Sustainability reporting and SMEs –

From ISO 14001 to Global Reporting Initiative

Master Thesis

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Abstract

Sustainability reporting is a global trend that engages companies in disclosure of their overall economic, environmental and social impacts and efforts. The Global Reporting Initiative (GRI) is the most popular sustainability reporting framework used today. At the current stage, it is primarily large companies that get involved in sustainability reporting practices. Small- and medium-sized enterprises (SMEs) despite of their significant impacts in the European economy, employment and environment show low level of engagement.

On the other hand, the environmental management standard ISO 14001 has gained global popularity over the last decade among companies of any size and sector. Therefore this research seeks to investigate the connection between ISO 14001 and GRI in order to get an insight into how ISO 14001 certified SMEs can use their existing knowledge and experiences for the purposes of sustainability reporting.

The research uses as a point of departure a comparison between the implementation processes and requirements/principles in ISO 14001 and GRI. It investigates the existing practices of the ISO 14001 certified company Brunata in Bulgaria in order to draw conclusions on how they can be transferred to sustainability reporting in order to facilitate an easier GRI implementation process for SMEs.

Preface

This report is the master thesis of Elitsa Mileva in the 10th semester of Environmental Management & Sustainability Science programme at Aalborg University. The report was produced in the period from 1st of February 2013 until 6th of June 2013. The sources are handled according to the Chicago style and will appear as following (name year).

As author of this report, I would like to thank Carla K Smink for the smooth supervision, the valuable comments, the support and the fruitful cooperation from the initial to the final stage of the research process. Also, I would like to give my acknowledgements to Mila Peneva, ISO system responsible at the case company Brunata, who provided me with the complete ISO 14001 documentation and input during the research process.

I hope my work will contribute to a broader understanding of SMEs for sustainability reporting. Hopefully, it will give a valuable input on how to manage processes in facilitating the implementation of Global Reporting Initiative.

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Chapter 1

Introduction and Research Questions

Sustainable development has raised high on the agenda as the world nowadays faces more and more severe consequences of the global economical and societal practices. According to the World Commission for Environment and Development (WCED), a sustainable development is necessary to secure the future of the human civilization as we know it today. The WCED definition of sustainable development from 1987 states that "Sustainable development means meeting the needs of the present without compromising the ability of future generations to meet their own needs" (World Comission on Environment and Development 1987). This definition even though being criticized over the years has become the most common definition and implies that the world cannot go on as usual and needs a change. (Loucks, Martens and Cho 2010)

Business and Sustainability

Business is seen as one of the main players in establishing the sustainable development as a future practice (United Nations 2012). An evidence for that is the participation of business in different sustainable networks and initiatives like the UN Global Compact, World Business Council for Sustainable Development, CSR Europe and the regularly held Earth Summits. The definition of WCED itself implies that sustainable development should happen in all dimensions of the society meaning that future concerns should incorporate three components – "social fairness, environmental responsibility and financial viability" (Loucks, Martens and Cho 2010). The role of business in those so called "three pillars of sustainability" is essential as the traditional responsibility of business is multiplication of profit (economic value) while at the same time it impacts the natural environment through its operations and the society through the engagement of people in all business activities.

The United Nations states the importance for business to get engaged in sustainability practices by broadening the focus and being accountable for more than just maximizing economic value (United Nations 2012). Therefore, the responsibility of business has shifted from running business as usual to developing different sustainability strategies meaning that at the current stage of environmental and social concerns in developing and developed countries are also coming into play as important issues for businesses to consider and as a driver for establishing a sustainable development. This happened mainly because of the pressure from communities on business over the last few decades that demands businesses to take responsibility on more than just their economic activities meaning that environmental and social concerns should also take place (Loucks, Martens

and Cho 2010). An evidence for business becoming more concerned with other than economical activities is the certification rate for ISO 14001, the most common international standard for environmental management systems, demonstrating a significant growth in the number of companies certified. Figure 1 shows that the number of certified companies have grown more than 19 times for a decade which implies that companies have incorporated environmental concerns into their operations and that trend is global.

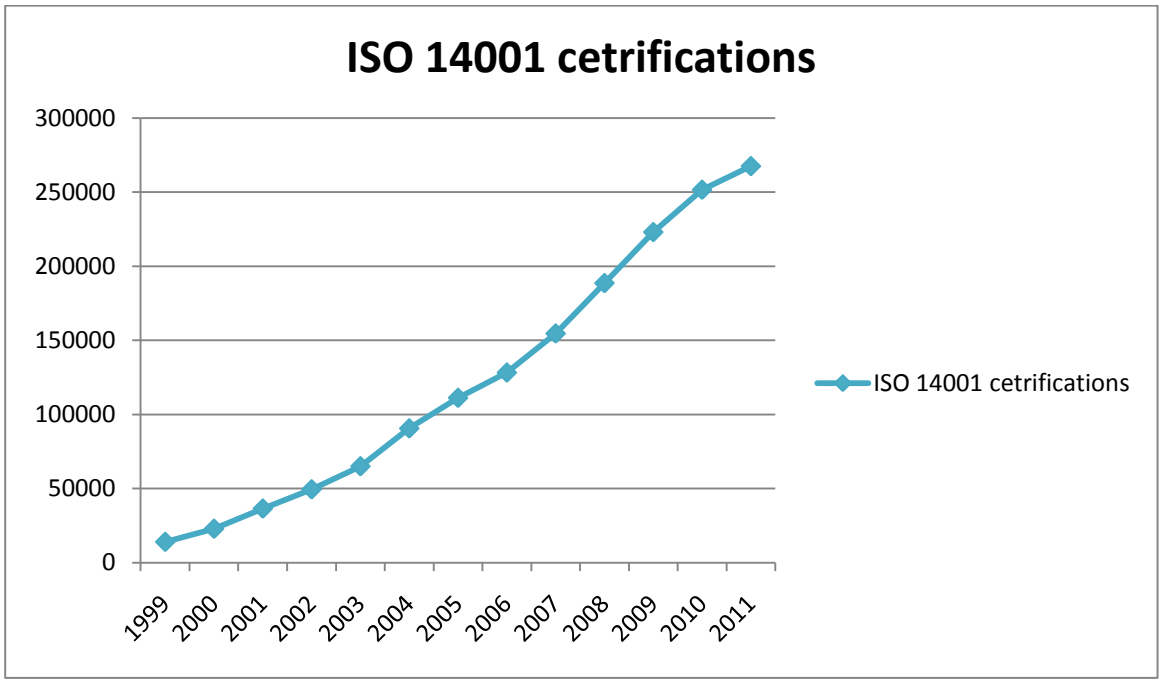

Figure 1 ISO 14001 certification rate (1999-2011) (Internation Standartisation Organization 2012)

The incorporation of the three dimensions of sustainability is broader than the implementation of environmental management systems but the figure shows the general trend of increasing the incorporation of responsible practices in business operations. Today the demand for business to act in a long-term sustainable perspective and thus commits to the WCED sustainable development definition is apparent even though the global level of success is hard to determine (Porter and Kramer 2006).

Nevertheless, there is a trend arguing that sustainable development can have a very beneficial outcome for businesses after decades of pollution, resource depletion and abusive labor practices and the negative consequences some large corporations faced in relation to those practices (Porter and Kramer 2006). The competitive advantage businesses can gain from sustainable development is based on the assumption that it can affect their position among customers responding to their social and environmental values; attract more educated and skillful employees; help complying with regulation; boost innovation in production and operations and improve their strategic position is rising high on the corporate agenda (Loucks, Martens and Cho 2010).

While the benefits for the business are somehow obvious it is still relevant to mention that corporate sustainability is popular mainly among large organizations. It seems to be so

because large companies posses the resources and human capital to allocate for sustainability practices. For large companies and communities, corporate sustainability seems like a win-win situation as societies demand from corporations while at the same time corporations benefit from demonstrating visibility and transparency of their operations. This is important for large companies as they maintain a complex stakeholder network globally, operate in many locations, employ many people and affect communities in many different ways including the natural environment. In this sense, adopting corporate sustainability seems to be a reasonable approach for them. Furthermore experience have proved that corporate sustainability is based on recognizing risks and managing opportunities which are both connected to the environmental and social trends (Loucks, Martens and Cho 2010).

Despite from the benefits already mentioned from adopting corporate sustainability, large companies are concerned with image building and respectively every effort made is reasonable to be communicated externally to stakeholders. Furthermore, United Nations outline the importance of engaging in sustainability reporting especially for large companies (United Nations 2012). The sustainability reporting trend has emerged in the end of last century with the development of different sustainability reporting frameworks aiming to provide a structured approach for documenting actions, efforts and improvements and therefore for building a good corporate image. In other words, sustainability reporting was established as an instrument for communicating accountability among companies which led to the development of different frameworks. (Brown, de Jong and Levy 2009)

The Global Reporting Initiative

The Global Reporting Initiative (GRI) is nowadays recognized as the most common framework for developing sustainability reporting among companies worldwide (Brown, de Jong and Levy 2009). The initiative is partnering with UN Environment Programme. The main focus of GRI is the development of the Sustainability Reporting Guidelines that have been produced in sound with the UN Global Compact and the Earth Carter Initiative (Cohen 2010). GRI engaged many actors such as NGOs, think tanks, large companies, banks, accountancies and organized labor in the initial sustainability guidelines development process. Furthermore, the adoption of the latest version of the Reporting Guidelines (G3) was tightened to the UN Global Compact requiring its users to use GRI as a reporting framework. This resulted in mainly multinational corporations complying with GRI. (Brown, de Jong and Levy 2009)

Initially, the main goal of GRI was to harmonize the sustainability reporting field by providing a common guidance for companies worldwide including the concerns about engaging different actors in dialogue and maintaining ongoing discussions on sustainability topics (Global Reporting Initiative 2011). The harmonization of the sustainability

reporting field was important because GRI set as a goal the creation of "common language" for reporting sustainable development suited for all types of organizations and referring to a great number of international agreements. This approach aimed to allow comparability between companies with different locations, size and industry (Global Reporting Initiative 2011). The main goal is also evident from GRI's mission "To make sustainability reporting standard practice by providing guidance and support to organizations" (Global Reporting Initiative n.d.).

According to Brown, de Jong and Levy, there are three underlying assumption that arose when GRI was initiated. Firstly, the increase of information in societies provoked the demand for accountability from the business and this resulted in the establishment of different forms of engagement. Secondly, progressive companies can benefit from a framework like GRI that would support them in sustainability reporting (and therefore in enhancing transparency, responsibility and accountability) and they can become its major supporters in return. And third, GRI developed the idea for multi stakeholder partnership which was seen as "an effective new form of so-called collaborative governance for sustainability". (Brown, de Jong and Levy 2009)

According to GRI there are different reasons why companies go for sustainability reporting. Among the most important GRI states the need for companies to show commitment and transparency, to be competitive, to position the company in a different (sustainable) perspective and to comply with regulations. Supporters of sustainability reporting argue that it brings to companies valuable add-ons like credibility, comparability, completeness, balance and legal certainty. On the other hand, opponents say that reporting is less flexible and does not provide a push for innovation or transparency on urgent "burning" issues (Global Reporting Initiative 2011)

Even though the initial idea of GRI was to produce generally applicable guidelines and to support sustainability, the main outcome researchers see today from the initiative is reputation management and brand protection. This is also a reason why mainly large companies are involved with GRI. The drop-off of important actors from the development process such as NGOs and labor organizations also indicates lack of interest and the fact that at the current stage the GRI guidelines serve particular corporate image purposes (Brown, de Jong and Levy 2009). Furthermore, it was proven that sustainability reporting requires organizational restructuration, allocation of additional responsibilities and thus less experienced or smaller companies face difficulties (Loucks, Martens and Cho 2010).

