THE CHALLENGE OF INTEGRATED REPORTING IN THE DUTCH OIL AND GAS INDUSTRY

by

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Prefatory Note

This research is a bachelor thesis as a requirement to graduate with the degree of Bachelor of Science in International Finance and Accounting from Saxion University of Applied Sciences. This research deals with a thorough study about integrated reporting and meant to provide insight about the challenge of establishing integrated report in the Dutch oil and gas industry. Not only students and researchers in the economic field, but the management of oil and gas companies have also become the target of this research.

Although this research follows qualitative approach, the author collected and measured some quantitative information to support this research, hence the author come up with suggestions based on what do the quantitative information indicate. During the work of this research, there were some difficulties in obtaining research paper sources that strongly related to this research's main problem, but eventually, conclusion can be drawn by linking various reliable data and articles.

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Abstract

Integrated reporting (IR) is the process of communicating sustainable value creation, internal dynamics of an organization’s strategy, governance, performance and prospects in a more cohesive and efficient approach than traditional financial reporting. It aims to ensure that an organization’s short-, medium- and long-term future value is expressed by considering its sustainability impacts, targets and expectations and linking them with financial results. However, most organizations still uncertain about what to report and have doubts whether IR is relevant for them. In this research, the conceptual framework of IR, the development of IR in the Netherlands and the challenges of IR implementation will be given. This research paper focuses on the oil and gas industry, which is very important to the world’s economy and at the same time has significant impacts on the environment. This paper also follows a qualitative research approach and aims to thoroughly analyze which IR aspects are valued the most important in the Dutch oil and gas industry. Findings from this research aim to provide insights to students and researchers in economic field about IR practice and the challenges in implementing it. Towards the end, the author tried to list IR aspects that can be considered important in establishing integrated report by early IR adopters in the industry.

Key words: Integrated reporting, International Integrated Reporting Council, Transparency Benchmark, oil and gas industry.

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Chapter I
Introduction

1.1 Problem Description

Hundreds of swans and birds were covered in oil after a tanker crashed into a landing stage in the port of Rotterdam (BBC, 2018). Four crewmembers of Swire Blue Ocean's offshore wind installation vessel, Pacific Osprey, also suffered injuries when the box section of the crane boom on Pacific Osprey collapsed onto the bridge in Eemshaven (Russell, 2018). In variety of cases, offshore platforms and activities have potentially led to fatal consequences. As the offshore technology expanded in exploring and drilling deep water oil and gas, they have also become the sources of environmental pollution and hazardous accidents at various stages of oil and gas production process (Anis & Siddiqui, 2015).

The oil and gas sector is one of the most important industries to the world's economy. According to (Morshed & Cleef, 2018), the Netherlands has been known as the leader in oil and gas services whereby it ranks second in Europe in gas production and exports that also has one of the biggest downstream hubs in Europe (Rotterdam harbour). One of the leading companies in offshore oil and gas industry is Heerema Marine Contractor (HMC), an international marine contractor headquartered in Leiden, Netherlands. Its operations include transporting, installing and removing offshore facilities (HMC, 2015). Due to the nature of these activities which engender high risks, organizations in this sector work continuously to reduce the significance of their adverse impacts on the environment and people(Schneider et al., 2015).

People no longer believe that businesses are able to take from society without also accounting back to society. It is reflected by stakeholders' demand on transparency, accountability and strategic information that connect the past to future risks and opportunities, while shareholders gain more interest in non-financial performance by requiring organizations to report their sustainability information (Rupley, Brown, & Marshall, 2017). Sustainability is essential to any kind of organizations and in order to be sustainable, organizations require a balance between economic progress, social advances and environmental protection, which is the foundation of value creation (EY, 2014). The term "sustainability" is often associated with "corporate social responsibility" (CSR), while the two are actually different concepts: one focusing on environmental concerns and the other is on social aspects (Idowu, Dragu, Tudor, & Farcas, 2016). However, as stated by Martyn Jones, deputy president of ICAEW, the goal posts for reporting are shifting that governments, regulators and investors increasingly want to know about the sustainability of organizations, so it increases the need for directors to put sustainability into the core of their strategies and corporate reporting (Deloitte, 2013). The perspective of organization's value has also evolved over time. It is not merely about market value that mainly rely on tangible assets, but it has shifted into greater basis on intangible assets, such as intellectual capital, natural and human capital (EY, 2014). This development indicates that financial information alone is not sufficient to make better decisions and attract potential investors. Today's organizations are looking at different aspects including activity, corporate governance, social responsibility and sustainability reports to complement their financial report, and they still need the understanding to link these non-financial information with the financial one (Yildirim, Kocamis, & Turuduoglu, 2017). Consequently, organizations begin to create an integrated business strategy through "Integrated Reporting".

The current business environment has shown that IR become a pressing matter of organizations to account how they contribute to the economic, social and environmental development. IR is a process of understanding the links between financial results and sustainability impacts, which are vital for business managers, and coping with every obstacle and surviving in the market with the objective of sustainability (Kaya, Erguden, & Sayar, 2016). According to Kaya et al. (2016), IR is a concise communication that conveys internal dynamics of an organization's strategy, governance, performance and prospects, in the context of its external environment, are established to create values in all stages of planning phases from the short, medium and long-term plans.

However, most organizations still uncertain on what to report in their integrated report and doubts whether IR is relevant for them (McNally, Cerbone, & Maroun, 2017). IR seems to be one of the most challenging and demanding tasks for any organizations, which have to deal both with an increasing number of powerful stakeholders and provide its managers with increasingly complex and useful information (Kaya et al., 2016). Furthermore, the fact that IR is still voluntary in most countries become another obstacle in IR practice. In countries such as China, India and South Korea, which have developing economies, are usually after short-term growth opportunities and therefore, they are less interested in long-term growth opportunities and long-term sustainability (Kaya et al., 2016).

As for HMC, the company fosters a culture that focuses on the long term and makes a difference through its people (HMC, 2015). This focus is essential to HMC since oil and gas industry largely contribute to the world's economy in a long-term. Organizations in the industry are inevitable to implement serious changes in the way they do the business (Schneider et al., 2015). They need the ability to clearly identify the values that are important to improve and strengthen their business. It is important for the organization to identify key issues on its sustainability and report its integrated business strategies through integrated report. Thus, this research will further discuss about the challenges of integrated reporting implementation in oil and gas industry in the Netherlands; the current condition of IR in the Netherlands, as well as examining the most important aspects of IR in the Dutch oil and gas industry (Dutch O&G).

1.2 Research Questions

1.2.1 Main Question

What are the challenges of IR implementation in oil and gas industry in the Netherlands?

1.2.2 Sub-questions

a) What is the current state of IR in oil and gas industry in the Netherlands?

b) Which aspects of integrated report, based on literature, are valued the most important in the industry?

c) Which aspects of integrated report, based on the review of the oil and gas companies listed in Transparency Benchmark, are valued the most important in the oil and gas industry?

