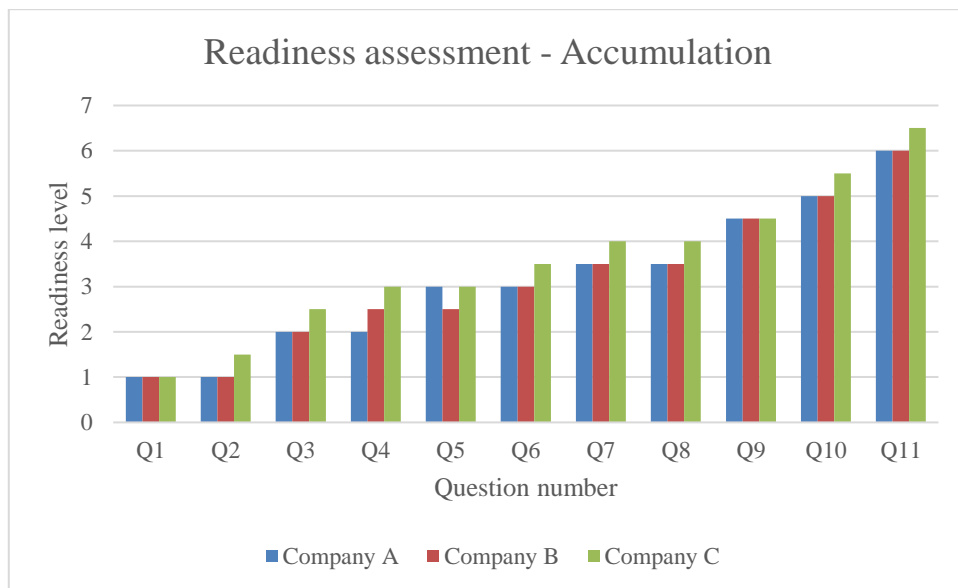


Figure 6. Accumulation of readiness level of the three participating companies.

### Summary of findings from readiness assessment

Company A and Company B achieved an overall level of 6 out of 11, and Company C received 6,5 out of 11. This research will compare results from readiness levels derived from the model and the evaluation set presented in Table 3. The result shows that Company A and Company B have average readiness for change. Meanwhile, Company C has average/good

readiness for change, which means the readiness level of the participants is close to each other. The in-depth semi-structured interview with company A provided more information on the resulting score, challenges of the ESRS guidelines, and critical feedback to the readiness assessment model itself. This will be further addressed in the discussion section of the study.

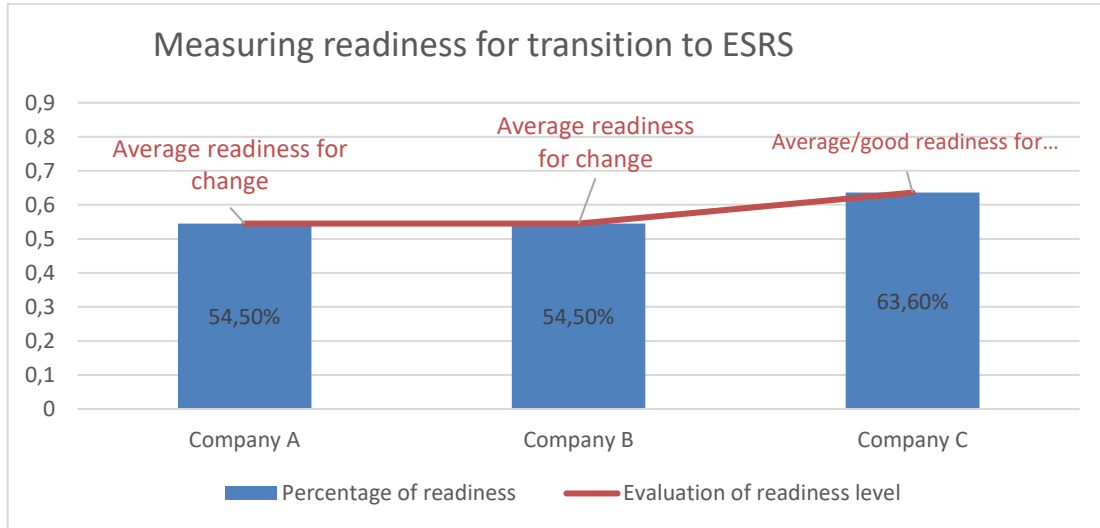


Figure 7. Evaluation set from Table 3 compared to accumulated readiness level.