Statistics show that the GRI guidelines are used by app. 1000 companies worldwide. This number implies that GRI is the most common reporting framework (compared to other frameworks) but still not covering a great number of organizations globally. There is also a trend for moving the geographical focus from the US, Europe and Japan to other economies from less developed regions. But still most of the companies reporting against GRI are large multinational corporations in polluting industries. (Brown, de Jong and Levy 2009) Small-

and medium-sized enterprises (SMEs) are barely represented with just 80 companies participating in the year of 2007 (Global Reporting Initiative 2011).

SMEs and Sustainability

The small number of SMEs participating in a sustainability reporting network like GRI is not surprising as they face completely different challenges (scarce resources, organizational structure, role of manager) than large companies and therefore need a completely different approach in terms of managing the resources and practices (Bos-Brouwers 2010). At the same time this lack of presence appears to be problematic as SMEs have a significant role in the European economy and generate 64% of the environmental impact in the European Union (European Comission 2010).

European Commission's definition on SMEs suggests certain requirements for companies to be identified as small- or medium-sized. The relevant requirement for a small-sized enterprise is less than 50 employees and less than € 10 million annual turnover (or € 10 million balance sheet total) while medium sized enterprises employ fewer than 250 people and have an annual turnover of less than € 50 million (or € 43 million balance sheet total). (European Commission 2009)

According to this definition, in Europe in 2008 there are 20.9 million SMEs (or 99.8% of the enterprises in the non-financial business economy) and are considered "a key driver for economic growth, innovation, employment and social integration." (Eurostat 2013)

SMEs are estimated to generate 58.6% of the value added within the non-financial business economy. Furthermore, they have a significant contribution to the employment in the EU hiring 66.7% of the non-financial business economy workforce. (Eurostat 2013)

The figures from Eurostat suggest that SMEs have a major role in the economic and social dimensions generating the most significant economic value and employment rate in Europe. This significant impact of SMEs in the economic and social dimensions implies that the sustainability topic is very relevant for them. At the same time, as explained before SMEs are somehow "excluded" from the most popular sustainability reporting framework GRI which leaves them out from the current trends in sustainability reporting. Even though SMEs might practice sustainability in a "quiet manner" in their everyday activities, the rate is significantly lower than with multinational corporations and the benefits from those actions are not fully utilized by SMEs. (Brown, de Jong and Levy 2009)

As mentioned before, SMEs experience more difficulties when approaching the

sustainable development and that is mostly because of their different characteristics. SMEs differ from large companies in the resources they possess – revenues, budgets, number of employees. Furthermore the size of the enterprise affects its ability to report sustainability performance i.e. larger companies report more often engagement in different social and environmental activities (Bos-Brouwers 2010). Furthermore, the structure of SMEs and their ownership characteristics affect significantly the way companies approach sustainability meaning that more proactive owners are likely to prioritize sustainable development and the smaller size of the company results in quicker and more flexible implementation of changes. The structure of the company can also be a limitation in the meaning of lack of managerial resources and specialists in particular areas. Last but not least, SMEs' business culture can play a role in the decision for adopting sustainability practices as smaller companies tend to be unsure whether to allocate resources for activities beyond the usual business practices. (Loucks, Martens and Cho 2010)

Considering the characteristics of SMEs listed above and the fact that most of the sustainability tools available today are suited for large companies, it is difficult for SMEs to get engaged and it is understandable why they are "excluded" from reporting frameworks like GRI. This report will aim to investigate on how SMEs can get engaged with sustainability reporting by studying their particular characteristics and suggesting a more simple fit-for-SMEs way to approach sustainability reporting. Taking into account the specific characteristics of SMEs this research will investigate how the current experience can be utilized in a new, broader perspective by applying existing knowledge and competences.

Research questions

The report will focus on the similarities of GRI to ISO 14001 and will use that as a point of departure for developing a common understandable framework for SMEs to adopt when approaching sustainability reporting. The reason for choosing ISO 14001 is mainly because of its worldwide recognition as an environmental management standard and the certification rates among companies.

The following main research question will be answered throughout this report:

- **How can SMEs approach sustainability reporting by using their existing experience and knowledge with ISO 14001?**

The answer of this main research question will be supported by answering the following sub-research questions:

- How are the ISO 14001 requirements fitting into the GRI reporting framework?

- What experiences do SMEs have with ISO 14001 that can be used in the context of sustainability reporting?
- What barriers did SMEs have in the implementation process of ISO 14001 and how can they be overcome for the purposes of GRI?

The limitations for this research are basically connected to the data collection. The research is limited to the data collection of a single case study which is chosen to be a representative case. As this is a qualitative study it is also limited to three sources of evidence – literature study, documents and interviews. The research was limited to a period of four months when no related activities like annual management review, internal audit were performed. Therefore this limited the access to more people in the organization for meetings and discussions and to more detailed observations of the processes. The methodological approach is described in details in chapter "Methodology".

Chapter 2

Methodology

This chapter will represent the methods used in this report for structuring the research, gathering theoretical information and collection of relevant data. The research took its point of departure from a literature review of the Environmental Management Systems – Requirements with guidance for use (the official ISO 14001 standard) and the GRI Sustainability Reporting Guidelines in order to investigate the level of overlap or supplement between both and to draw conclusions for further analysis. In general this research is based on a case study methodology as a main tool for structuring the data collection and the research in general. Case study was chosen among other research methods for several reasons which will be described later.

Literature Study

In the beginning of the research process the focus was placed on investigating GRI in theory. This was the period of problem formulation and an investigation of different relevant documents on the internet took place in order to get more knowledge about the Global Reporting Initiative, the reporting framework and the principles for complying with it. During this process, it was discovered that the rate of compliance among SMEs is relatively low and therefore statistics on this matter was investigated in a deeper context. Along with the literature study about GRI, another one about ISO 14001 took place focusing on certification rates and tendencies within the last few years. It was discovered that ISO 14001 have reached high number of certified organizations and this led to the development of the research question about how companies can use existing knowledge and experience from a management system like ISO 14001 while approaching sustainability reporting. As it will be explained in chapter "GRI and ISO 14001 – A Theoretical Comparison" ISO 14001 is chosen due to content-related and process-related reasons. The formulation of the research question led naturally to the development of the first sub-research question and one of which seeks to investigate the level of overlap or supplement between GRI and ISO 14001. This comparison was intended to be the theoretical approach to the research. During this process literature study was conducted by investigating relevant documents to the reporting framework and the standard. The documents were obtained through internet and especially through the websites of GRI and ISO 14001. In order to overcome the usage of selective data, additional investigation on academic literature was performed in order to check if similar researches have been performed before and what academic literature

exists on this issue. The search engines Primo from Aalborg University Library (AUB) and Google Scholar were used throughout this process because of their advantage to find and access relevant articles.

In general, the literature review provided knowledge about narrowing down the focus as well as supporting points to build the theoretical approach around. It was essential in the formulation of the research questions and therefore was used mainly in the beginning of the process.

Case Study Methodology

The formulation of the research questions and the findings made in chapter "GRI and ISO 14001 – A Theoretical Comparison" shed a light on the preferred methods for further investigation of the problem. It was discovered that a case study methodology is the most relevant one for this research as it is a structured process of investigating a particular research topic in a contemporary context that encompasses different data collection methods. Therefore it was build upon the Robert Yin's book "Case Study Research – Design and Methods" and it will be used as the major source in this section in order to explain the process of structuring the research and collecting the data.

According to Robert Yin a case study research is a linear but iterative process where adjustments in prior or later phase are being done while progressing through the process. The figure bellow represents the process of a case study research throughout the phases he identifies as essential in order to perform a good case study (Yin 2009).

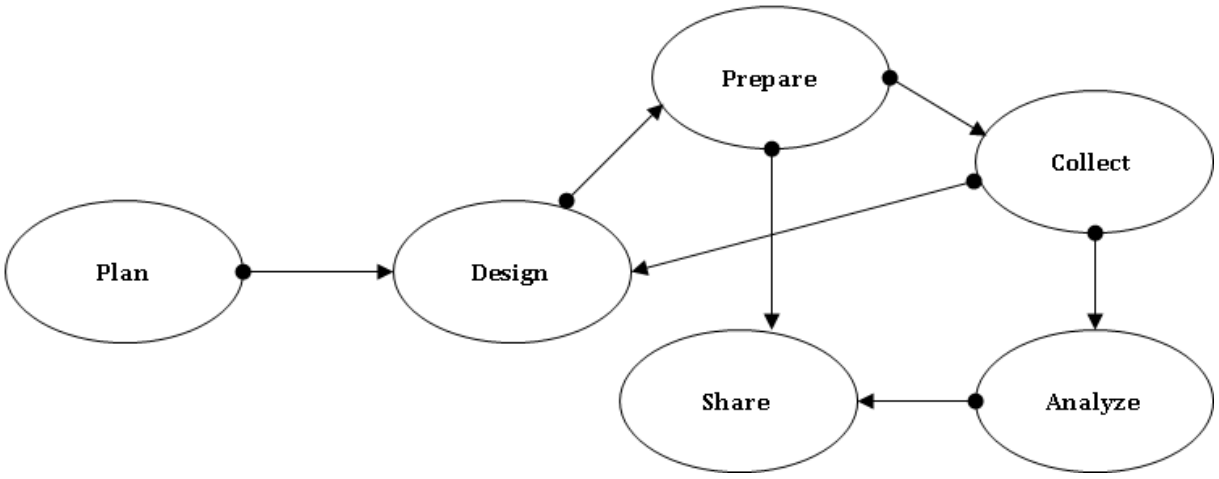

Figure 2: The case study – a linear, but iterative process (inspired by Robert Yin 2009)

In the *Plan phase*, the relevance of a case study as a preferred research method is investigated or this phase tests how relevant the case study is to particular research questions and research area. A case study aims to explain contemporary events where the

research has little or no influence on the events. This relates to the current research as it aims to discover the similarities between ISO 14001 and GRI through investigation of processes without controlling them. Therefore, relevant research questions for conducting a case study are "how" and "why" questions as they are explanatory to current circumstances with "operational links needing to be traced over time" (Yin 2009 p. 9). Furthermore, case studies encompass broader variety of research methods such as documents, interviews and observations of events, routines etc., which gives it an advantage to other research methods such as, experiments or surveys. Bent Flyvbjerg argues that investigation of real-life situations helps researchers to develop additional view of reality that theory cannot provide (Flyvbjerg 2001). The biggest criticism towards case studies comes from the understanding that it is an inconvenient method for generalization of theories, but it is argued that case studies provide enough sources for drawing conclusions on theories by testing them in the real world (Yin 2009 p. 15). Flyvbjerg also supports this by stating: "One can often generalize on the basis of a single case and the case study might be central to scientific development via generalization as supplement or alternative to other methods…. The case study is useful for both generating and testing of hypotheses but is not limited to these research activities alone" (Flyvbjerg 2001).