1.3 Research Methodology

By means of data gathering, this study uses different sources of literatures to generate relevant evidence. First, this study relies on the review of literature and hence, it is regarded as a qualitative research. A literature review is the process of summarizing, comparing and discussing published information in the literature related to a particular field of study within a certain time period. It summarizes relevant information from prior research taken from reliable sources and it helps to present the important aspects taken from them. The main reason to use literature review as the research methodology is to generate critical evaluation to the research problem being investigated. Secondly, this study analyzes the oil and gas companies listed in Transparency Benchmark (TB) website to gain insight into the Dutch companies corporate social reporting activities. The study will focus on the Dutch companies who has the best IR practice based on the TB scores. To analyze, the companies' TB scores will be compared to see which criteria show the highest scores. Subsequently, the important aspects of IR are ought to be determined. As for the relevant materials, the study comprises the following range of media:

a) Scientific and professional journal articles are the main source in the research project,

b) Records of organizations and government agencies (such as annual report, integrated report, sustainability report and industry analysis),
c) Survey research, which based on Transparency Benchmark web site,
d) Newspaper articles.

Selection of search engines

In this study, scientific journals used were taken from the following search engines:

a) Science Direct,
b) Emerald Insight,
c) Research Gate,
d) IntechOpen.

Identification of key words

In order to retrieve the relevant articles, the following key words and abbreviations have been used in various combinations; *integrated reporting (IR), International Integrated Reporting Council (IIRC), Transparency Benchmark (TB), Dutch oil and gas industry (Dutch O&G), Dutch oil and gas service companies (Dutch OGS).*

Selection and number of articles

The researcher uses several criteria for selecting articles:

a) The article mentions the development and the implementation of integrated reporting (IR),
b) The article mentions the analysis and current states of IR and its practices in oil and gas sector in the Netherlands,
c) The article includes elements from IR (such as environmental issues and corporate governance codes) and its key elements in the oil and gas sector (such as natural capital, health and safety).

1.4 Research Objectives

This research aims to provide insights into the development of IR in the Dutch oil and gas industry by exploring the challenges to establish an integrated report. This research also offers advice on whether IR is beneficial to Dutch OGS and some recommendations for Dutch OGS on what aspects are valued the most important in value creation process to produce an integrated report.

Chapter II
Theoretical Framework

2.1. Introduction

In recent years a movement towards value creation models in corporate reports can be seen in a number of companies (KPMG, 2018). However, companies still have doubts about the relevance of IR and difficulties to clearly identify the most important aspects to be disclosed in an integrated report (McNally et al., 2017). Another difficult issue is to address what the outlook of the business continuance for the Dutch O&G will look like (Ruoff, 2016). Those issues will be discussed in detailed later in this chapter. The remainder of this chapter is structured as follows: Section 2 provides brief overview on the evolution of corporate reporting and section 3 is about the history of IR. This includes the framework used to establish an integrated report and the development of IR in the Dutch O&G. Section 4 provides analysis of 2017's Dutch O&G Transparency Benchmark (TB) scores as well as the best practices of IR in the Dutch O&G based on both TB analysis and other literatures.

2.2. Evolution of Corporate Reporting

Historically, corporate sustainability was a subject of interest as early as 1900s. It was in 1953 when H. Bowen introduced the first definition of CSR, "[…] the obligation of businessmen to pursue those policies, to make those decisions, or to follow those lines of action which are desirable in terms of the objectives and values of our society" (Christofi & Christofi, 2012). In 1984 Freeman introduced the stakeholder theory that argued company's responsibilities consisted of two-ways responsibility between business and its internal and external stakeholders (Idowu et al., 2016). Within the stakeholder view, there are implicit contracts between society and companies in relation to any social activities they have done (Hanifa & Cahaya, 2016). This means companies have a responsibility to act based on stakeholders' interests and disclose their CSR information to all stakeholders. Legitimacy theory also suggests that firms communicate information to stakeholders in order to conform to societal expectations (Rupley et al., 2017). It means companies have a responsibility to the society to act in their bests interests and to provide them with CSR disclosures, so that the society can evaluate the performance of those companies. Prior research provides evidence that enhanced CSR disclosure provides benefits to companies including higher credit ratings and positive capital market reaction to disclosure regulations (Rupley et al., 2017).

With the emerging conflicts between prosperity and negative effects on the environment such as water, air pollution and resource scarcity, sustainability reporting (SR) is becoming increasingly popular. The sustainability concept was popularized by the publication of the Brundtland Report in 1987, under the title “Our Common Future” (Idowu et al., 2016). The report defined sustainability as “the ability to meet the needs of present generations without compromising the ability of future generations to meet their own needs” and challenged the world to envision a future where the threats of environmental destruction are minimized and the people of the world enjoy economic stability and social equity between generations (Christofi & Christofi, 2012). Both SR and CSR are mainly applied on a voluntary basis, except in some European countries, such as Denmark, Norway, France, the Netherlands, Belgium and United Kingdom, which have national regulations regarding CSR, and therefore this field becomes mandatory (Idowu et al., 2016). Various policies, frameworks and guidelines regarding SR and CSR have been used. As an example, the Netherlands sets obligatory CSR regulations such as Dutch Civil Code 1838 and the Environmental Protection act (Wolniak & Hąbek, 2013). Their CSR policies mainly based on self-regulation and supporting CSR activities by giving instructions, manuals and providing other types of documents (Wolniak & Hąbek, 2013). Other reporting companies may also use UN Sustainable Development Goals, ISO 26000 and Global Reporting Initiative (GRI). GRI is a non-governmental organization based in Netherlands, which was founded in 1997 with the main purpose of supporting economic, environmental and social sustainability (Idowu et al., 2016). Together with experts in all stakeholder groups, GRI established GRI guidelines and become the world’s most widely used SR standards. Up until 2017, KPMG reported that 93% of 4,900 large companies over the world have published sustainability report with 63% of them comply with GRI standards (KPMG, 2017). However, previous studies emphasize a lack of comparability regarding standards, guidelines and frameworks, questioning their utility or even a disconnection between these types of reports and the strategy of the company (Idowu et al., 2016). This gap is intended to be filled by integrated thinking to introduce new vision promoted by the International Integrated Reporting Council (IIRC) in their work on the integrated report (Idowu et al., 2016).

2.3. Integrated Reporting

2.3.1 Definition of Integrated Reporting

IR can be defined as the process of communicating sustainable value creation, which provides insights into the resources and relationships used or affected by the organization, as well as the interaction between the organization and its external environment (Stacchezzini, Melloni, & Lai, 2016). IR arises from the need to link financial with non-financial information so that users can fully understand the corporate performance and conduct risk analysis of the company. It aims to ensure that the company's short-, medium- and long-term future value is expressed by considering the company's sustainability results, targets and expectations and linking them with financial information (EY, 2014). Although an integrated report is not intended to be a sustainability report, its focus on sustainability issues and purpose of stimulating integrated thinking are clear; as the CEO of the IIRC explains, "Integrated report promotes a more cohesive and efficient approach to corporate reporting that draws on different reporting strands […]" (Stacchezzini et al., 2016). All the operating and functional units of a company, as well as the capitals that it uses to create value, must be considered. Moreover, companies should reveal not only their performance, but also how they achieve these results. Stacchezzini et al. (2016) mentioned that companies should provide information about their inputs (resources, relationships), business activities, outputs (products, services), outcomes (impacts on resources, relationships) while the International Integrated Reporting Framework (IIRF) also requires a forward-looking focus (targets, forecasts, projections) and quantitative information (key performance indicators, monetized metrics).