## 4.2 Categorization of Sustainability frameworks

Companies can voluntarily choose which frameworks for sustainability reporting they like to use. In this section I want to define categories from the sustainability reports published from the participating companies. The categories are previously presented in the 3.1.4 theory section. These are as follows: GRI, SASB, CDP, IIRC, TCFD and NFRD 2014/95/EU.

## 4.3 Use of sustainability frameworks

This chapter aims to answer the research sub-question:

- *What frameworks are the companies using as a basis for sustainability reporting?*

As the names of the companies involved are not disclosed, I have provided sustainability reports from the Norwegian contractor Veidekke ASA[120] and international energy company with headquarters in Norway, Equinor[121] as sample examples.

The following framework's data is found in the Company A sustainability report published on the official website. The report states that Company A has reported on sustainability per the GRI standards, with information from January 1st, 2022 – December 31st, 2022. Further, the report states that the SASB framework has been used to address sustainability topics and accounting metrics. Next, we find that the sustainability framework CDP is used in order to address key climate-related risks which have the potential to impact in a strategic or financial

way. Lastly, Company A state that the company has conducted an opportunity assessment and climate risk based on the TCFD sustainability reporting framework in order to address the main risks and opportunities. Thus, the result of chosen sustainability frameworks is presented in fig. 8, whereas Company A has used the following frameworks for reporting: GRI, SASB, CPD, and TCFD. IIRC and NFRD 2014/95/EU is not mentioned in their report.

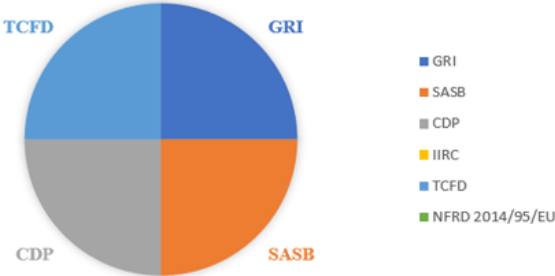


Figure 8. Visualization of used frameworks used by Company A

In Company B report published on the company’s official website, the following frameworks data is found. This report states that the report is in accordance with GRI 2021 – Oil and Gas Sector sustainability framework. In order to address potential impacts of climate change, energy transition, financial performance and long-term strategy the company has used the TCFD framework. Next we find that Company B use the framework of SASB to report on sustainability topics and metrics. Lastly, the sustainability report uses CDP to address climate related risk, specifically on GHG emissions.



Figure 9. Visualization of used frameworks used by Company B

In Company C report published on the company’s official website, the following frameworks data is found. This report states that the report is in accordance with GRI 11 2021 – Oil and Gas Sector and GRI 1: Foundation 2021 sustainability framework. Company C further state the use of CDP to disclose annual ESG performance of greenhouse gas (GHG) emissions. Company C have not included TCFD in the sustainability report, although they have provided

a separate report to address climate-related scenario Analysis and risk assessment with the use of TCFD.

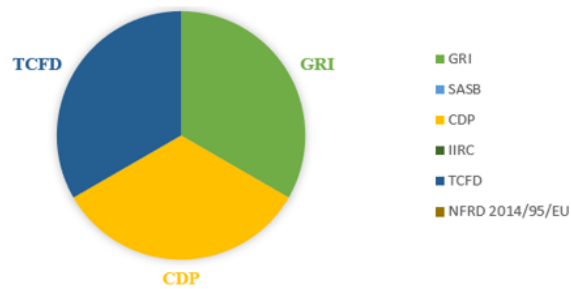


Figure 10. Visualization of used frameworks used by Company C

#### 4.4 Key differences between sustainability frameworks

This section will prove results for the following research sub-question:

- *What are the key differences between these sustainability frameworks?*

The aim of this section is to attempt to provide a clearer understanding on who, why and what the participating companies report on. The use of sustainability frameworks has been identified in chapter 5.3, this chapter aims to address the key differences between these according to each of the companies and perform analysis based on theory presented in chapter 2. From results we find that Company A and Company B use the same four sustainability reporting frameworks as a basis for reporting: GRI, SASB, CPD and TCFD. IIRC and NFRD 2014/95/EU is as previously mentioned not used as a framework of the participants, therefore they are not relevant for further study. The content analysis will divide information into following three categories: *Audience, focus, purpose*.

**GRI:** From the theory in chapter 2, we find that the *audience* to GRI sustainability reporting framework is to a broad multi-stakeholder base. Further, the *focus* of the framework is on the economic, external environment and societal impact. As for the *purpose* of the GRI framework; This framework enables companies to take responsibility and increase transparency for potential impacts by making a common global guideline standard for sustainability reporting.