The definition of a case study used by Robert Yin reflects the conditions for using case studies made above and defines a case study as a method that aims "… to illuminate a decision or a set of decisions; why they were taken; how they were implemented and with what result" (Yin 2009 p. 17)

The case study research method was chosen for this research for few reasons. First, it is fitting to the main research question "How can SMEs approach sustainability reporting by using existing experience and knowledge in ISO 14001?" as the question is explanatory to practices in organizations. Second, the focus of this research is put on investigating current circumstances such as existing experiences and knowledge. Third, the methods suggested to be used in a case study such as document review and interviews are convenient for the purposes of this research as the data collection will be conducted in different ways and through different sources in order to get a complete understanding of the existing practices. And last, a case study will allow the researcher to test the theoretical findings in a real life context and therefore to make generalizations and conclusions for answering the main research question.

The *Design phase* is the second one in the process of structuring a case study. It represents a set of actions or a logical plan that connects the data collected to the initial research questions and to the expected conclusions. During this phase an incorporation of four main concerns takes place i.e. "what questions to study; what data are relevant; what data to collect; how to analyze the results". (Yin 2009 p. 26) The main purpose of the case study design is to avoid the lack of correspondence between the collected evidences and the research questions. According to Yin, the design phase consists of few essential components. First, the research questions should be precise and the use of literature for narrowing down the focus is essential. Second, the research questions should be formulated in a way that they point relevant data to be collected throughout the case study.

Third, they should also provide guidance for favoring one case over another and the absence of this indicates vague research questions. Furthermore, the design phase should include linkage between the collected data and the research questions and criteria for interpreting data. The development of theoretical prepositions is essential prior to any data collection in order to secure relevant data. (Yin 2009 p. 28)

During this research process, the main statements from the Design phase of a case study are taken into consideration. As already explained in section "Literature Review", relevant articles were used in the initial stage to narrow down the focus. Furthermore, the formulation of the main research question aims to point to the relevant data by containing "existing experience and knowledge" in companies. This naturally formulates the study propositions of this research. On the other hand, the research question itself guides to the choice of a case which should represent a SME with ISO 14001 certification and having existing experience and knowledge with the system.

This research is based on a single case study methodology. The case chosen is a representative case. A representative case aims to investigate contemporary circumstances and routines and the results are expected to be informative about certain experiences (Yin 2009 p. 48). Furthermore, a representative case constitutes a random sample which allows generalization for an entire group of cases (Flyvbjerg 2001). In this respect the case investigated in this study aims to explain the experience of a company with ISO 14001, the practices for implementation of environmental management standard and to be informative about the usage of this experience in regards to the GRI implementation process and principles. As the case is representative, the results will allow transferable conclusions to other cases i.e. SMEs with similar features.

The *Prepare phase* of the case study methodology consists of the preparation of a case study protocol. The case study protocol is a framework that guides the researcher throughout the case study process and aims to integrate events from a real-life context with the data collection. The development of such a protocol has two major advantages: it helps to keep the focus on the targets and facilitates the researches in handling out continuously several problems like distractions during the data collection phase, content and structure of the case study report and moving away from the initial research questions. (Yin 2009 p. 81)

For the purposes of this research a case study protocol is designed and aims to incorporate the research question, the hypothesis, the data collection methods and the particular areas of investigation throughout the process. Further information about the particular case is presented in chapter "Case Presentation". Following is the case study protocol is presented in the table below.

1. Introduction to the Case study and the purpose of the protocol	
1.1.1 Case study questions	How can SMEs approach sustainability reporting by using their existing experience and knowledge in ISO 14001?
1.1.2 Case study hypothesis	ISO 14001 certified SMEs can use their existing knowledge and experience for establishing sustainability reporting against the GRI principles
1.1.3 Case study propositions	Existing experience and knowledge
1.2 Theoretical framework	ISO 14001 – GRI => OVERLAP in: Requirements/Principles Implementation process ⇨ Use existing knowledge from ISO 14001 when approaching GRI
1.3 Role of the protocol	Suggests the framework for conducting the case study by pointing the data collection methods and the main questions to be answered throughout the case study
2. Data Collection Procedures	
2.1 Names of sites to be visited and persons to be contacted	Brunata office in Sofia, Bulgaria - Mila Peneva
2.2 Data collection plan	ISO 14001- related documents – procedures, company profile etc. Interviews
3. Outline of Case Study Report	
3.1 Experience and knowledge of companies in relation to ISO 14001	
3.2 Correlation between existing practices and the GRI principles	
3.3 Expected organizational changes when approaching GRI in comparison to ISO 14001	
3.3 Expected outcome for the organization	

4. Case study questions
What experience and knowledge did the company gain during an ISO 14001 certification process?
How did the company identify the significant impacts and what was the role of the management team in the process?
What were the new responsibilities and how did the management allocate them to different people in the organization?
How did the company incorporate the concerns of interested parties in the implementation process?
How does the company manages data collection and monitoring and and how does it secure data quality?

Table 1: Case study protocol for the case of an ISO 14001 certified company Brunata LTD

The next step in the case study research design is the *Collect phase*. It plays an explicit role for conducting a reliable case study due to its value to provide the evidence for the research outcome. The case studies differ from other research methods in their ability to use multiple sources of evidence and to encompass different kind of data. (Yin 2009 p. 99). In this sense case studies have advantage in comparison to other research methods where data collection is performed through a single source (such as in surveys or experiments) Case studies deal with many different sources of evidence but this research has focused on three main as they are the most relevant to the research questions, the case and the methodology i.e. documentation and interviews (they have already been mentioned in Table 1). The main advantage of the documentation source is that it allows making conclusions and point direction for further investigation concerning the case but at the same time the purpose for issuing should be taken into consideration and certain level of criticism should be applied (Yin 2009 p. 103). The use of documentation is essential for this research as it provides the basic knowledge for the case in terms of formal procedures and practices in ISO 14001. As the documents are formal and were issued for the purposes of the certification process, the information collected should be screened through other sources of evidence.

Another source of evidence used throughout the case study research is interviews. According to Robert Yin, they should be designed as guided conversations rather than in precisely structured "question-answer" manner (Yin 2009 p. 107). This provides the possibility for the researcher to follow the line of inquiry of the case study and to get an additional insight into the topic according to responses of the interviewee. A more structured manner of conducting an interview might limit the outcome. While conducting interviews in a case study, two main objectives appear to be important i.e. considering the researchers outcome while at the same time being friendly with the interviewee in an open-ended manner (Yin 2009 p. 107). During this research, in depth-interviews are conducted as they take place over a longer period of time, represent a continuous process

of investigating facts, opinions and insights into the certification process of ISO 14001 and therefore are relevant.

The data collection should be performed according to three principles. First, the use of multiple source of evidence is essential for addressing a broader variety of topics and confirmation of data collected and therefore for gaining a deeper insight into the case. Second, creation of case study database (notes, documents) is important for securing accessibility to all the data collected during the process. Third, the maintenance of chain of evidence that represents the logical connection between the case study questions, the case study protocol, specific sources, case study database and case study report allows tracing of the case study process back and forth and therefore is substantial. These three principles provide a consequence for comprehensive data collection and therefore ensure reliability. This is difficult in a qualitative study where data can be interpreted in more ways than in quantitative studies.

In the *Analyze phase*, the evidence collected is categorized, tested and examined in order to draw empirical conclusions (Yin 2009 p. 126). This is performed according to different analytic strategies that use different approach to handle the data and analyze the evidence. The purpose of the analytic strategies is to point "what to analyze and why" (Yin 2009 p. 126) According to Robert Yin, the most preferred analytic strategy is the one relying on theoretical propositions and that will be used in the case study for this research as it appears to be most fitting to the overall structure of the case study. In this sense, the theoretical propositions or the findings in chapter "GRI and ISO 14001 – A Theoretical Comparison" are the basis for formulating the objectives and design of the case study. The formulation of the research questions and the relevant literature review took place at the same time. As already explained in the Prepare phase all those shape the data collection process and therefore lead to analytic strategy that uses the same approach. An analytic strategy based on this structure will secure an analysis that is a logical continuation of the whole process and a coherent case study.

According to Robert Yin, the analysis of a case study is the most important part because it provides the outcome from the whole process. Therefore, the analysis should serve a few principles. First, the analysis should cover the research questions by relying on as much evidence as possible and collected. Second, the analysis should address as many alternative interpretations as possible. Doing so requires a certain level of criticism to the investigator's own work but at the same time makes the conclusions more reliable and sharp. Additionally, the analysis should address the most significant aspects of the case study and therefore demonstrate a focused and systemized process. Finally, the existing knowledge of the investigator about the case study should be used sufficiently in the analytical phase as it provides the basis for the whole case study process. (Yin 2009 p. 131)

The final phase is the *Share phase*, where the whole process including results and findings comes to closure. The process of sharing the case study includes identifying the relevant audience, the structure of the case study report and relevant ways to presenting the data. Robert Yin argues that identifying a target group for the case study report whether

academics, policy makers or businesses, is a reasonable starting point for structuring it. Furthermore, few reporting structures are suggested by Robert Yin and the linear-analytic structure is the most relevant for the case study in this research. It is evident from the structure of this report that it follows the linear flow of problem formulation, literature review (theoretical findings and propositions), methodological approach, findings from data collection, conclusions and perspectives. The case study conducted in this research is explanatory aiming to explain existing knowledge and practices in an ISO 14001-certified company and their application to the GRI principles for sustainability reporting. Therefore it fits to the liner-analytic structure where logic relations are followed.

The methodology described in this chapter explains the activities beyond the writing of the report. The overall structure sticks closely to Robert Yin's methods and design in order to produce a research of a good quality and to train different skills. The process of conducting a case study provided the guidance in the overall process of structuring the research, the choice of the case, the methods for data collection, the analytical framework used and the way this report is structured. Without guidance, conducting a case study is a challenging and confusing process where many aspects are to be taken into consideration.

Chapter 3

GRI and ISO 14001 – A Theoretical Comparison

For the purposes of this research, the similarities between ISO 14001 and GRI will be investigated in terms of process of implementation and requirements/guidelines in order to find relevance between the standard and the reporting framework and to use this as a point of departure for further analysis and findings.

The GRI guidelines will be investigated and compared to the ISO 14001 requirements in order to investigate the level of overlap or supplement of both and to draw conclusions on whether an ISO 14001 certified company can use existing knowledge and experience when implementing sustainability reporting.