2.3.2 The History of Integrated Reporting

South Africa has played a leading role in promoting IR practices. It is the first country that require all publicly traded companies to issue integrated report or to provide reasons for not doing so (often referred to as a "comply or explain" basis for preparing an integrated report) (McNally et al., 2017). The first implementation draft of integrated report was published in 2011 by the IIRC, consisting subjects matter and principles of integrated report. The IIRC then launched a pilot program in 2012 involving about 100 companies to create a new global IR framework (Yildirim et al., 2017). Eventually, the IIRF was published in December 2013.

While not being another country with a mandatory requirement outside South Africa, it is expected that in the future, there will be an increase in the number of voluntary applications and the number of countries that are compulsory (Yildirim et al., 2017). A number of organizations in Europe were already publishing integrated reports even before the launch of the IIRF in December 2013, including The Crown Estate (UK); SAP (Germany); Novo Nordisk (Denmark); Port of Rotterdam Authority (the Netherlands) (EY, 2014). Moreover, at the end of 2014, the European Commission released EU Non-Financial Reporting Directive (Directive), calling businesses across Europe to start thinking about broader value creation and to fulling integrate their reporting processes (IIRC, 2017b). This initiative should not be seen as adding to reporting burden for companies, but of encouraging them to adapt their existing reporting to reflect the broader, long-term vision for their company and the resources and relationships they use in the world (IIRC, 2017a). The CEO of IIRC, Richard Howitt added, "The European Commission are to be congratulated on the publication of these principles-based guidelines and in recognizing that 'integration' between different voluntary frameworks used already is better than adopting any one exclusively" (IIRC, 2017b).

2.3.3. The International Integrated Reporting Framework

Integrated reporting framework aims to establish guiding principles and content elements that govern the overall content of an integrated report (IIRC, 2013). It enables a company to use common standards in producing a single integrated report (Yildirim et al., 2017). Table 1 shows a brief explanation of IIRF Guiding Principles, informing the content of the report and how information should be presented:

Principles	Objectives
Strategic focus and future orientation	Provide insight into the organization's strategy and how it relates to the organization's ability to create value in the short, medium and long-term, and to its use of and effects on the capitals.
Connectivity of information	Promote a holistic view of the combination and interdependencies between the factors that affect the organization's ability to create value over time. of the combination, interrelatedness and dependencies between the factors that affect the organization's ability to create value over time
Stakeholder relationships	Provide insight into the nature and quality of the organization's relationships with its key stakeholders.
Materiality	Identify and evaluate the importance of relevant matters in terms of their ability to affect value creation.
Conciseness	An integrated report includes sufficient context to understand the organization's strategy, governance, performance and prospects.
Reliability and completeness	An integrated report should include all material matters, both positive and negative, in a balanced way and without material error.
Consistency and comparability	The information in an integrated report should be presented: - On a basis that is consistent over time, - In a way that enables comparison with other organizations to the extent it is material to the organization's own ability to create value over time.

Table 1 Guiding Principles of integrated report (IIRC, 2013)

The main purpose of these principles is to recognize the variation in individual circumstances of different organizations and to make comparability become possible across organizations

(Chersan, 2018). In this context, the IIRF does not set benchmarks for an organization's performance or the quality of its strategy, but to identify information to be included in an integrated report for use in assessing an organization's ability to create values (IIRC, 2013). Yildirim et al. (2017) also stated that at the core of the IR conceptual framework lies on the extension of the company's reporting to include all the resources that it uses as input to its business activities. Table 2 shows the content elements, categories of information required to be included in an integrated report, which must answer the question for each of them:

Elements	Questions
Organizational overview and external environment	What does the organization do and what are the circumstances under which it operates?
Governance	How does the organization's governance structure support its ability to create values over time?
Business model	What is the organization's business model?
Risk and opportunities	What are the specific risks and opportunities that affect the organization's ability to create values and how is the organization dealing with them?
Strategy and resource allocation	Where does the organization want to go and how does it intend to go there?
Performance	To what extent has the organization achieved its strategic objectives for the period and what are its outcomes in terms of effects on the capitals?
Outlook	What challenges and uncertainties is the organization likely to encounter in pursuing its strategy, and what are the potential implications for its business model and future performance?
Basis of presentation	How does the organization determine what matters to include in the integrated report and how are such matters quantified or evaluated?

Table 2. Content elements of integrated report (IIRC, 2013)

The content elements are fundamentally linked to each other and are not mutually exclusive (IIRC, 2016). At this point, the form of questions that has been answered will provide information in a way that creates correlations between the content elements.

While information quality is one key aspect within the scope of IR, value creation is a vitally concentrated area as well (Kaya et al., 2016). As represented in Figure 1, it is apparent that the components of value creation process align with the content elements of integrated report. In addition to financial capital, IR examines five additional capitals; tangible asset such as manufactured capital, intangible assets such as intellectual capital, human capital and

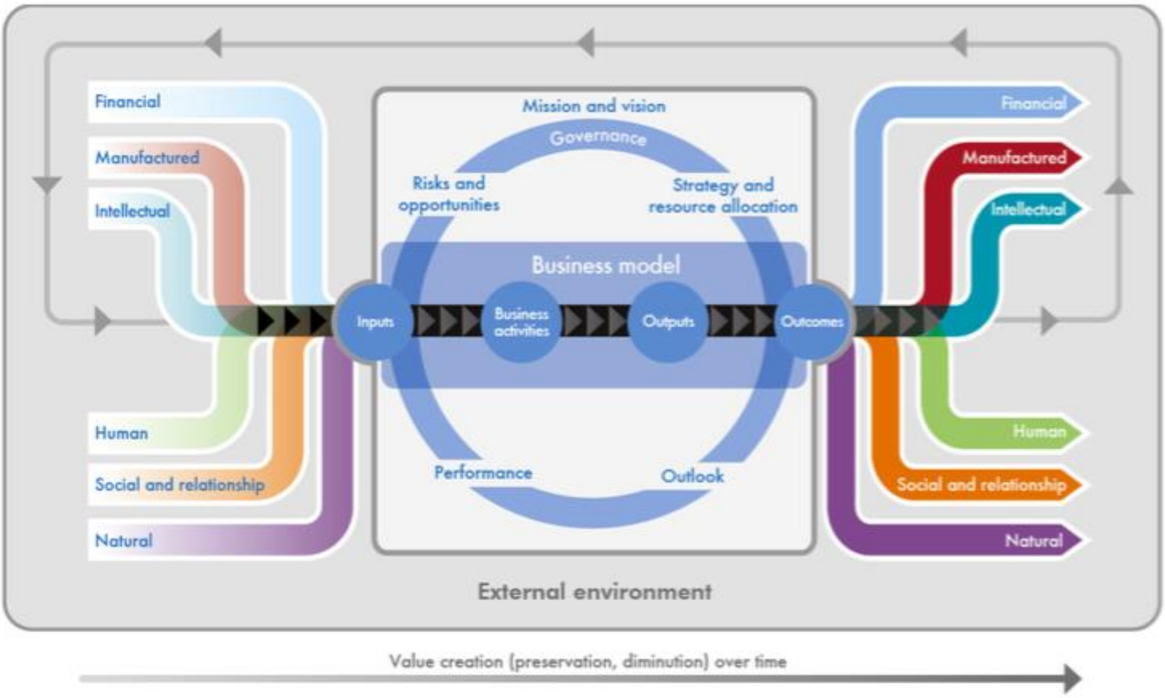


Figure 1. Value creation process of integrated report (IIRC, 2013)

relationship with community, also natural capital (EY, 2014). Taking various forms of capital does not in itself create value. Value is created through the business conducts in order to release value from inputs of capital (IIRC, 2016). The core of the organization, the business model, draws on the six capitals as inputs and through its business activities, converts them to outputs (e.g. products, services and waste) (IIRC, 2013). This process results in outcomes, both positive and negative consequences of the business activities (e.g. increased sales, customer loyalty and disrupted operations) that closely linked to the reactions of stakeholders (IIRC, 2013). Any value created, regardless it becomes a tangible or intangible asset, will translate into performance and therefore, market value will be impacted (EY, 2014).