**SASB:** This sustainability reporting framework has a typical *audience* of investors and financial stakeholders. The *focus* is on the potential internal impact on environmental, social and governance seen from a risk financial performance perspective. The SASB's *purpose* is to act as reporting/accounting to help companies report on disclosures such as financial material sustainability related matters for companies to provide relevant information to investors.

**CDP:** The *audience* of this framework is investor oriented and to specific customers which request information about disclosures. As for the *focus* of the framework, it is on potential

external impacts to the environment to stakeholders who request information. Further, the *purpose* of CDP is act as an enabler for companies and governments to disclose information on environmental impacts how to reduce these.

TCFD: The *audience* of this framework is oriented towards investors. As for the *focus*, it is on the financial risks which emerge as a result of the climate change. Further, the *purpose* of TCFD is to help companies to disclose environmental, social and governance (ESG) performance and potential material impact of the future value creation and performance.

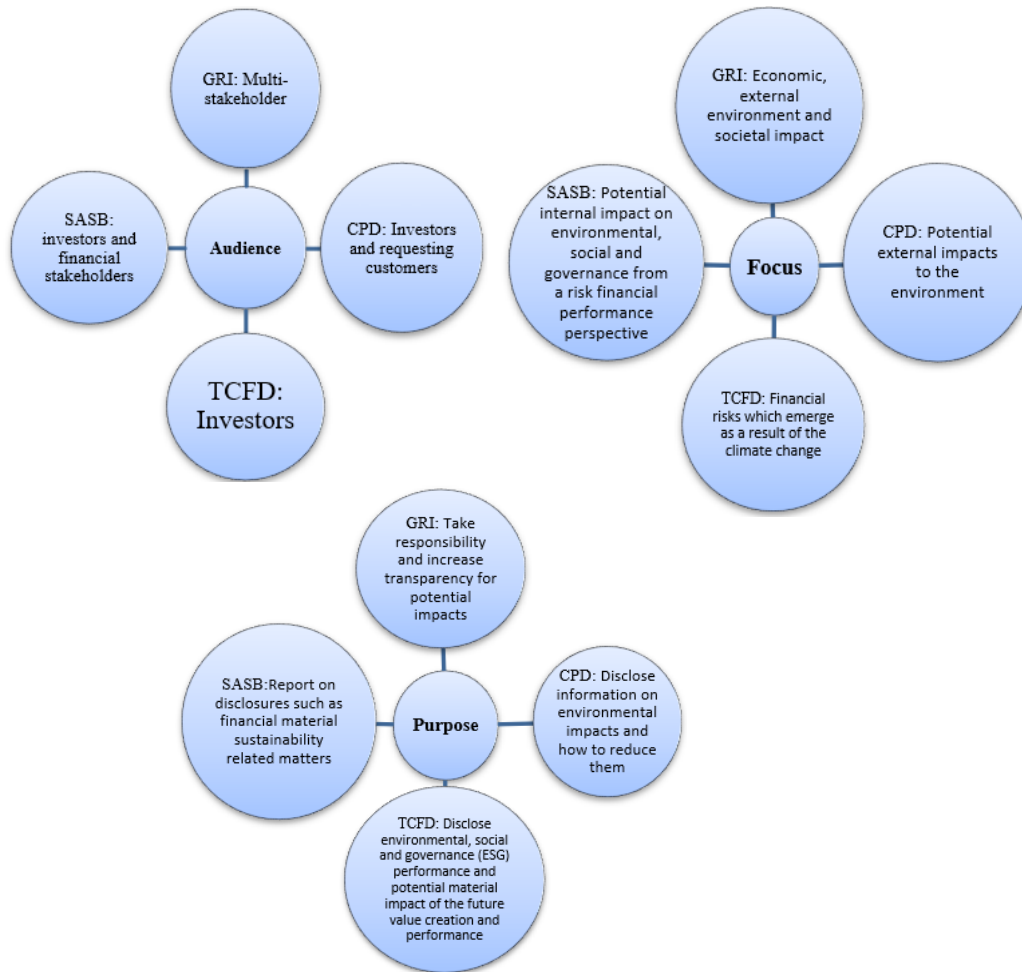


Figure 11. Audience, focus and purpose of chosen frameworks

## 5. Discussion

The focus of this study is to provide findings on the research of organizational readiness in the transition to the required upcoming sustainability reporting framework ESRS. This has been stated in the main research question:

- *How ready are the companies for the upcoming mandatory sustainability reporting framework, ESRS?*

In addition to this the research sub-questions have been to identify what sustainability reporting frameworks the participating companies are using today and to find the key differences amongst these.

- *What frameworks are the companies using as a basis for sustainability reporting?*

Lastly, the sub-research question.