ISO 14001 was chosen among other standards because of its worldwide popularity among companies of any size, sector and location. Currently more than 267 000 companies worldwide are certified with ISO 14001. The certification rate shows regional differences with Europe and East Asia and Pacific holding 91.2% of the total number of certified companies worldwide, North, Central and South America holding respectively 5.4% and only 3.3% of the certified companies being located in Africa, Middle East and Central and South Asia. (Internation Standartisation Organization 2012) The figures show that the standard is ahead by certification rate compared to other similar standards (for example EMAS with 4581 certified organizations until March 30th 2012 (European Commision 2012). As mentioned already in chapter "Introduction" the number of ISO 14001 certified organizations has grown significantly over a decade. The main reason for this is the increasing demand for companies to manage systematically and proactively their environmental impact and to incorporate that in their business strategies and operations (Jørgensen and Remmen 2007).

Another reason for choosing ISO 14001 is more content-related. The standard provides a framework for establishing an effective environmental management system without stating particular requirements for environmental performance. That makes the standard flexible for companies and allows them to assess their own particular impacts and develop their own environmental improvements. (International Organization for Standartization n.d.) In this sense ISO 14001 and GRI have a similar approach as both provide framework and guidance but also independency to companies to run the process in the most suitable way.

Implementation Process of ISO 14001

According to ISO 14001, an EMS is a "part of an organization's management system used to develop and implement its environmental policy and manage its environmental aspects" (ISO 2004). The standard is based on the so called Plan-Do-Check-Act model which systemizes the approach to environmental management starting with identifying the significant environmental impacts, going through implementation of procedures for improvements, monitoring the progress and ensuring continuous improvements by a top management review. ISO 14001 also demands identification of relevant legal requirements which secures compliance with existing environmental legislation. The requirement for continuous improvements in ISO 14001 is based on the identification of objectives and targets through short and long-term improvements and designation of responsibilities within the company for achieving them. (ISO 2004) (Jørgensen and Remmen 2007)

The implementation process of ISO 14001 starts with the formulation of an environmental policy. This is important in order to secure management commitment and to demonstrate the concerns of the company with its environmental impact and the commitment for reduction, improvements, legal compliance and pollution prevention. The environmental policy is the basis for identifying the significant environmental impacts and the management commitment to reducing them. The *Plan phase* is where the environmental aspects of the company are identified together with the legal requirements and the objectives and targets for improvements. The *Do phase* is based on the implementation and operation of the environmental management system in order to meet the objectives and requirements set. This is related to allocation of responsibilities among the staff, availability of resources for implementation and improvements, suitable knowledge and skills and organizational structure (ISO 2004). During the *Check phase* a monitoring and measurement takes place in order to evaluate compliance, non-conformity and performance towards the environmental policy, objectives and targets. This phase is a key element for preventing repetition of nonconformities and securing continuous improvements (Jørgensen and Remmen 2007). In the final phase, the *Act phase*, a management review takes place in order to ensure that the environmental management system is adequate and effective and to suggest improvements and future changes. This is where the success of the environmental management system is being assessed taking into account communication from external interested parties, legal requirements, environmental performance, corrective and preventive actions and the extent to which the objectives and targets have been met (ISO 2004). An interesting feature of that Plan-Do-Check-Act model is that it sets the basis for continuous improvements by requiring that after the management review the process starts all over again from the planning phase.

Implementation Process of GRI

GRI has already been introduced in chapter "Introduction" as the most common framework for sustainability reporting. According to the definition used by GRI sustainability reporting is the practice of "measuring, disclosing and being accountable to internal and external stakeholders for organizational performance towards the goal of sustainable development" (Global Reporting Initiative 2011).

The process of approaching and producing sustainability reporting suggested by GRI contains five steps: Prepare, Connect, Define, Monitor and Report. Those will be described below with an emphasis on the process, the efforts required and the expected value for the company according to GRI. Additionally, GRI has formulated Reporting Principles to secure the relevant content of sustainability reports i.e. Materiality, Stakeholder inclusiveness, Sustainability context, Completeness, Balance, Comparability, Accuracy, Timeliness, Clarity and Reliability. They will be described later in this chapter. Both the process of sustainability reporting and the reporting principles will be compared to the relevant ISO 14001 process and requirements in order to investigate the similarities between the reporting framework and the environmental management standard and to draw conclusions on whether they supplement or overlap each other and how they can be used together.

In the *Prepare phase*, the planning of the sustainability reporting process takes place. This is where the reporting organization demonstrates management commitment internally and identifies the potential economic, environmental and social impacts of the organization. During this process action plans are developed containing information on timescale, report team, responsibilities, tasks and target groups. The action plans are then presented to decision-makers, most often management team. This phase also requires a meeting for finalizing the discussion around the action plans including budgeting. GRI developers argue that the potential value from this initial phase is the development of common vision and strategy on sustainability reporting and identification of possible strengths and weaknesses. (Global Reporting Initiative 2011)

The *Connect phase* is important for the organization because this is where stakeholders get involved in the process. According to GRI, this phase enhances the transparency of the organization and the reputation. Its main focus is to get an input from different internal and external stakeholders on the planned report content in the first step and to use it for clarifying the reporting topics. It is important to prioritize stakeholders and further work with a sample of them who will be engaged in the dialogue by giving meaningful comments on their expectations. (Global Reporting Initiative 2011)

The *Define phase* is where the particular report content is identified. The input from the first two steps is used for producing a list of relevant indicators for the company to report which is agreed upon by the senior management or organization's leader. The indicators themselves should be tested against the GRI Reporting Principles (Materiality, Sustainability Context and Completeness) which will be described later. In this phase the definition of overall sustainability goals takes place and therefore the company can experience an internal change as a new approach might be required for achieving the organization's sustainability goals. This change is usually supplemented by the development of procedures and improvement of monitoring. (Global Reporting Initiative 2011)

In the *Monitor phase* the data collection takes place in order to support the reporting of the indicators identified. The organization should ensure that the data is collected consistently and is of a high-quality. Another set of Reporting Principles (Balance, Comparability, Reliability, Accuracy, Timeliness and Clarity) comes into play in this phase in order to check the quality of the content and those will be described further. The value expected from this phase is improvement of management systems, innovation and commitment to sustainability. (Global Reporting Initiative 2011)

The *Report phase* is the final one in the sustainability reporting process. The most relevant methods to communicate the sustainability report are chosen and it is written, finalized and launched. The GRI developers argue that this is not the end of the cycle but oppositely is the start of a new one as sustainability reporting is a process of continuous improvement and feedback is relevant to be investigated in order to prepare for the next reporting period where the organization hopefully enhances reporting practices. The value from this phase is estimated to be attraction for investors, enhanced reputation, comparability and benchmarking. (Global Reporting Initiative 2011)

After the ISO 14001 and GRI processes have been presented it is relevant to investigate how they fit to each other and if there are similarities between them. The following table represents a comparison between the standard and the reporting framework and conclusions will be made based on the findings.

The table summarizes the processes in implementing GRI and ISO 14001. Few points are relevant to be highlighted in regards to the comparison between both. It is evident that the processes are similar at their starting and ending point meaning that both identify management commitment as an initial step. This is important to ensure that the company recognizes the sustainability/environmental goals as relevant to its activities. In the end of the process both the reporting framework and the environmental management standard demand an ongoing process that starts all over again after the publication of a sustainability report (in GRI) and the management review (in ISO 14001) respectively. This is to clarify that both are process-oriented and demand continuous improvements in the systems.

Comparison between the process in GRI and ISO 14001			
GRI		**ISO 14001**	
	STEP	**STEP**	
Develop vision and strategy: Allign internally Identify the organization's most critical economic, environmental and social impacts	**Prepare**	**Environmental policy**	Management comittment to the overall environmental goals of the company
Transparency and dialogue with stakeholders: Discuss internally and externally the significant impacts	**Connect**	**Plan**	Identification of environmental aspects and their significant environmental impacts; Legal requirements; Objectives and targets
Connect departments and encourage innovation: Involve the ultimate decision-makers Internal changes will be required to achieve the sustainability goals	**Define**	**Do**	Availability of resources Allocation of roles, responsibilities and authorities Communication with internal and external interested parties
Collect the information needed and ensure data quality	**Monitor**	**Check**	Monitor and measure key environmental impacts through verified measurement equipment
Choose format, launch the report and start the cycle again	**Report**	**Act**	Management review and follow-up actions on improvements; the cycle starts again

Table 2: Process in GRI and ISO 14001 (inspired by GRI and ISO 14001)

Even though the processes are structured in a different manner they cover similar activities but with a different scope e.g. identification of significant/critical impacts, allocation of new roles and responsibilities within the organization with respect to the scope, organizational change in order to meet the new goals and collection and monitoring of data. The greatest similarity is that both aim to contribute to reduction of significant impacts, but with a different approach especially in terms of stakeholder communication. While GRI places incorporation of stakeholders' concerns in the beginning of the process with a crucial role on decision-making, ISO 14001 finds communication with interested parties optional for identification of significant environmental impacts. Along with the other characteristics outlined earlier, this implies that GRI is report-oriented and therefore more external while ISO 14001 is operationally-oriented and therefore more internal.

Principles of GRI and Requirements of ISO 14001

The reporting guidelines developed by GRI contain ten reporting principles that aim to track the quality of the report in terms of information. They also aim to give additional value to companies by enabling readers to make different decisions based on the information disclosed in the report (Global Reporting Initiative 2011). The principles are divided into two groups: Principles for Defining Report Content (Materiality, Stakeholder inclusiveness, Sustainability context, Completeness) and Principles for Defining Reporting Quality (Balance, Comparability, Accuracy, Timeliness, Clarity and Reliability) (Global Reporting Initiative 2011). They were mentioned earlier in this chapter but now will be discussed more in depth and compared to the ISO 14001 requirements in order to get a deeper understanding on how both the reporting framework and the environmental management standard supplement or overlap each other.

The principle of **Materiality** demands that an organization reports on its significant economic, environmental and social impacts in order to allow reasonable decision-making among its stakeholders. The content according to this principle is determined by its relevance to the organization's overall mission and strategy and aims to reflect the definition of sustainable development according to the WCED, i.e. meeting the needs of the present without compromising the needs of the future generations. (Global Reporting Initiative 2011) Material topics might be sustainability impacts identified by experts or raised by stakeholders, as well as future challenges in the particular industry and relevant regulation.

The material topics in ISO 14001 are the significant environmental impacts of the company. The environmental management system is built on them and aims to reduce them firstly by expressing commitment from top management and then by undertaking relevant actions for achieving short and long-term reduction. The conclusion is that both GRI and ISO 14001 seek that the organization defines its significant impacts and undertakes action for reporting activities on them or reducing them. While in GRI the Materiality principle refers to decision making by stakeholders, in ISO 14001 it sets the boundaries for the development of the environmental management system and the following actions on the impact reduction. But it is evident that the principle is essential for the process of sustainability reporting and the environmental management system and their outcome.