2.3.4. The Development of Integrated Reporting in the Netherlands

Dutch companies already have some years of experience with environmental management as 16% of the Netherlands population considered very environmentally conscious customers who choose only those products that do not pose environmental or social issues (Wolniak & Hąbek, 2013). The environmental reporting obligation has been implemented in the Netherlands since 1997, by the extension of the Environmental Management Act, and was further developed in 1999, by the Environmental Reporting Decree (Hoffmann, 2003). Looking at the strong history of leading practice for corporate reporting, today the Netherlands has indicated a move towards IR. Eumedion, which represent institutional investors' interests in corporate governance in the Netherlands stated that, "more than one-third of Dutch listed companies are working on preparations for changing over to integrated reporting" (IIRC, 2015). Major investors and asset managers have voiced their concern to receive more insight into the strategic framework for long-term value creation of a company as it is now part of the Dutch Corporate Governance Code (KPMG, 2018). In comparison with the previous versions, the current Dutch Corporate Governance Code reflects a more comprehensive view on long-term value creation, including risk management and role of the supervisory board (MCCG, 2016).

The integration of non-financial indicators into regulations has also indicated in the issuance of EU Non-Financial Directive 2014/95/EU. The legal requirements for transparency on non-financial information of large public interest entities have become stricter (EY, 2017). Approximately 6,000 companies throughout Europe and 100 companies in the Netherlands are affected by the Directive (Deloitte, 2015). The adoption of the Directive could be considered as the first legal step toward IR Framework implementation in the European Union (Chersan, 2018). It requires companies with over 500 employees to disclose information about how policies, risks and outcomes of environmental matters, social and employee issues, human rights, anticorruption and diversity are linked to the value creation process (Deloitte, 2015). The Dutch Ministry of Economic Affairs believes that external disclosure encourages companies to increase the focus on CSR policy and thus improve business performances in this area, based on the constructive criticism of their stakeholders (EY, 2016). In order to fulfill the demand for transparency regarding the companies' CSR and SR, the Dutch Ministry of Economic Affairs then initiate a way to dialogue with stakeholders through Transparency Benchmark (TB).

2.3.5. The Transparency Benchmark

TB was introduced in 2004 to encourage businesses in the Netherlands to disclose their policy and results through their corporate reports. It is an annual survey conducted by the Dutch Ministry of Economic Affairs, aiming at assessing the content and quality of external reporting on corporate responsibility issues (Transparency Benchmark, 2017c). TB does not intend to give an opinion to an organization's performance, but to openly communicate and engage with the stakeholders. The scores on TB are determined based on the publicly available reports of all participating organizations, such as annual reports, financial reports and corporate responsibility reports. There are 15 different sectors in TB and all participating organizations are invited to learn more about the content and quality of their own report by using the online self-assessment and later, the self-assessments will be assessed and evaluated by a team of independent researchers (Transparency Benchmark, 2017c). As shown in Figure 2, the assessment of content-oriented criteria (100 points) are divided into 3 sub-criteria (company and business model, policy and results, management approach), while the quality-oriented criteria (100 points) are divided into 5 sub-criteria (relevance, clearness, reliability, responsiveness, coherence). Those criteria are in line with the latest international guidelines, such as the GRI, the IIRF, as well as the EU Directive (Transparency Benchmark, 2017c). Also, the yearly benchmark makes it possible to identify trends in each sector and to keep companies improve in the area of corporate sustainability.

Content-oriented Framework of Standards					100
1. Company and Business model	33	2. Policy and Results	34	3. Management approach	33
1A. Profile and value chain	10	2A. Policy and (self-imposed) obligations	5	3A. Governance en remuneration	10
1B. Proces of value creation	10	2B. Objectives	5	3B. Steering and Control	8
1C. Analysis of the operating context (including risks and opportunities)	8	2C. Economic aspects of business practice	8	3C. Future expectations	5
1D. Strategic context	5	2D. Environmental aspects business practice	8	3D. Reporting criteria	10
		2E. Social aspects of business practice	8		

Quality-oriented Framework of Standards									100
4. Relevance	20	5. Clearness	20	6. Reliability	20	7. Responsiveness	20	8. Coherence	20
Materiality	8	Clearness	6	Accuracy, Completeness and true view	17	Focus on stakeholders	13	Strategic focus	5
Scope and demarcation	6	Conciseness	4	Prudence	3	Contribution to social debate	2	Contextual coherence	6
Timeliness	6	Insightfull	7			Audacity	5	Integration	8
		Accesibility	3					Comparability	3

Figure 2. Content and quality assessment criteria (Transparency Benchmark, 2017a)

2.4. Examination of Integrated Reporting in the Dutch Oil and Gas Industry

The Dutch O&G is a maturing industry. Local energy production has largely contributed to the wealth, development and energy security in the Netherlands (Ruoff, 2016). However, during 2017 the average oil price level remained below US$60/bbl for the third year in a row hence resulted in lower investment activities by big oil companies and a further decline of 13% in revenue across the Dutch O&G (EY, 2019). Given the fact that this sector is moving into a time when only the fittest will survive, growing a competitive edge will be a key for Dutch oil and gas service companies (Dutch OGS) (Morshed & Cleef, 2018). Dutch OGS are expected to develop tactical strategies for the future (EY, 2019) and by implementing IR, it helps companies better understand the effects of their strategic and tactical preferences on the society, because communications with all stakeholders help the companies' strategy complies with the social needs (Kaya et al., 2016). René Coenradie, Netherlands Oil and Gas TAS Leader, stated "[…] the primary focus of (Dutch) oil field service companies will shift toward more structural transformations. These are likely to include creating more integrated offerings as well as innovating in technology, data analytics and commercial arrangements, in order to (out-)perform in this new lower oil price environment in a sustainable manner." (EY, 2018).

Most of Dutch companies use the IIRF to report on how they create value (KPMG, 2018) and to gain insights of what aspects are considered important for value creation process in Dutch O&G, this study will analyze the IR practices by the TB 2017 winners of all sectors, the top-scorer and the early practitioners within the industry. Details on how the best companies perform certain activities related to the earned score will also be given. The TB scores achieved will be analyzed and the outcomes will show indications of where the result leads to and what are the meanings behind the scores.