- *What are the key differences between these sustainability frameworks?*

In order to answer the three research questions, this study has based on research from sustainability reporting experts built a readiness assessment tool and performed content analysis.

### 5.1 Readiness assessment

The data from company interviews suggest that there are measures companies should implement to increase readiness. This is supported by the level of readiness of the participating companies from the analysis and results section. Further, the content analysis finds that both companies A and B have implemented the use of GRI, SASB, CDP, and TCFD. Meanwhile, Company C has implemented the use of GRI, CDP, and TCFD in its sustainability reporting. Lastly, the key differences between these frameworks have been addressed in fig. 11, where the data are categorized in the audience, focus, and purpose. Initial findings from the readiness assessment have identified that the three companies could implement actions to gain readiness for the transition to the ESRS guidelines. Reports [2], [4] indicate that Norwegian companies must make significant changes to comply with the new regulations. As report from Deloitte points out, the new requirements from EU is not only about gathering more numbers and data, the guidelines aim to ensure the credibility, relevancy meeting new requirements [2]. Based on the readiness assessment, it is evident that the three companies have several strategic steps planned for the transition to ESRS, but there are also many that still need to consider. The assessment was based on expert recommendations for



readiness improvement on transition to the EU guidelines. However, Company A and B scored 6 out of 11. Company C, on the other hand, stands out due to the number of actions they plan to implement, earning them a total score of 6.5 out of 11. Nevertheless, all three companies still need to take numerous strategic steps to increase their readiness.

Next, we will examine the outcomes of the readiness assessment.

**Question 1:** When we investigate the first question, we find that all three companies have conducted a gap analysis to compare their data to new requirements. Company A's semi-structured analysis provided detailed information, but it was found that the company had not yet received the results of the gap analysis. As a result, they have not yet developed a plan to address the identified gap. It should be noted that conducting a gap analysis is the first step toward compliance with the upcoming ESRS requirements. Once this is done, companies can create a roadmap for alignment and develop a plan to address any identified gaps [104], [105]. Company B and Company C have stated that a gap analysis has been conducted. However, the two structured interviews did not provide any additional information on the gap analysis results or the plan to reduce potential gaps.



Figure 12. Level of readiness – question 1

**Question 2:** In question two, there is consensus amongst experts that there is increasing demand to implement data-driven materiality analysis for the extensive requirements in the ESRS [106], [107]. Still, neither of the participating companies has implemented software to assess the company’s double materiality. This raises several potential research questions, why have they not? Is there limited access to such software?

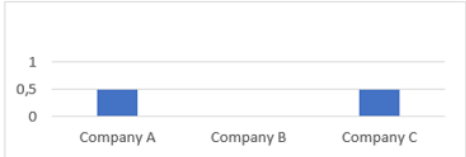


Figure 13. Level of readiness – question 2

**Question 3:** As for question three, the results find that all three companies have included stakeholders for assessing materiality analysis. However, the semi-structured interview of company A, found that the interviewees might perceive this question as general involvement

of stakeholders and not specifically to contribute to the companies materiality analysis as reports find important [107], [108].

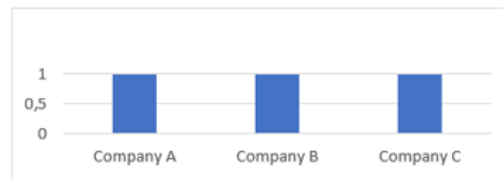


Figure 14. Level of readiness – question 3

**Question 4:** Next, for question four, from the previous chapter of results, we see that not one of the participating companies has established a plan for collecting data in the value chain. Company A points to an issue with requirements from ESRS. In the oil and gas sector, there is a lack of definition as to what is the value chain of the company. This statement could support the result, whereas no one of the participants has implemented a plan to collect data in the value chain.

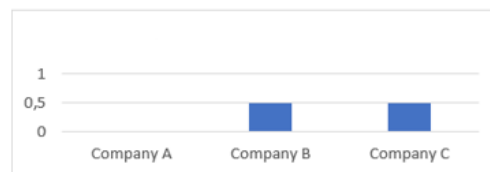


Figure 15. Level of readiness – question 4

**Question 5:** In question five, research find that it is critical to have numerical targets and to establish a plan to reduce the potential negative effects in the value chain [2], [110]. Initially, the result indicates that Company A established these. On the other hand, this does raise the issue from the previous question, where the value chain of the oil and gas sector is not clearly defined. This might support the results from company B and company C as to why neither of these has implemented numerical targets of the value chain.