The principle of **Stakeholder inclusiveness** is the one that demands the dialogue with interested parties. As outlined earlier in this chapter, this process is essential for GRI and is placed in the initial phase of the sustainability report development. According to the GRI Guidelines the definition of the relevant stakeholder groups, the response to stakeholders' reasonable expectations and interests should be disclosed in the sustainability report. The main goal for an organization adopting this principle is to get to understand its stakeholders and therefore to address them through balancing the specific interests (Global Reporting Initiative 2011). As the aim of sustainability reporting is to show accountability, the failure to comply with this principle may result in non-credible and

useless report. Therefore, GRI demands the establishment of documented stakeholder engagement process identifying the organizational approach on whom, how and when to engage.

The incorporation of the concerns from stakeholders (identified as interested parties) is also included in ISO 14001 where the environmental policy should be understandable for them and the communication of the relevant actions should be suited for their needs and interests. Furthermore, the organization should consider the input from interested parties for the development of different objectives and targets and communication with external parties should be documented. (ISO 2004) In terms of including stakeholders in the processes of GRI and ISO 14001 it is evident that there is an overlap in the way both see this incorporation. But it is important to outline that GRI is more demanding to this principle due to the scope of the sustainability reporting for building accountability while for ISO 14001 it is important but yet not essential as it is more internally oriented.

Another principle that is in place according to GRI is the **Sustainability context**. According to it the report should reflect the organization's contribution to the future development and trends in terms of social, environmental and economical conditions. This is the principle that puts the generic scope of the reporting in a broader sustainability concept. It is usually determined by the organization's overall strategy and the importance sustainability has in it. The sustainable performance of the organization should be disclosed with reference to the overall long-term goals, risks and opportunities. (Global Reporting Initiative 2011)

As ISO 14001 has a narrower focus on environmental performance, its relevance to the overall strategy of the company is not as strong as in GRI. The overall goals for environmental improvements are usually communicated throughout an environmental policy which is part of the corporate vision but it does not cover strategic dimensions for an organization. It is important to mention that proactive companies can put ISO 14001 high on the corporate agenda and therefore it can have an impact on the overall goals of the company.

The principle of **Completeness** demands that the report should cover all relevant to the organization sustainability topics in order to enable objective evaluation from stakeholders. This means that the organization can be selective when addressing topics but the relevant concerns should be addressed. This is closely connected to a sufficient stakeholder engagement process, but also broader societal expectations can be addressed. The topics included in a sustainability report should be those that the organization can influence in the supply-chain and downstream to distributers and users. This principle also demands that the topics allow the development of reasonable estimates for the future and therefore the establishment of both short- and long-term sustainability goals. (Global Reporting Initiative 2011)

ISO 14001 is similar to GRI in relation to covering all the relevant impacts by engaging relevant functions in the organization. Those are usually impacts within the organization

that can be influenced and therefore minimized (through the development of objectives and targets) which leads to environmental improvements. (ISO 2004) There is a relative overlap in approaching this principle between GRI and ISO 14001 but the scope is narrower in ISO 14001 compared to GRI.

The following table represents a summary of the comparison between the Principles for Defining Report Content in GRI and the ISO 14001 requirements for implementing an environmental management system. It is evident that there is a certain level of overlap between them as the principles according to GRI and the ISO 14001 requirements are similar in term of approach to significant impacts, stakeholder concerns and their contribution to the corporate strategy. Due to the broader sustainability context of GRI and its objective to provide a reporting framework, it is more extensive and more focused on stakeholders while ISO 14001 is more operationally and internally oriented.

Comparative analysis		
GRI		**ISO 14001**
Principle	**Definition**	**Correspondent requirement**
Materiality	The information in a report should cover topics and indicators that: reflect the organization's significant economic, environmental and social impact would substantively influence the assessments and decisions of stakeholders	Significant impacts in ISO 14001
Stakeholder inclusiveness	The reporting organization should identify its stakeholders and explain in the report how it responded to their reasonable expectations and interests	Interested parties and their inclusiveness in the process
Sustainability context	The report should present the organization's performance in the wider context of sustainability	ISO 14001's conformity with environmental policy but in a broader context
Completeness	Coverage of the material topics and indicators and definition of the report boundary should be sufficient to reflect significant economic, environmental and social impacts and enable stakeholders to assess the reporting organization's performance in the reporting period.	Covers all relevant topics in ISO 14001 within a time-frame and identified short- and long-term goals

Table 3: Comparison between GRI's Principles for Defining Report Content and ISO 14001 requirements (inspired by GRI and ISO 14001)

The Principles for Defining Reporting Quality aim to ensure that the information reported is credible and increases transparency for the reporting organization. The quality of the information also seeks to enable reasonable stakeholders' assessment of corporate performance. (Global Reporting Initiative 2011)

The principle of **Balance** demands that the report should reflect both positive and negative aspects of organizational performance in order to enable reasonable assessment of the overall performance (Global Reporting Initiative 2011). This is to secure that the organization does not disclose sustainable performance selectively and therefore misleads the stakeholders. Both favorable and unfavorable results should be included in the report and the organization should clearly distinguish between objective presentation of information and interpretation of facts. (Global Reporting Initiative 2011)

On the other hand, ISO 14001 is not so demanding to communication of positive and negative results in relation to the environmental management system but it identifies the internal audit as a tool to assess objectively the extent to which it is fulfilled (ISO 2004). This implies both positive and negative impacts in relation to objectives and targets and overall environmental goals. Therefore, there is again an overlap in the approach between GRI and ISO 14001 in relation to being objective to the results achieved but with a different scope and different application. While GRI demands that in order to ensure external assessment, in ISO 14001 it is for internal use and assessment.

The principle of **Comparability** demands that information is reported consistently. This is necessary for evaluating performance and to allow comparison over time and between organizations in relation to their sustainability impacts. Another application of this principle is to enable assessment of current performance against the past and the objectives defined. The presence of quantitative data is necessary to allow comparison both as total numbers and ratios and in this respect organizations are encouraged to make cross-referencing, whenever practicable, to data from previous years in order to allow meaningful comparison. The presentation of data in different manner (like tables of content, diagrams and links) allow stakeholders to find important information easy and without a significant effort. This principle ensures that the information reported is meaningful to stakeholders and therefore the incorporation of their concerns is essential as they may change the overall direction of the organization's efforts over time. (Global Reporting Initiative 2011)

ISO 14001 also demands that certified organizations determine timescale for continuous improvements and track changes. This is achieved by management review where current environmental performance is assessed and decisions are made in relation to the overall goals of the organization. Similarly to the GRI principle, this evaluation takes place over a certain period of time and aims to track progress and secure adaptability to future changes including communication from external interested parties (stakeholders). (ISO 2004) It is

evident that both GRI and ISO 14001 demand keeping track on performance in order to enable reasonable decision making and set future directions as the incorporation of external concerns is essential for both in this process.

The principle of **Accuracy** demands that reported information should be accurate and detailed. This implies the usage of performance indicators in order to assess the economical, environmental and social performance of the reporting organization. Therefore, the use of qualitative and quantitative data is essential to indicate accuracy. Furthermore, GRI demands distinction between different information like estimations, assumptions, calculations and qualitative evidences. (Global Reporting Initiative 2011)

ISO 14001 also requires the use of different type of data for assessing performance, primarily quantitative data. This requirement relates to the specific objectives and targets the organization should identify in the environmental management system. (ISO 2004) In this sense GRI and ISO 14001 have a similar approach towards collection and usage of data for future improvements and therefore both overlap each other but GRI gives more room for different data types and sources while ISO 14001 is stricter in the ways environmental performance is assessed.

The principle of **Timeliness** requires that the reporting is published on a regular basis and the information disclosed is closely connected to the particular reporting period in order to allow informed decision making among stakeholders. This is to ensure that the collection and publication of sustainability data is aligned with the reporting schedule and that it is comparative to other similar periods when relevant information has also being reported. (Global Reporting Initiative 2011)

In ISO 14001 the regularity is expressed by the demand for regular monitoring and measuring of the key characteristics for environmental performance (ISO 2004). This implies that according to ISO 14001 an environmental management system should be executed consistently and the main environmental performance indicators reviewed regularly by the responsible body in the organization i.e. the management team. For both GRI and ISO 14001 this principle of timeliness results in keeping track of the system, the improvements and the general direction and secures the alignment in time with the overall goals of the organization. Therefore, this principle is common for both but again with a different application.

The principle of **Clarity** demands that the information in the report is disclosed in an understandable usable manner including comprehensible visualization of data and proper communication channels. This is to ensure that the report is user-friendly for stakeholders and is designed in a way that would facilitate the understanding of relevant information and the usage of the report for certain purposes. (Global Reporting Initiative 2011). In general, the principle aims to give guidance on report quality in relation to consistency and format and this is to avoid blurry and meaningless reports.

In ISO 14001 this principle can be found in the requirements for communication. According to the standard the concerns and information needs of interested parties should be met by

the development of appropriate external communication by format and content in order to respond to the expectations. (ISO 2004) In this sense, ISO 14001 is similar to GRI and both aim to provide meaningful information to stakeholders in regards to organizational performance.

Finally, the last principle is for **Reliability**. It is related to the way of gathering, compiling and analyzing data in order to make stakeholders confident that it is accurate and can be checked when needed. This requires internal records of procedures and documentation in order to secure that the data provided in the report is reliable. Non-evident conclusions should not be included in the report because this might compromise this principle. (Global Reporting Initiative 2011)

Similarly, ISO 14001 demands the development of procedures for accurate measurement of impact by verified methods. The reason is the same like in GRI i.e. ensuring data quality and confidence about data source. For both, GRI and ISO 14001 this is necessary to show that the organization keeps track on performance by analyzing reliable data and this can be reviewed whenever needed. This principle also aims to ensure that the organizations do not mislead stakeholders when communicating on their performance.

Conclusions

The comparison between GRI and ISO 14001 in terms of process and guidelines/requirements made above outlines the similarities between the reporting framework and the standard. The findings made will be summarized here and will be used as a point of departure for further analysis of how existing knowledge in ISO 14001 can be used for implementing GRI smoothly by SMEs.

It is evident that GRI has a broader scope than ISO 14001 by taking into consideration also social and economical impacts apart from the environmental ones. Furthermore, focus of ISO 14001 is environmental improvements within the organization while GRI is adapted to external reporting. It was found out that despite from cases where ISO 14001 is used as a communication tool, it remains more internally and operationally-oriented than GRI whose main role is creating and retaining credibility among stakeholders. The extent of stakeholder inclusiveness and the importance of this process constitute the biggest difference between the reporting framework and the standard as the incorporation of their concerns is more intensive in GRI than in ISO 14001.