2.4.1. Lessons from the Transparency Benchmark

In order to stimulate transparency, TB will award the best three participating organizations. In 2017, VION Holding N.V. awarded as the fastest climber in the transparency benchmark ladder. Within a year, the agriculture company rose from the 204th to the 112th in rank, climbing 92 positions since it issued a CSR report for the first time and presented crucial components such as a value creation model that are connected with each other and is remarkably accurate (Transparency Benchmark, 2017c). On the other hand, ABN AMRO grabbed the award for the most innovative annual report as it published a Human Rights Report in 2016 and applies the UN Guiding Principles Reporting Framework for this report (Transparency Benchmark, 2017c). Last, Royal BAM Group takes home the main trophy, the 2017 Crystal Prize, a joint initiative of the Royal Dutch Professional Association of Accountants and the Ministry of Economic Affairs and Climate (Transparency Benchmark, n.d.). It is clear, for example, that the company engages with different stakeholders across its operating companies and holds an annual multi-stakeholder meeting hosted by BAM's CEO to discuss BAM's strategy, cross industry trends and movements in the entire construction value chain (BAM, 2017). BAM also presents its own vision for the kind of projects that are necessary to meet corporate responsibility challenges and a room for self-reflection, in a separate section concentrating on areas in which BAM can improve (Transparency Benchmark, 2017c).

To gain more insights on the important aspects of IR in Dutch O&G, the following sections will provide analyses about the TB's content and quality criteria and the meaning behind the scores achieved, based on the publicly available reports (annual reports, financial reports, SR and CSR reports) over the reporting year 2016.

2.4.1.1. Low Score Overview of Dutch Oil and Gas Companies

In TB's 2017 sector overview, Dutch transportation sector has the highest average score with 156 points, followed by O&G sector with average industry score of 141. Although most Dutch companies use the six capitals of IIRF to report on how they create value, the way companies do this differs both in depth and presentation of the value creation model (KPMG, 2018) hence some of them scored far below the industry average score (Transparency Benchmark, 2017b). The 2017 Dutch O&G overview shows that some companies still scored far below the industry score average (141 points). They are HMC B.V. (46 points), Ultra-Centrifuge N.V. (43 points) and Delta N.V. (40 points). These three lowest scored companies (excluding 0 scored companies) were chosen since they have relatively tight scores. This section will further discuss about the content and quality results and the meanings behind the scores achieved by those three companies.

Table 3. Low-ranking overview of Dutch OGS (Transparency Benchmark, 2017b)

Criteria	Maximum score	Avg. sector	HMC	Ultra-Centrifuge	Delta
Company & business model	33	25	5	10	11
Policy & results	34	24	15	5	4
Management approach	33	24	1	7	6
Relevance	20	15	6	13	4
Clearness	20	16	12	7	6
Reliability	20	12	1	0	0
Responsiveness	20	14	2	1	6
Coherence	20	16	4	0	3

a) Company and business model

According to the overview (see Table 3), the scores imply that all three companies have explained business profile, given at least 3 scopes of business activities and describe its value chain, where an explanation is given concerning CSR aspects that are of importance within the value chain. HMC has explained those information in its 2016 SR, but the report did not mention business risk and opportunities, material subjects and value creation process (HMC, 2017). Those could be part of the reasons why HMC has insufficient score (5 out of 25 average score), and probably the same reason also goes for Ultra-Centrifuge and Delta. Low scores may caused by lack information of value creation process and the analysis of strategic and operating context.

b) Policy and results

Ultra-Centrifuge and Delta's low score may indicate that their report hardly sets out general explanation about policy and obligation, objectives and sustainability aspects (Transparency Benchmark, 2017a). Meanwhile HMC explained about its regulation and compliance, security and code of conducts in its 2016 SR (HMC, 2017), hence it scored 15 out of 24 average score.

c) Management approach

This criterion covers governance and remuneration, steering and control, future expectations and reporting criteria. Delta (2017) includes corporate governance and details about roles of boards, shareholders and works council in its annual report. On the other hand, HMC scored lowest (1 point) in this criterion, meaning that the company provided only general explanation regarding steering and control of the organization (Transparency Benchmark, 2017a).

d) Relevance

The scores indicate that the companies have explained the scopes and process used to determine the most material issues and published the report between three and six months after the end of the reporting period on the website of the company (Transparency Benchmark, 2017a). However, scores could be lower if the companies did not make their report publicly available. It is reflected by HMC and Delta that scored less than a half of the average (15 points).

e) Clearness

For this criterion, HMC achieved 12 points out of 20. This indicates that the company has published the report via company's website as it included a glossary, a summary about sustainability aspects and comparative figures (Transparency Benchmark, 2017a). Lower scores may caused by unavailability of annual reports or corporate responsibility reports, as well as failure to comply with reporting guidelines. Deloitte mentioned IR challenges such as different guidelines for reporting (GRI G4, UNGP, IIRF and others) and industry-specific regulations that might not favour IR (Deloitte, 2015).

f) Reliability

All three companies scored lowest in Reliability. 0 score of reliability indicates that there is no statement included in the company's report whether the report has been verified by independent party, no views of external matter experts or external stakeholders included, or explanation on uncertainties in the reported CSR information (Transparency Benchmark, 2017a). Meanwhile 1 point indicates that there are less than three views of external stakeholders on the developments and results of material aspects of business practice.

g) Responsiveness

A company will score 1 when it gives general explanation about how stakeholders involve in the company's policy and activities, and how their legitimate interests and expectations are considered. Additional 1 point will be given if the company gives specific explanation that meets at least two aspects of stakeholders' involvement (Transparency Benchmark, 2017a). According to the result, Delta might have dared to be vulnerable by sharing issues publicly and explained specifically about stakeholders needs and the company's aims to create CSR awareness.

h) Coherence

0 score means a company's report does not explain or explicitly reveal interrelations between policies, activities, CSR aspects and business strategy. When specific explanation of the congruence of the business strategy and objectives with regard to CSR are given, a company will score 3, while 4 is when the company indicates interrelations between at least 5 different aspects of its business practice, such as company's strategy, risk factors and indicators with a quantitative target value (Transparency Benchmark, 2017a).

Overall, HMC has achieved a higher total score compared to Ultra-Centrifuge and Delta. As shown in the Policy & Results and Clearness scores, HMC managed to clearly summarize the main results of sustainability fields and give sufficient information regarding policy and results in its SR. Roadmap sustainability was given in HMC's SR and it stated that the roadmap will help the company to achieve sustainability goals and act as a platform to inform internal and external stakeholders of what HMC has achieved (HMC, 2017). Similar with most companies in the industry, HMC also provided quantitative information, such as key performance indicators (KPIs) on environment, health and safety (EHS) that are presented in graphs (HMC, 2017). KPIs help to assess how effective a company achieve its core business objectives, such as financial health, physical performance, operational excellence and EHS

(Yildirim et al., 2017). In the case of O&G, not only natural capital, but human component also plays an essential role in the business operations (Schneider et al., 2015). This includes employees skills and experience, health and productivity, and training. Apparently, many O&G companies combine those aspects into an integrated EHS management system. According to Schneider et al. (2015), EHS management used by O&G companies to mitigate the impact of EHS problems and minimize the exposure of humans to the hazard's sources and thus, importance for the training and competency of the workforce is stressed. In HMC, the company holds an Incident and Injury Free program training to improve the safety culture within HMC, provided to all HMC personnel and subcontractors working on vessels (HMC, 2017). Environment and personnel protection, emissions, process safety and sustainability are the common EHS issues for the O&G and thus, they need to be address by companies in order to allow the sector to advance towards sustainability (Schneider et al., 2015)

Nevertheless, lack of corporate governance disclosure and weak reliability of information is still visible in HMC's SR. HMC still needs to work on giving explanation about tasks and responsibilities within the company, steering and control with regard to CSR. Providing guarantee on the quality of CSR information will increase reliability, for example, by giving signed statement of an independent party who has verified the certainty and reliability of HMC's CSR information. Compliance with the revised Dutch corporate governance code is also one of the activities that a company must undertake for IR improvement (KPMG, 2018).