Figure 16. Level of readiness – question 5

**Question 6:** Further, question six has not been implemented by either of the companies, but Company B and Company C intend to do so. Consulting agencies state that if a company discloses the potential risks and impacts beyond immediate control and has sustainability information integrated at a strategic level and in operations, it can result in less risk for investors and customers [2], [111], [112].

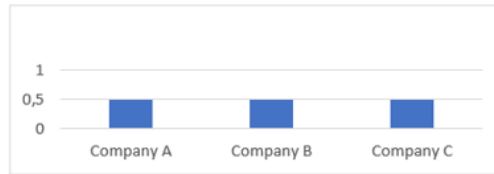


Figure 17. Level of readiness – question 6

**Question 7:** In question seven, an interesting issue was revealed – the three companies involved will eventually share their scientific models in order to achieve their goals. However, the necessary data to implement these models is currently unavailable from the science-based target initiative. This may suggest that the companies are prepared but lacking critical information. Reports indicate that companies still have a long way to go to meet this requirement, but it is unclear if this refers to ESRS's requirements [2].

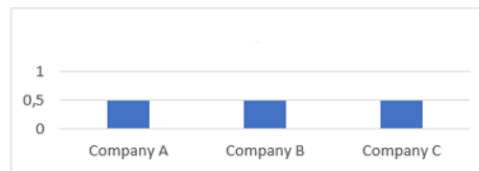


Figure 18. Level of readiness – question 7

**Question 8:** In question eight, research find that by incorporating the EU Taxonomy, companies can increase insight to strategy and improve resilience [114]. The findings from the results indicate that the EU Taxonomy may not be very useful for the oil and gas industry. Company A reported that they only have a few activities that fit into the EU Taxonomy. None of the participants in this study have been able to use the EU Taxonomy as a tool for strategic planning.



Figure 19. Level of readiness – question 8

**Question 9:** During question nine, we learned that both Company A and Company B had assessed their policies to meet the comprehensive standards set by ESRS. Company A conducted an internal and external review of its policies, including consulting agencies. On the other hand, Company C has not yet conducted a review, but they have expressed their intention to do so. According to the data, a potential reason why all participants have either implemented or intend to implement the question might be due to the availability of information on both previous sustainability reporting methods and the ESRS for companies.

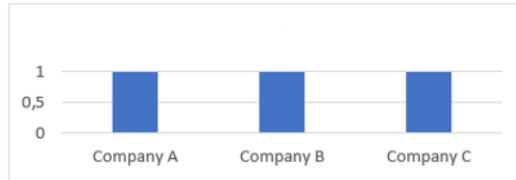


Figure 20. Level of readiness – question 9

**Question 10:** In question ten, Company A discloses that its main sustainability reporting framework is the GRI. In addition, they also use other reporting frameworks such as SASB, TCFD, and CDP. Company A has reviewed some differences, but they have yet to conduct a comprehensive difference mapping of all content. Company B still needs to do this, while only Company C has done so. Based on the findings of the semi-structured in-depth interview, systematic difference mapping appears to be time-consuming. This is confirmed by experts in the field who recommend that companies use tools and checklists to conduct a framework gap analysis for future development [116].

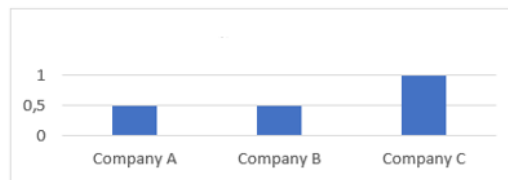


Figure 21. Level of readiness – question 10

**Question 11:** Question eleven finds that all the participating companies have made contractual arrangements with other companies to collect relevant data for the sustainability reporting requirements. Consulting agencies have reported that there has been an observation that the use of digital software is vital due to the significant amount of expended data requirements over the years by regulations [2], [117]. This research attempts to confirm that the participating companies have adopted the question to enhance their readiness for ESRS requirements. However, the question does not provide any information on how the contractual arrangements are described.

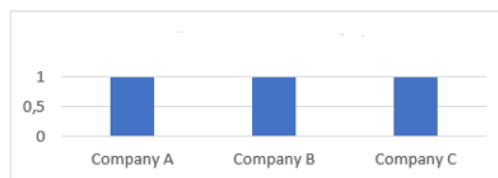


Figure 22. Level of readiness – question 11

After analysis of data collected from sustainability reporting experts from consulting agencies and the participating companies, it has been observed that Company A, Company B and Company C exhibit a similar level of readiness for the transition to the ESRS guidelines set by

the EU. However, Company C has demonstrated a slightly higher level of preparedness for this transition. For limitations of the readiness assessment, see section 5.4.

## 5.2 Sustainability reports - Content analysis

This subchapter aims to discuss the analysis and results of the sub-research question below.