The similarity between GRI and ISO 14001 is mainly discovered in the implementation process. The processes are structured differently but cover similar actions. It is evident from the comparison made in this chapter that the processes overlap each other by going through similar phases and using as milestones similar requirements e.g. incorporation of sustainability/environmental goals in the corporate vision by management commitment, identification of significant impacts and reducing them, communication with stakeholders,

coverage of relevant topics, track of progress, collection, analysis and usage of data etc. Furthermore, the GRI principles for defining report content and quality described in this chapter are relevant to major requirements in ISO 14001 and therefore suggest additional level of overlap between the reporting framework and the standard.

The following figure represents the theoretical framework of this research. It visualizes the overlap between GRI and ISO 14001 in terms of implementation process and principles/requirements. This research develops the hypothesis that the certain level of overlap between the environmental management standard and the reporting framework is a precondition for ISO 14001 certified SMEs to facilitate an easier implementation process of GRI by using their existing knowledge and experience.

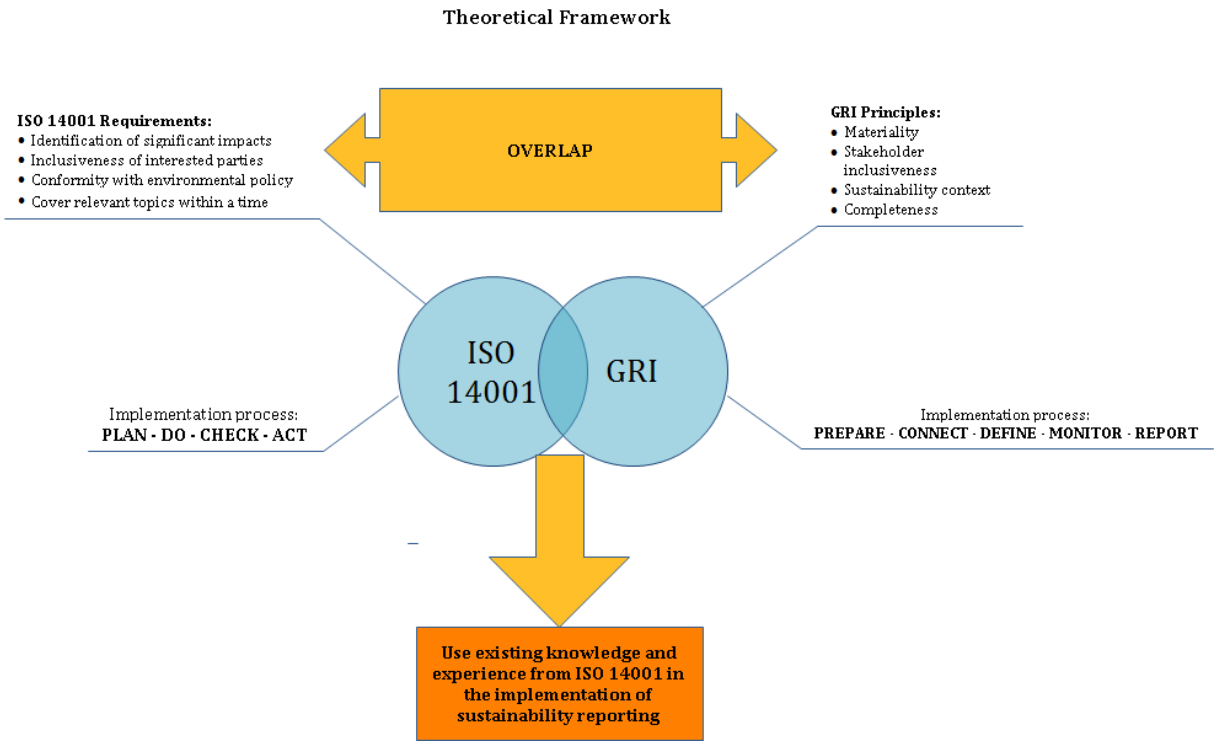

Figure 3: Theoretical framework

The theoretical findings related to the similarities of GRI and ISO 14001 made in this chapter suggest that both overlap and supplement each other in terms of process, principles and requirements and important issues to consider when implementing. This suggests that an organization having ISO 14001 implemented can use existing knowledge and experience when implementing GRI. The similarities in the requirements for ISO 14001 and GRI also can give a valuable input to an organization together with the environmental management system implementation process in order to get a deeper understanding of how to structure the process and develop a proper sustainability reporting system. As this report focus on increasing the level of sustainability reporting among SMEs, the findings in this chapter will be used further for the development of an understanding about how the existing practices in an ISO 14001 certified SME can be utilized for adopting sustainability reporting and facilitate the process.

For the purposes of this research a case study is conducted in order to get an insight into the experiences of a SME with ISO 14001. The current experiences are examined and the principles of GRI will be applied accordingly in order to test the relevance of these findings to the real world and to draw conclusions on how SMEs can facilitate an easier GRI implementation process through the usage of knowledge and experience from ISO 14001. The methods used for data collection are described in details in chapter “Methodology”.

Chapter 4

Case Presentation

For the purposes of this research a case study was developed in order to test the findings made in chapter "GRI and ISO 14001 – A Theoretical Comparison" in a real-life context. The research will be based on the case of the Bulgarian subsidiary of Brunata International a/s – Brunata LTD based in Sofia, Bulgaria, and the reasons for this will be explained in details later in this chapter. The research is based on multiple source of evidence i.e. documents and interviews as mentioned in chapter "Methodology". The main person involved with the process from company side is Ms. Mila Peneva, Quality Manager of Brunata LTD and ISO system responsible.

Brunata International a/s with a headquarter in Herlev, Denmark is a company operating in the field of resource optimization. The company manufactures heat cost allocators and substations for district heating and provides related services. The heat cost allocation service consists of installation of metering systems, readings of the energy consumed on a regular basis and billing for individual and business customers (Brunata International a/s n.d.). The company is represented in many European markets e.g. Bosnia and Herzegovina, Poland, Czech Republic, Great Britain, Latvia, The Netherlands, Russia, Croatia/Serbia, Romania, Italy, Bulgaria, Turkey, Greece, Slovenia, Slovakia, Hungary where it provides basically the heat cost allocation service and metering solutions (Brunata a/s 2012). For almost a century of experience in the field of individual metering and heat cost allocation the products and services of Brunata have proven to contribute to more efficient energy consumption by 30% average reduction among individual customers (Brunata International a/s n.d.).

This research focuses on the Bulgarian subsidiary of Brunata which is the biggest outside Denmark in terms of number of employees. The subsidiary deals with sales of metering solutions and related services in Bulgaria where individual metering and billing is mandatory by law for all consumers of district heating since 2001. Brunata LTD operates in the biggest cities with district heating in Bulgaria – Sofia, Plovdiv, Ruse, Pleven, Gabrovo - and is also responsible for the sales, the billing and the services in Greece. Additionally to the heat cost allocation services, the Bulgarian subsidiary has developed the production of substations for district heating which is relatively new field for Brunata Group in general and adds to the variety of products and services provided by the company internationally. The production is oriented to serve public contracts and export markets and this will be described later because of its major role in the structure of the company in general. In

addition, the Bulgarian subsidiary has established a Research & Development department which deals mainly with remote reading systems. Finally, the subsidiary was involved with few renewable energy projects in Bulgaria supported by the Group Management Team over the last decade (i.e. biofuel power plant in the city of Razlog, photo-voltaic system in the village of Kapatovo, both located in Bulgaria).

The following figure represents the place of the Bulgarian subsidiary within the overall organizational structure of Brunata in order to get a deeper understanding about the responsibilities within the Brunata Group structure. The squares marked in blue represent the functions of Brunata group, based in Denmark, that support the overall operations of the company in Scandinavia and international markets e.g. group finance, group communication, product and supply chain management etc. The squares marked in yellow represent the field of operation of the Bulgarian subsidiary.

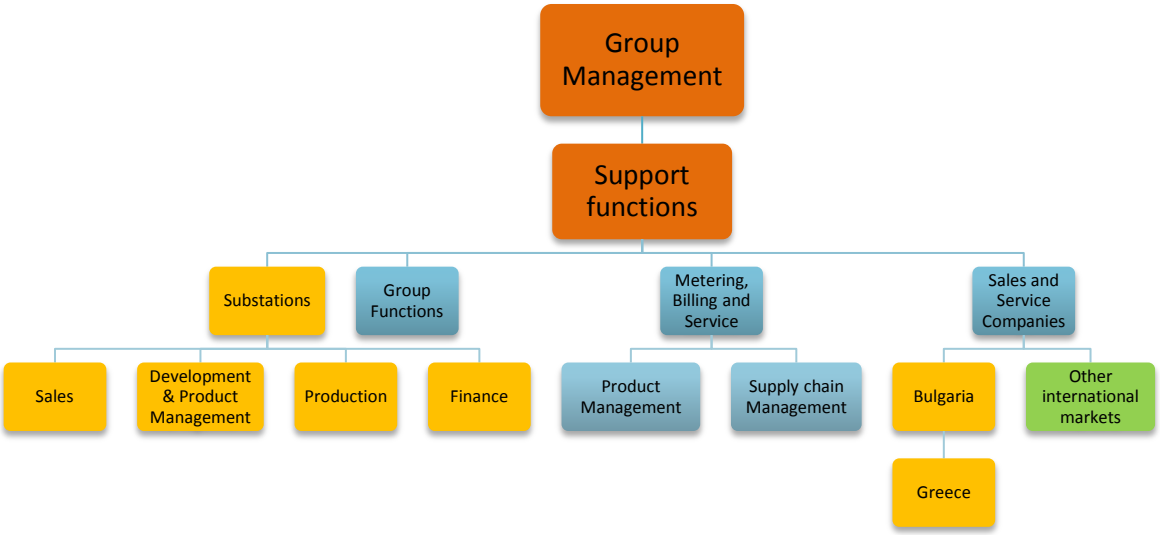

Figure 4: Position of the activities of the Bulgarian subsidiary of Brunata (inspired by the organizational structure of Brunata (Brunata a/s 2012)

As this report focuses on the Bulgarian subsidiary of Brunata as a case its responsibilities and operations will be described in this chapter in order to present a background information about the company and to use this as a point of departure for further data collection and analysis in relation to the existing ISO 14001 practices and their correspondence to the GRI principles.

The Bulgarian subsidiary was established in 1993 under the name Brunata Bulgaria LTD. Since then the company has experienced a significant growth in terms of responsibilities, operations and staff. The following timeline represents the most important developments over the last two decades related to the overall operation of the company and how it was shaped.