2.4.1.2. High Score Overview of Dutch Oil and Gas Companies

In fact, the Dutch OGS in 2017 has achieved a higher average score than in 2016, which was 135 points (Transparency Benchmark, 2017c). Alliander N.V. (198 points) keeps leading the rankings of Dutch O&G since 2014 and has won the 2016's Crystal Prize. The company managed to maintain its report quality in terms of relevance of material subjects, clearness of the report, responsiveness by specifically discusses dilemmas on corporate responsibilities with its stakeholders and focused on the long-term value creation (Transparency Benchmark, 2017c). According to 2017's TB of Dutch OGS, Alliander score is followed by TenneT Holding B.V. (194 points) and Nederlandse Gasunie N.V. (194 points). The best practices of IR in the Dutch O&G can be seen in following content and quality criteria analysis of the three highest scored companies, which have obtained tight TB scores (see table 4).

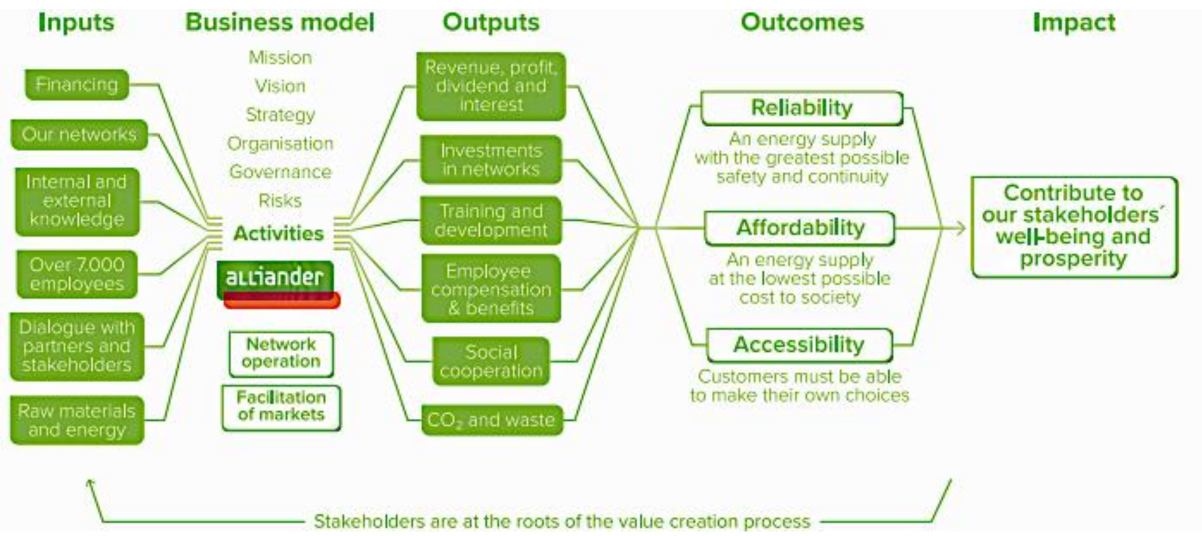
Table 4. High-ranking overview of Dutch OGS (Transparency Benchmark, 2017b)

Criteria	Maximum score	Avg. sector	Alliander	TenneT Holding	Nederlandse Gasunie
Company & business model	33	25	33	32	33
Policy & results	34	24	34	34	34
Management approach	33	24	32	33	33
Relevance	20	15	20	20	19
Clearness	20	16	19	19	20
Reliability	20	12	20	16	16
Responsiveness	20	14	20	20	18
Coherence	20	16	20	20	21

a) Company and business model

As shown in Table 4, achieving maximum score in this criterion implies that the companies' reports provide a clear idea of the scope of their activities, a concise and interconnected description of the value chain, business model and value creation process, including business risks and opportunities (Transparency Benchmark, 2017a). For example, Nederlandse Gasunie (2017) presents in its annual report about the scope of its activities, including quantitative information, such as the amount of gas transported, the number of employees and invested capital. Figure 3 describes how Alliander has mapped out its value chain in its integrated report, connecting all six capitals with its business model to carried out three different outcomes; reliability, affordability and accessibility, then quantify the consequences of their operations. This shows that the company has not only covered TB content and quality standards, but it has also incorporated them with the value creation aspects of IR.

Figure 3. Alliander N.V. value creation process (Alliander, 2017)



b) Policy and results

The best three Dutch OGS have attained perfect score in this criterion, which proves that they have given specific explanation about policy and guidelines they comply with, concrete objectives on CSR aspects and quantitative explanation on all material sustainability aspects (Transparency Benchmark, 2017a). Alliander sets out objectives and results section in its 2016 annual report, along with economic (net debt, solvency), environmental (emissions from business operations) and social (customer satisfaction, employee survey score) aspects (Alliander, 2017)

c) Management approach

The high scores achieved imply that the three companies have successfully provided insights into the organization structure and governance of the company, steering and control with regard to CSR aspects, future expectations and reporting criteria.

d) Relevance

The high scores achieved imply that the companies have published their report in a timely manner and reported on all material aspects. As an example, Tennet explained the process used to determine its most material issues, that is by having dialogue with stakeholders, assess all material topics in order of priority and illustrate them with a diagram (TenneT, 2017).

e) Clearness

The high scores achieved imply that the three companies have included a glossary or similar index that at least focuses on non-financial subjects and concise summary of the main results on sustainability fields (Transparency Benchmark, 2017a). For example, by presenting the amount of emissions, employees, sickness absence, gas converted and gas traded in the form of tables (Nederlandse Gasunie, 2017).

f) Reliability

This criterion covers certainty regarding the reliability, independency and quality of CSR information reported by the companies. High scores achieved may resulted by the statement of independent auditor's report and assurance report, but out of the three companies, only Alliander achieved maximum score for reliability. This is very likely since Alliander emphasized its report quality by explicitly stating that their annual report presents financial, operational and CSR information in an integrated manner and in compliance with relevant Dutch Civil code, International Financial Reporting Standards (IFRS), Dutch Corporate Governance Code 2016, GRI and IIRF (Alliander, 2017).

g) Responsiveness

High scores achieved indicate that the companies have explained stakeholders' involvement in their report. As for Tennet, the company launched a pilot in local communities to measure the company's reputation and give insight into what stakeholder needs and how to meet their expectations (TenneT, 2017).

h) Coherence

The perfect scores achieved indicate that the three companies have presented a clear and concisely described connection between the provided information. This means companies have given brief but comprehensive information. For example, Tennet (2017) presented a summary of stakeholder activities, concerning its stakeholders, strategic goal, type of dialogue, topic of discussion and achievement in 2016 and strategic priorities for 2017.