➤ *What frameworks are the companies using as a basis for sustainability reporting?*

Content analysis is regarded as being one of many qualitative approaches to gain meaning and derive analysis from data [81]. The results from the three companies indicate that they have mostly used the same sustainability reporting frameworks. Fig. 8 and 9 demonstrate that Company A and Company B have utilized GRI, SASB, CDP, and TCFD. However, Company C has not implemented SASB. Neither of these have mentioned the use of the Non-Financial Directive - NFRD 2014/95/EU. Previously theory state that it is accounted for in § 3-3c, whereas the Norwegian Government aims to replace this directive with CSRD within 5. July 2024 [62]. A reason for this is derived from the semi-structured in-depth interview with Company A, where the interviewee mentions that the GRI is their main sustainability reporting framework. In theory section, it is found that the GRI has reported that all disclosure requirements in the NFRD 2014/95/EU are addressed by the GRI [36]. Thus, this study finds that there is no need to mention the NFRD 2014/95/EU in the sustainability reports if the GRI is used as a basis for reporting. The topic of which frameworks companies are using has been well researched, but the purpose of this sub-research is to use the results to determine the readiness of the participating companies. According to Deloitte, businesses that disclose their sustainability practices using GRI and TCFD are better prepared to meet the new standards set by the EU [2]. The research findings demonstrate that all the companies that participated have utilized GRI and TCFD, which increases their readiness for transitioning to the ESRS. To gain a deeper understanding, it is recommended for further research to introduce a method for quantifying and measuring the level of preparedness resulting from the use of sustainability frameworks.

Next, we move into identifying the key differences between the frameworks. This was done by categorizing qualitative information to three categories to gain a deeper understanding of differences. The three categories are audience, focus and purpose. Results show that the audience of SASB, CDP and TCFD are mostly oriented to the investors and financial stakeholders whereas the GRI is oriented towards multiple stakeholders. Further, the differentiating aspect from the focus is financial perspective of potential external and internal

impacts to the environment. This is the focus of SASB, CDP and TCFD meanwhile GRI does focus on Economic, external environment and societal impact.

The purpose of the GRI is to take responsibility and increase transparency for potential impacts. This is supported by studies who indicate that sustainability reporting is an important factor to increase credibility, openness and trust in the business world similarly to a yearly financial report [4]. A study of sub-research questions was conducted to gather data and gain a better understanding of how sustainability frameworks help companies prepare for the transition to ESRS guidelines. The study focused on key differences between these frameworks, but the insights were limited because all three participating companies used similar combinations of frameworks. To improve comparability, future research should include a larger sample of companies from different sectors.

### 5.3 Readiness assessment model validation and verification

When selecting a questionnaire to use as a research tool, the first step is to determine whether a validated model exists [122]. Research on readiness assessment on transition to the ESRS could not be found, therefore this model is built on the rational method. The term rational comes from the believed rationality of experts and their considerations [123]. Statements from consulting agencies on how to prepare for the ESRS is the foundation, this questionnaire relies on the experts knowledge to gain validity. In addition, the first of four interviews were conducted as a semi-structured interview to gain feedback from interviewees with experts. Based on the feedback received from interviewee, a number of the questions in the questionnaire has been edited to be clearer and more precise. This is supported by other researches where it is stated that the effectiveness of a questionnaire greatly depends on how it is worded and formatted. In addition, consider to include closed or open questions, or a mix of both [123]. To ensure the reliability of our model, it is recommended to seek input from consulting agencies and readiness assessment experts for suggestions on how to enhance it. At present, model has not been adequately validated. Nonetheless, by consulting with several experts the model's overall quality may be improved. However, the time constraint for this research is a limiting factor. For future studies, we recommend establishing a verification process that involves consulting agency experts and reporting company experts.

### 5.4 Limitations of the Readiness assessment model

In this section, I want to address the discovered limitations of the readiness assessment. There are multiple factors, such as the methodology of interviews scoring the questionnaire. When conducting interviews, both qualitative semi-structured in-depth interviews and structured interviews yield measurable results. However, structured interviews are easier to code and provide less data than semi-structured interviews. Through semi-structured interviews, we gain insight into the company's approach to each question, resulting in a more comprehensive understanding. Due to time constraints, there was a limited sample in this study. If given more time, I would have preferred to conduct semi-structured in-depth interviews with a larger sample. For further research, I would propose conducting semi-structured interviews with a larger sample in order to improve accuracy and validate results [73]. Regarding question scoring, it is unclear when to answer with "no" or "not yet." In the semi-structured in-depth interview, Company A answered "not yet" fewer times compared to structured interviews with Company B and C. This could be due to the structured interviews did not require participants to provide detailed explanations for choosing "not yet." Therefore, the scoring of interviews may be affected by the lack of clarity between "no" and "not yet."