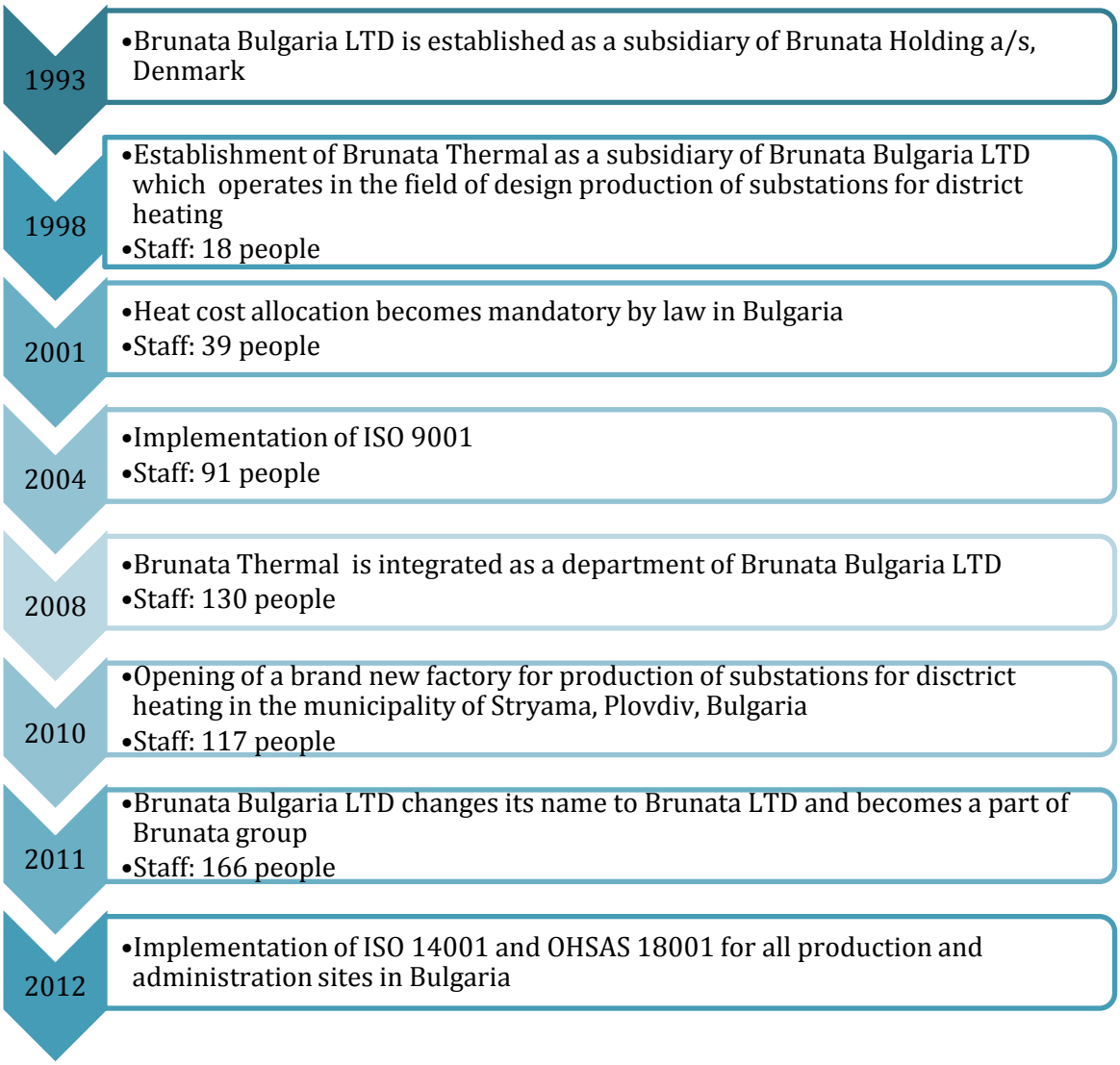

Figure 5: Timeline of the corporate history of Brunata in Bulgaria for the period 1993 – 2012 (Brunata LTD 2012)

Currently Brunata in Bulgaria operates as a subsidiary of Brunata Group with basic fields of operation: production of substations, heat cost allocation and additional operations such as research & development, sales and administration. It is evident from Figure 5 that the company is ISO 9001, ISO 14001 and OHSAS 18001 certified. Due to the specific topic of this research, the focus of the case presentation will be put on the experience of the company with ISO 14001 in the different fields of operation. The aim is to provide a slight idea on different aspects of the environmental management system that will be used for further analysis later.

The organizational structure of Brunata LTD described in this chapter will be presented in Figure 6 in order to visualize the formal structure of the company. It is important to mention that the Heat cost allocation department is the biggest in the company due to the nature of its operations and the need to provide services to many individual customers as explained above. Nevertheless, the Sales and Production departments are the main source of innovation by providing partners on the domestic and the international markets with

solutions for resource optimization which is explained in details later. The Administration department deals mainly with supportive functions for all other departments in the company and facilitates cross-departmental relations.

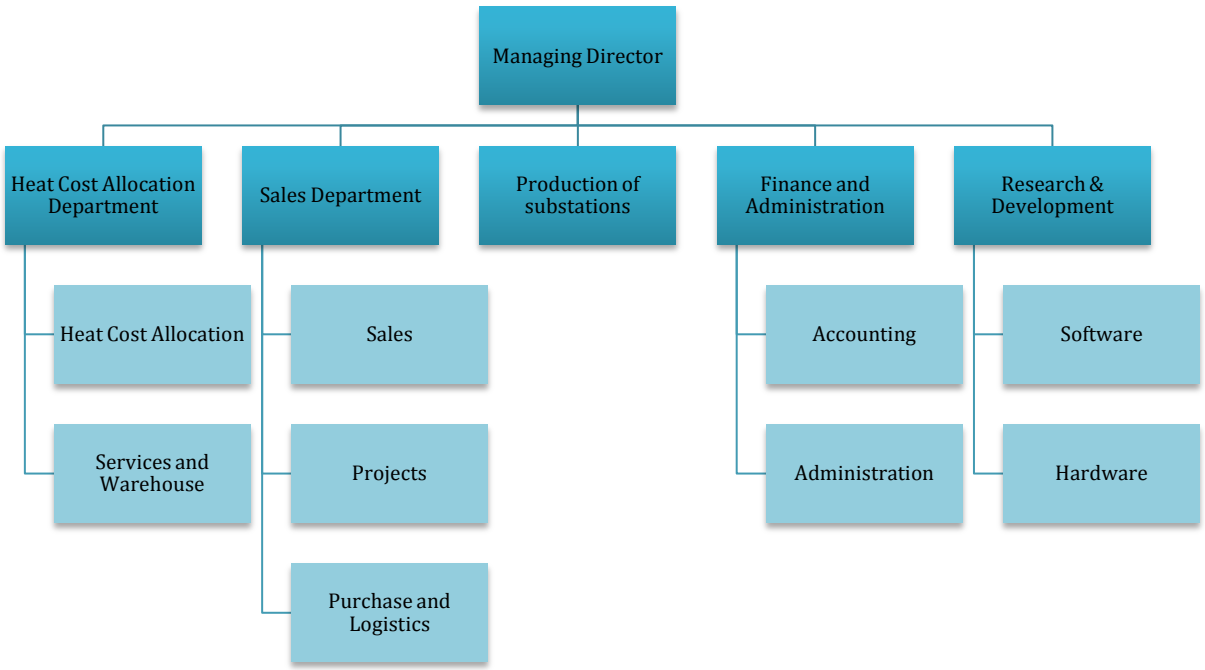

Figure 6: Organizational structure of Brunata LTD (Brunata LTD 2012)

As already shown in Figure 4 the production of substations for district heating represents its own division in the overall structure of Brunata Group. It is based in a factory in the municipality of Stryama, Plovdiv, Bulgaria. The production site has an area of 2200 square meters and annual production capacity of 2000 substations. Since the establishment of the production initially in the subsidiary Brunata Thermal LTD and later under the management of Brunata LTD, the production is oriented to both domestic and international markets. Brunata LTD has delivered substations for district heating according to public contracts (subsidized by the World Bank) and as part of other relevant projects in Bulgaria and to partner companies on international markets such as France, Serbia, Greece, Denmark, Ukraine, Italy etc. That has resulted in the production of app. 11 500 until the end of 2011. (Brunata LTD 2012)

For the purposes of this research it is important to outline that Brunata initiated an ISO 14001 certification because of the production of substations. A new rule for participation in public contacts and tenders was introduced in 2012 demanding participating companies to have environmental management system implemented (Peneva 2013). Furthermore, during the process of implementation it was discovered that the specific operations in the production i.e. painting, welding, electronic equipment etc. have a relatively big impact on the environment and therefore are a field for improvements. (Brunata LTD 2012)

The heat cost allocation department is one of the major in the company in terms of staff with currently employing 54 people. That was the initial field of operation for the company with the establishment in 1993 and the department has experienced a significant growth since then. This is closely related to the increased market share in the heat cost allocation in Bulgaria where mounting of metering solutions and individual billing is mandatory for all individual and business consumers of district heating. Currently, Brunata services 3854 buildings in different cities in Bulgaria and the total number of households using the metering solutions of Brunata is 117 550. Particularly in Sofia, Brunata operates with 42% market share. (Brunata LTD 2012) The operations consist of sales of metering systems, mounting and servicing of heat cost allocators, billing and customer relations. The staff of the department includes engineers, technicians, managers and customer relations specialists.

Due to the nature of the every-day operations, the Heat Cost Allocation department is one of the major consumers of resources in the company (especially fuel) and also represents an area of interest for environmental improvements. (Brunata LTD 2012)

The additional operations of Brunata LTD consist of research & development, sales and projects and administration. The Research & Development (R&D) department deals with software and hardware development of remote control and reading systems. The department has worked on several projects for remote reading equipment and has provided different innovative solutions for individual and business customers in relation to metering of energy consumption. Over the last decade the products of the R&D department have also found application in the Danish market as part of different projects in Esbjerg and Copenhagen. In the domestic market the most significant contribution of the R&D department is the development of the SiDiO remote reading system that provides hardware and software metering solution for energy meters through wired systems. (Brunata LTD 2012)

As the sales of heat cost allocators and the related services for individual customers are based in the Heat Cost Allocation department, the Sales department in the company deals with business-to-business sales of the major products and solutions like substations for district heating and remote reading systems. It is also involved with projects for design of district heating infrastructure and other complex projects in the field of energy consumption optimization. It operates in close relation to the Finance and Administration department where the administrative tasks are located, as well as the financing of different projects and innovations. (Brunata LTD 2012)

The choice of Brunata LTD for a relevant case in this research is based on few reasons. First, the company is a SME and therefore a relevant case with annual turnover in Bulgaria for 2011 - € 10.5 million and 166 employees (Brunata LTD 2012). Second, the company is newly certified with ISO 14001 in 2012 which implies that implementation process is in place. Therefore it is relevant to investigate the knowledge and experiences in order to draw conclusions on how those can be transferred to the GRI implementation process and principles. And third, the company has recently got the OHSAS 18001 certification for

occupational health and safety management which indicates that the social dimension of the operations is also taken into consideration from top management and therefore makes the case relevant to the broader field of sustainability reporting.

In the following chapter "ISO 14001 Experiences in Relation to GRI – Praxis and Recommendations" most of the evident found during the case study will be presented in order to enable conclusions on the implementation of sustainability reporting in relation to the existing experience and knowledge with ISO 14001.