Although there are still enough areas in which organizations differ from another, a high level of quality on the assessed reports can be seen. This also reflects that the scores differences among the top-ranked organizations in the TB are progressively narrowing (Transparency Benchmark, 2017c). The best practices in Dutch O&G and what other companies can learn from them will be discussed in the following section.

2.4.1.3. Best Practices of Integrated Reporting in the Dutch Oil and Gas Industry According to the Transparency Benchmark

TB mostly concern about sustainability and CSR information, and all of TB's content and quality criteria are necessary to support the value creation process. Although TB does not provide precise answer on the most important aspects of IR in the Dutch O&G, the high scores achieved by the top-three scorer can become a hint. Based on the top scorers' analysis, the top three companies achieved maximum score in two criteria: Policy & Results and Coherence. Companies should focus on their own narrative about their objectives, strategies, key business priorities, how they measure their performance against these and how all of these are creating value for investors and relevant stakeholders (KPMG, 2018). Building a smart and structured report would be a good starting point for presenting value creation process and hence establishing integrated report. A fundamental move to long-term value creation is about the actual strategy of the company, answering such questions as 'what is the core purpose of the company?', 'what is the value we want to create and for whom?' and what is driving that value?' (KPMG, 2018). This implies that giving information about company's profile and business model is also a must do for IR purpose.

Another criterion that could be considered important is Responsiveness. By being transparent and communicating in an open way, organizations show their vulnerability and engage with stakeholders in a meaningful way (Transparency Benchmark, 2017c). For example, Alliander the top scorer of Dutch O&G's in 2017, maintains a dialogue with all of its stakeholders concerning the trends and expectations in society, also on how the company can work to achieve a timely and successful energy transition at the lowest cost to society (Alliander, 2018). By regularly asks all stakeholders what aspects they want to see in the annual report, in 2018, Alliander has found top three material themes; EHS, reliability of supply and safe infrastructure (Alliander, 2018). EHS management system supports to create a safe workplace by protecting the employees, managing the risks and communicating them to internal and external stakeholders (Schneider et al., 2015). Failing to adequately manage risks such as natural disasters and workplace accident will result in not only worker injuries or deaths, but also regulatory and other legal penalties that may affect a company's performance and reliability (Anis & Siddiqui, 2015). Meanwhile Alliander's reliability of supply and safe infrastructure were considered as crucial aspects because of the major power outages happened in Arnhem and Amsterdam in 2018. Alliander explained in the report about what happened, how to prevent the damage and how to improve operational processes (Alliander, 2018). Alliander's way of providing such responsiveness could become a good example for other companies in the industry.

2.4.2. Best Practices of Integrated Reporting in Dutch Oil and Gas Industry According to the Literatures

Despite of the difficulty to determine what to report in IR or doubts about the relevance of IR (McNally et al., 2017), with IR, oil and gas industry is targeted to provide useful information to stakeholders about important issues, including economic, environmental, and social issues that affect the organization's ability to create value (Yildirim et al., 2017). EY defines this as a way to measure value creation in the form of positive and negative externalities. When externalities are positive, they can become a source of competitive advantage and financial returns in the long-term (EY, 2014). As a consequence of identifying and measuring both intangible assets and externalities, companies could tell their unique value creation stories. It is also explained in the literature that aside from externalities, company's profile and business model, EY has identified other important aspects to be included in an integrated report (EY, 2014):

a) Strategies and KPIs

Value creation process requires specific measurement metrics (EY, 2014). IR suggests that quantitative indicators such as KPIs can be extremely useful in explaining how a corporation creates value in an integrated report and how it uses and influences various capital elements (Yildirim et al., 2017). In this context, organizations share the performance of six capital elements by means of their KPIs. Table 5 shows several KPIs examples based on energy sector-specific information:

Table 5. Basic performance indicators in energy, oil and gas industry (Yildirim et al., 2017)

Integrated Report Elements	Performance indicators
Financial capital	Sales volume; sales revenues; operating profit; and net working capital, unit cost and activity per unit production.
Manufactured capital	Production volume; counterfeit usage rates; changes in productive capacity; operational efficiency; and unit shipping costs.
Natural capital	Renewable energy production and capacity (mW); energy consumption (mW); operational oil/gas leaks; activities related to greenhouse gas emission reduction; ozone drilling emissions information; NOx, SOx and other air emission types; total waste volume and disposal methods; waste drilling studies and improvement strategies; import, export and transportation wastes; and settlement areas affected by waste water discharge.
Social and relationship capital	Employee satisfaction; customer happiness; supplier satisfaction; donations and sponsorships.
Intellectual capital	Research and development investments; patent applications; and buying patents.

By defining KPIs for the relevant capitals, companies will have a better integrated performance management system and their reporting will be more concise and relevant (Deloitte, 2015). As a result, the company's management can focus on monitoring material matters and investors can assess value creation, and thus, companies can minimize negative externalities and maximize the positive ones.

b) Risk and opportunities management

Forty years of investments in offshore wells, production facilities, pipelines and onshore support have created Dutch O&G as a well performing industry (Ruoff, 2016). However, around half of the 155 production sites on the Dutch continental shelf are non-operational and the number of operational platforms is expected to decrease as many oil and gas installations and pipelines are ageing (EY, 2018). In fact, the future cannot be forecasted with certainty, but identifying such long-term opportunities and risks can give stakeholders valuable and forward-looking information on a company's future survival capability (Yildirim et al., 2017). Control over reporting risk management information, such as how much risk information should be disclosed, can also help maximize value creation (EY, 2014).

c) Materiality

Materiality concept in IR comprises the entire strategy of a company, which requires evaluating the size of the business operation's impacts and the probability of occurrence (EY, 2014). To determine relevant material matters, those related to value creation are considered relevant and once they are determined, material matters are prioritized based on their significance (IIRC, 2013). For reporting purposes, a company should only identify the individual capitals that materially contribute to or affect the value creation process and the long-term viability of its business model (EY, 2014).

To sum up, all six capitals mentioned by IIRC are indeed valuable in value creation process, but there are several other aspects that need to be considered in preparing an integrated report in the oil and gas industry. Since onshore and offshore operations have high probabilities of health and safety incidents, EHS management become a key aspect to strong productivity and efficiency (Anis & Siddiqui, 2015). Given the fact that traditional financial reporting and annual reports are not providing enough information needed to give a good understanding of a company's value creation ability (KPMG, 2018), other aspects such as business model, risk management, strategy and KPIs, multiple capitals and materiality should be highly considered in establishing integrated report in the Dutch O&G.