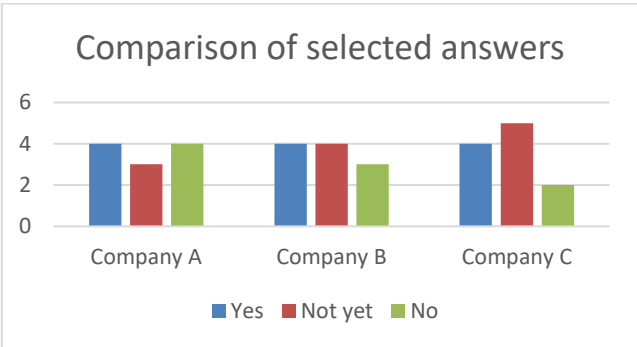


Figure 23. Comparison of selected answers

As a result of the selection of answers, the difference between answering no and not yet lies within the intent to implement the question in time for the ESRS requirements, but do the interviewees know this difference?

Further, I must address implementing a simplified readiness assessment model and a simplified scoring method based on other studies. Additionally, to potentially improve the accuracy of results, I would suggest conducting semi-structured in-depth interviews with a larger sample of companies in order to increase reliability and validity.

## 6. Conclusion

- *How ready are the companies for the upcoming mandatory sustainability reporting framework, ESRS?*

The main research question presented above was the starting point for conducting this research. In order to gain insights into readiness for sustainability reporting and the current frameworks, it was necessary to explore existing research on sustainability reporting and research from experts on which strategic steps can improve organizational readiness for the ESRS by the EU. Results from this research indicate that the three participating companies within the oil and gas sector in Norway have a similar level of readiness, and the companies can implement strategic steps to improve readiness. The questions from the readiness assessment are based on what experts of sustainability reporting state are the necessary steps to achieve readiness. Findings from this research underlined findings from other reports stating that Norwegian companies have improvement potential to achieve readiness of sustainability reporting. Concludingly, this research finds that the participating companies can still take a number of these steps. The steps which have yet to be taken are confirmed by companies indicating their intention to implement them. In the data collection phase of research, it was found that incorporating certain sustainability frameworks into the yearly sustainability report can improve readiness for transition to the ESRS. Thus, the sub-research question was implemented.

- *What frameworks are the companies using as a basis for sustainability reporting?*

Findings from this sub-research find that all three participating companies in the oil and gas sector in Norway use similar sustainability GRI, SASB, CDP, and TCFD. The sustainability frameworks that improve readiness for the ESRS guidelines are the GRI and TCFD, which have been used as a basis for sustainability reporting by these companies. Thus, data from this research suggest that the companies have a similar basis for sustainability reporting and have improved their readiness for the EU guidelines. Furthermore, to determine the frameworks used by participating companies for sustainability reporting, I have conducted literature research and compared the most commonly used sustainability reporting frameworks. Through our research, it was discovered that sustainability frameworks are intricate and not uniform in their requirements. Therefore, the research also tried to illuminate the key differences between these frameworks.



➤ *What are the key differences between these sustainability frameworks?*

Findings from this sub-research suggest that there are key differences between the common frameworks, and data suggest that the categories of audience, focus, and purpose of these sustainability reporting methods differ. However, it is a well-researched topic; the findings provided did not contribute any valuable findings to the main research question regarding the readiness of participating companies.

Lastly, this research used a mixed-method methodology and involved three companies in the oil and gas industry. This includes qualitative semi-structured in-depth interviews, content analysis of sustainability reports, and quantitative structured interviews. In the analysis of results phase, it's worth noting that there are various ways to interpret the data collected for this research. My conclusions are based on my literature research and my understanding of the theories presented. To improve the data collection process, conducting more semi-structured in-depth interviews to understand the findings better and ensure consistency across different companies would be beneficial. This study aims to contribute to companies and help identify strategic measures recommended by consulting experts that can assist companies in meeting ESRS requirements and improving their preparedness. While there is research available on the quality of sustainability reporting by companies, there is a lack of research on the readiness of companies for the new sustainability reporting frameworks mandated by EU regulations. This study aims contribute to the research gap by examining how prepared companies are for the change to the ESRS sustainability reporting guidelines.