Chapter III
Conclusion

This study sought to give knowledge for the readers about the challenges of IR implementation in Dutch O&G and thus identifies a number of IR aspects that valued the most important in the industry. Given the fact that annual financial reports are not providing enough information needed to give a good understanding of companies' value creation ability, IR emerged to enable businesses to assess their standing holistically (Kaya et al., 2016). South Africa is the first country to implement IR concept in 2009 and requires companies to prepare and publish integrated reports (Yildirim et al., 2017). IR emerged as an advancement of CSR and SR, also as a strategic and holistic groundwork for companies to provide insights regarding their sustainability impacts, targets and expectations and linking them with financial results (EY, 2014). By moving from CSR and SR towards integrated report, companies are able to increase efficacy and efficiency in communicating their value creation process to internal and external stakeholders (Stacchezzini et al., 2016). With some years of experience on CSR and SR practices, companies in Europe have also started to make a move towards IR. IR practice has become more common in Europe since the issuance of the Directive that encourages businesses across Europe to start thinking about broader value creation and to integrate their reporting processes (IIRC, 2017b). However, the variety of standards, guidelines and regulations has hindered comparability and created a disconnection between the types of reports and the company's strategy (Idowu et al., 2016). For that reason, IIRC published IIRF in December 2013, creating a common ground and reinforce the evolution of corporate reporting (Kaya et al., 2016). The purpose of IIRF is to establish guiding principles and content elements that govern overall content of an integrated report and to explain the fundamental concepts that support them (IIRC 2013). IIRF Guiding Principles are used to recognize the variation in individual circumstances of different organizations (Chersan, 2018), meanwhile the IIRF Content Elements are the categories of information that need to be connected by the integrated report through value creation process (IIRC, 2013).

In terms of Dutch O&G, the uptake of IR is visible in the industry as it placed second in TB's 2017 survey with average score of 141 (Transparency Benchmark, 2017c). Moreover, the inclusion of focusing on long-term value creation in the new Dutch Corporate Governance Code has made IR become more relevant to the Dutch market (KPMG, 2018). Not only the legal requirements such the Directive and Dutch Corporate Governance Code, but TB also encourages Dutch companies to be more transparent about their policy and results. Nevertheless, IR seems to be one of the most challenging and demanding tasks for any company, which have to deal both with an increasing number of powerful stakeholders and provide its managers with increasingly complex information (Kaya et al., 2016). The real challenge is not the report itself. Rather, it is the thinking that went into it and the adjustments in policy-making, as well as the integration in the systems (Deloitte, 2015). Uncertainty about what to report and doubts about the relevance of IR have been regarded as the challenges of implementing IR (McNally et al., 2017). For better reporting on capitals, Deloitte (2015) suggests companies to firstly identify which of the six capitals are the most relevant for now and the future, identify the key value drivers, define how KPIs can be measured and managed, and finally report on the relevant capitals and KPIs.

Furthermore, this study identifies several IR aspects that valued the most important in the oil and gas industry. Yildirim et al. (2017) stated that in the of case oil and gas industry, KPIs can be extremely useful to explain how companies create value and how the relevant KPIs influences various capital elements. The IIRF recognized six capitals, but it allows companies to adopt other classification structures as long as the individual capitals are materially contributed to the value creation process (EY, 2014). EHS issues, natural and human capital are crucial in the operation of oil and gas sector (Schneider et al., 2015) and with the correct KPIs, company's management can focus on monitoring such material matters (EY, 2014), identify business risks and opportunities to make the company survive in the long run (Yildirim et al, 2017). EHS management also become a key aspect to address productivity and efficiency in both onshore and offshore operations (Anis & Siddiqui, 2015).

Based on the Dutch O&G top-three scorer of TB 2017, this study also found several other criteria that considered most important to establish an integrated report:

a) Policy & Results scored highest, hence this content-oriented criterion regarded important for IR. It defines the extent strategic objectives achieved by a company and how the results influenced the capitals (IIRC, 2013). Companies mostly score low in reporting on their sustainability impacts on society, but Dutch companies stand out for their reporting here, specifically on their environmental impact (KPMG, 2018).
b) Coherence of information means keeping integrated reports consistent over time, because this can help companies to work continuously on presenting information concisely and clearly (Deloitte, 2015).
c) This study also found that Company & Business Model and Responsiveness (relationship with stakeholders) are other criteria that early IR adopters would likely to

consider as a crucial starting point of their IR practice. Business model is the vehicle of value creation process, which takes inputs from the capitals and transform them through business activities and interactions to produce outputs that lead to outcomes in terms of effects on the capitals (IIRC, 2016). On the other hand, Alliander (2016) has proven that maintaining a dialogue with stakeholders can help the company identify their material matters. Materiality in IR can be determined based on matters that significantly impact the company's strategy, long-term viability of its business model or strategic capitals (EY, 2014). Considering stakeholder interests in companies long-term strategy development process can also be useful in making relevant strategic decisions (KPMG, 2018).

Moves toward IR in the Dutch O&G are being made in the right direction, but there are still a number of improvements that could be made. Identifying and measuring the above-mentioned important aspects could be one of the next steps for Dutch OGS in their IR journey.

Chapter IV
Policy and Limitations

This study has found significant information regarding IR, which will be addressed as suggestions for early IR adopters in Dutch O&G and for future research relating to IR. The author presents the suggestions based on the current state of IR both in the world and in the Netherlands, its implementation in Dutch O&G and the analysis of TB scores for Dutch OGS. At the end of this chapter, the author would also like to discuss some limitations of this study.

The author would recommend companies to start adopting IR because it is proven to be successful in increasing customer and employee loyalty that can possibly lead to financial benefits (Kaya et al., 2016). Moreover, IR allows companies to communicate with external stakeholders who progressively demand companies to implement and improve sustainable and responsible actions (Kaya et al., 2016). One example of presenting businesses' economic sustainable actions in the O&G is a focus on cost savings and optimization of return on assets as a result of the decreasing oil prices. This has led to an increased adaptation of innovative software and robotic process automation throughout the Dutch O&G, which enables the industry to remain competitive, drive optimization of asset utilization, cost efficiency and safety (EY, 2018).

IR is not simply about gathering financial and non-financial information. Rather, it is about creating values from the heart of an organization. When integrated thinking is embedded into an organization's activities, the more naturally will the connectivity of information flow, leading to a better integration of information systems that support the preparation of integrated report (IIRC, 2013). As for HMC, IR aspects such as conducting dialogue with stakeholders and presenting business model in the report would be a good starting point. These can enhance responsiveness and strategic focus to create values. HMC is also highly recommended to start focusing on the TB criteria that scored lowest, which are Management Approach and Reliability. Practical applications include providing corporate governance disclosure and statement of independent party who verifies whether the information in the company's report comply with generally accepted standards.

Nevertheless, there are several drawbacks that suggest measures for further research. First, the author manually analysed TB scores by comparing the results with TB criteria, hence the author only come up with suggestions based on TB results and what do the results indicate. Future research should extend this analysis with more advanced assessment techniques, such as assessing TB results with the company's core purpose. Second, the author can only draw limited conclusions from TB scores analysis due to limited availability of companies' reports. Third, there is no accurate solution about which aspects that early IR adopters should tackle first, because it depends on the company core objectives and strategy, all operating and functional units of the company, as well as the current situation within the industry. Thus, the author would recommend starting IR by assessing the capitals used to create value and the problems that early IR adopters are currently facing, then determine which aspects and criteria should be prioritized in value creation process to deal with the relevant problems. By highlighting the limitations of IR practices by early IR adopters, the author hopes to encourage further research to keep up with the evolution of IR and yearly TB results.

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