## 6.1 Proposals for further studies

Suggestions for further research have, in brief, been addressed in this research. These are areas of interest where it is not conducted in-depth research. This study's chosen methodological approach has been adapted to measure the readiness of transition to the ESRS guidelines. However, this research has limitations regarding the application of a suitable readiness assessment model, given the low amount of existing research to compare data with. As a result, the first area of further studies is to further improve and develop readiness assessment from this research by addressing its limitations presented. The next area of interest found in this research is that companies that have incorporated the GRI and TCFD are more

prepared for the ESRS guidelines by the EU. Lastly, another interesting aspect of this research is to examine the transferability of the readiness assessment to other sectors and international companies. Therefore, three suggestions further research is highlighted below.

- *How can readiness assessment model to transition to the EU guidelines be improved?*
- *How does GRI and TCFD improve sustainability reporting readiness to the EU guidelines?*
- *Can findings from this research be applicable to other sectors and companies?*

The suggested further researches are presented with the intention to provide more information and to hopefully provide a step further in scientific research of sustainability reporting. This is to address highly relevant and vital matters of achieving a sustainable future. This research can hopefully contribute to other researchers with models to measure readiness, gain a better understanding of the complexity of sustainability reporting, and which strategic steps companies can implement to gain readiness for the upcoming EU guidelines further.

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## Appendices

Appendix 1.

Question no.	Readiness self-assessment model	Answer
1	Has a gap analysis been carried out for data against requirements in ESRS and has a plan been drawn up over time to reduce this gap?	Yes, Not sure, Not yet, No.
2	Over time, ESRS requires a more precise and data-driven materiality analysis based on the effects and risks the company faces. Has a systematic assessment of double materiality been established?	Yes, Not sure, Not yet, No.
3	Are stakeholders involved in assessing the company's materiality analysis?	Yes, Not sure, Not yet, No.
4	Has a plan been established to collect data in the value chain for the significant areas?	Yes, Not sure, Not yet, No.
5	Are there numerical targets and an established plan to reduce potential negative effects in the value chain?	Yes, Not sure, Not yet, No.
6	Have strategic steps been taken to manage the complexity and magnitude of sustainability effects and risks?	Yes, Not sure, Not yet, No.
7	Have scientific models been established that are used to set the goals that are presented?	Yes, Not sure, Not yet, No.
8	Is the EU taxonomy used as a strategic planning tool?	Yes, Not sure, Not yet, No.
9	Have policies and procedures been reviewed against substantive requirements in ESRS?	Yes, Not sure, Not yet, No.
10	Has a difference been mapped between upcoming specific requirements in ESRS versus their current existing sustainability reporting?	Yes, Not sure, Not yet, No.
11	Have contractual arrangements been made with third parties to obtain data?	Yes, Not sure, Not yet, No.

Appendix 2.

Company A – Sustainability frameworks			
Framework	Audience	Focus	Purpose
<b>GRI</b>	Multi-stakeholder	Economic, external environment and societal impact	Take responsibility and increase transparency for potential impacts
<b>SASB</b>	Investors and financial stakeholders	Potential internal impact on environmental, social and governance seen from a risk financial performance perspective	Report on disclosures such as financial material sustainability related matters
<b>CDP</b>	Investors and requesting customers	Potential external impacts to the environment	Disclose information on environmental impacts and how to reduce them
<b>TCFD</b>	Investors	Financial risks which emerge as a result of the climate change	Disclose environmental, social and governance (ESG) performance and potential material impact of the future value creation and performance

Appendix 3.

<b>Company B – Sustainability frameworks</b>			
<b>Framework</b>	<b>Audience</b>	<b>Focus</b>	<b>Purpose</b>
<b>GRI</b>	Multi-stakeholder	Economic, external environment and societal impact	Take responsibility and increase transparency for potential impacts
<b>SASB</b>	Investors and financial stakeholders	Potential internal impact on environmental, social and governance seen from a risk financial performance perspective	Report on disclosures such as financial material sustainability related matters
<b>CDP</b>	Investors and requesting customers	Potential external impacts to the environment	Disclose information on environmental impacts and how to reduce them
<b>TCFD</b>	Investors	Financial risks which emerge as a result of the climate change	Disclose environmental, social and governance (ESG) performance and potential material impact of the future value creation and performance

Appendix 4.

<b>Company C – Sustainability frameworks</b>			
<b>Framework</b>	<b>Audience</b>	<b>Focus</b>	<b>Purpose</b>
GRI	Multi-stakeholder	Economic, external environment and societal impact	Take responsibility and increase transparency for potential impacts
CDP	Investors and requesting customers	Potential external impacts to the environment	Disclose information on environmental impacts and how to reduce them
TCFD	Investors	Financial risks which emerge as a result of the climate change	Disclose environmental, social and governance (ESG) performance and potential material impact of the future value creation and performance