Chapter 5

ISO 14001 Experiences in Relation to GRI - Praxis and Recommendations

In this chapter the evidence from the data collection will be linked to the particular research questions in order to enable conclusions on how SMEs can apply existing knowledge from ISO 14001 when approaching sustainability reporting according to GRI. Data collection took place through investigation of ISO 14001 system documents and procedures, and three in-depth interviews with the ISO system responsible, Ms. Mila Peneva, in the case company – Brunata – that took place over a period of time. As mentioned in chapter "Methodology", the interviews were intended to be structured like guided conversations. Few basic initial questions were formulated to follow the line of inquiry and those can be found in Appendix A. The statements from Mila Peneva cited in this chapter can be found in Appendix B.

As already explained in chapter "Case Presentation" the subsidiary of Brunata Group in Bulgaria – later referred to as Brunata – is a medium-sized company with ISO 9001 certification from 2004 and ISO 14001 and OHSAS 18001 certifications respectively from 2012 (Brunata LTD 2012). The implementation of ISO 14001 and OHSAS 18001 in 2012 was initiated due to new requirements from the district heating company in Sofia stating that all suppliers and sub-contractors in the field of district heating should have both systems implemented (Peneva 2013). As Brunata takes part in public trends for different district heating related products and services this requirement was applicable to the company.

It was already described in chapter "GRI and ISO 14001 – A Theoretical Comparison" that the environmental management standard ISO 14001 and sustainability reporting framework GRI overlap each other in terms of implementation processes and requirements/principles. Therefore, investigating an ISO 14001 certified SME is a good starting point for getting an insight into existing practices and knowledge on how SMEs run an environmental management system and what lessons they have learnt in the process. The outcome from this investigation is recommendations for a company to consider when approaching GRI. The implementation process of ISO 14001 is also a matter of interest for this research and is investigated in order to draw conclusions on how SMEs can facilitate an easier process towards GRI. The principles of report quality and report content will also applied accordingly in order to draw additional conclusions on sustainability reporting, ISO 14001 and SMEs. The findings made during the data collection will be related to the GRI framework in order to draw recommendations for SMEs to adopt when approaching

sustainability reporting and to enable the facilitation of an easier GRI implementation process.

Similarly to ISO 14001, the implementation process of GRI starts with management commitment from the top management. The commitment demonstrates the overall intentions of the organization for achieving sustainable development and is the starting point for internal alignment. Furthermore, the identification of significant impacts and allocation of responsibilities is one of the initial steps to undertake in this process. The ISO system responsible in Brunata, Mila Peneva, explains that Brunata had difficulties with the formulation of the environmental policy at the initial step as the environmental issues were new to the company and there was a lack of knowledge in the initial part of the process. Furthermore, she stated that from a company perspective the policy should be a broad statement that aims to show the overall commitment. The formulation of the environmental policy was the initial step the company undertook and due to a lack of time Brunata stuck strictly to the standard requirements and did not invest time in innovation and creativity in order to secure compliance and get certification as soon as possible. (Peneva 2013)

In the case of Brunata the environmental policy demonstrates the overall commitment to reduction of impacts and management of the environment without being precise on particular issues. The following activities are mentioned in the environmental policy of Brunata (Brunata LTD, 2012):

- Compliance with legal requirements in relation to the environment
- Formulation of objectives and targets for managing the environment
- Availability of all resources needed for the environmental management system
- Secure continuous improvements
- Motivation, corporate culture and building of competences among the staff in relation to the environmental management.

It is evident that the environmental policy sticks closely to the overall requirements of ISO 14001 in order to demostrate management commitment and is quite broad. No specific targets are listed and therefore no specific areas of action are in place. According to Mila Peneva broad environmental policies prevent many SMEs to formulate goals that lead the company "straight to the point" (Peneva 2013). Furthermore, an environmental policy that sticks closely to the requirements of ISO 14001 lacks the development of vission and strategy that GRI states as a benefit from this step (Global Reporting Initiative 2011). Therefore the first recommendation for ISO 14001 certified SMEs approaching sustainability reporting is:

<u>Recommendation 1:</u> Formulate the policy in a manner that points to the overall vision of the company by mentioning specific areas for action/improvement

The statements in such a policy could be formulated in a way that declare the overall intentions of the company in terms of future objectives, but it should also list the particular areas of action (significant impacts) in order to be specific about how the vision can be

achieved and how the overall performance can be improved. Following is an example of such a policy:

"*Improve the environmental performance of the company by:*

- *Reduction of waste of different origin from production and offices*
- *Disposal of harmful substances according to the legal requirements*
- *Optimization of energy consumption in the production line and the administration*
- *Reduction of air emissions by optimizing the everyday use of cars*

Build motivation, competences and culture among the staff by:

- *Providing education on the legal requirements and the environmental management*
- *Communicating the overall vision and ambition level of the company concerning the environmental performance and improvements*
- *Involving them in the environmental management system"*

The recommendation suggests that the identification of significant impacts should take place in the beginning of the process in order to secure correlation between the overall corporate vision and the areas of action/improvement. Furthermore, when identifying the significant impacts the company should keep the overall vision in mind and the other way around – when formulating the overall vision the significant impacts should be included. Mila Peneva also confirms that the environmental aspects should be tightened to the policy in order to create an integrated vision about the environmental management system of the company (Peneva 2013). This implies an ongoing process of interaction between the policy and the particular areas of impact that can secure the correspondence and the continuous improvement in ISO 14001. Furthermore, this process relates to GRI where the correlation between the overall vision and the most critical impacts is also mentioned as essential.

<u>Recommendation 2:</u> Identify the significant impacts together with the formulation of the corporate vision so they correspond to each other and provide a basis for an integrated process.

As mentioned already in chapter "GRI and ISO 14001 – A Theoretical Comparison" the formulation of significant impacts is essential for both ISO 14001 and GRI. The procedure for identification of significant impacts in Brunata suggests two ways of identifying the significant impacts: formation of work group from the system responsible person and managers of department and/or the external consultant in cooperation with the system responsible person. Brunata chose the latter and the initial identification of the significant environmental impacts was performed by an external consultant (Peneva 2013). As shown in Figure 7, Mila Peneva will have the responsibility of decision making further in the process of identification of significant environmental impacts. Mila Peneva also states that from her experience it is quite typical for SMEs in Bulgaria to hire external consultants for identifying environmental aspects due to the lack of knowledge in the initial step. She also

explains that from her perspective this is not the most convenient option because "No consultant can know your organization better than you can" (Peneva 2013).

The outcome from the use of the external consultant was a list of the significant impacts of Brunata placed in the previously mentioned procedure and it includes: the everyday use of cars and their emissions in the atmosphere, the metal waste from the production of substations, waste from packaging of chemicals, replacement of batteries for heat cost allocators and their disposal (Brunata LTD 2012). Mila Peneva explains that on the primary stage of ISO 14001 certification the external consultant focused on the most obvious and hazardous impacts.

GRI does not neglect the use of external experts in the initial phase of impact identification but states that "…the main objectives are to align internally and …. try to understand and identify your organization's most critical economic, environmental and social aspects" (Global Reporting Initiative 2011). This implies that the knowledge about the significant impacts is preferable to be accumulated internally rather than received as an outcome from an external party investigation. Mila Peneva also states that in her perspective that would have been more convenient but Brunata experienced a lack of time and knowledge of the personnel and this is the reason to hire an external consultant instead of to accumulate the knowledge internally. In her perspective, more time in the certification process would have enabled training and education for the staff and therefore obtaining knowledge about ISO 14001 and environmental management in general. For Mila Peneva, the compilation of environmental and company-related knowledge is the best precondition for the identification of meaningful and precise environmental impacts. Additionally, she stated that if the company itself was working on the impacts by engaging more people internally, the impacts would have been more business and company specific to the particular organization of Brunata (Peneva 2013). Furthermore, in the process of internal identification the company can benefit from learning and exchange of knowledge. Therefore, a third recommendation follows:

<u>Recommendation 3:</u> Use the knowledge of the personnel in the process of identification of the significant impact

It is evident from the significant impacts mentioned above that the administration of Brunata is left out of the list. This implies that it has little or no environmental impact as its operations are not listed among the significant environmental impacts of the company. At the same time the administration employs 84 out of 166 people and therefore this formulation of the environmental impacts excludes half of the employees in the company from the environmental management system even though due to the nature of their operation "they are the biggest consumer of paper in the company" (Peneva 2013). Therefore the company missed out a division that represents a big part of it in terms of employees and can appear to have a significant environmental impact if investigated. Furthermore, even though the boundaries of ISO 14001 in Brunata were identified to cover the whole organization, there are absences in practice (Peneva 2013).

Mila Peneva stated that the categories suggested by ISO 14001 i.e. emissions to the air, waste, disposal of harmful substances, noise, use of energy, water and natural resources acted as a main inspiration and guidance for her, personally, to know what to focus on when identifying the significant impacts (Peneva 2013). As she was the only representative from the company working with the external consultant, it was somehow natural that the outcome was limited to these categories. The lack of participation from other people in the organization limited the input and the outcome from the significant impacts identification process and resulted in poorly formulated environmental impacts that do not cover all the relevant operations of the company.

In terms of significant impacts GRI demands that companies report against the principles of Materiality, Stakeholder inclusiveness, Sustainability context and Completeness which were already described in chapter "GRI and ISO 14001 – A Theoretical Comparison". The principles secure that the impacts are meaningful, suited to the stakeholders' expectations and the vision of the company and comprehensive (Global Reporting Initiative 2011). Therefore, because of the use of the principles GRI prevents companies from misinterpretation and unsound formulation. Furthermore, looking closer into the case, it is evident that the company compromised the principle of materiality, stakeholder inclusiveness and completeness by not covering the whole organization and its impacts and by leaving out staff from the process. Therefore, the forth recommendation is:

Recommendation 4: ***Structure the process of identification of significant impacts in a way to cover the whole organization and all its operations in order to secure comprehensive and complete environmental impacts***

As already mentioned the engagement of the personnel in the certification requires a certain amount of time and knowledge. As mentioned already, Mila Peneva agreed that engaging the personnel is more time consuming and requires more internal efforts in terms of training but the result from such a process will be more valuable for the company and therefore is a good investment. Furthermore, other resources like human (number of employees, responsibilities) and financial are also important. Mila Peneva also discusses the role of the resources in the implementation process. She states that from her perspective the lack of time was a main barrier in the implementation process (Peneva 2013). In the initial stage the lack of time prevented Brunata from planning carefully responsibilities and educating the personnel. That was important because Mila Peneva stressed on the lack of knowledge among the personnel in terms of managing the environment as another important issue. Consequently, the lack of time and knowledge was presupposed by the fact that the staff is multifunctional in terms of responsibilities and planning additional activities in Brunata usually interferes with the urgency of other daily tasks and responsibilities. This implies that the company faces difficulties when approaching a new field especially in terms of time and knowledge of the personnel. In terms of financial resources, Mila Peneva stated that there was enough money allocated for the certification and additional activities so she does not see financial resources as a main barrier at the initial stage. Furthermore, when asked for an opinion about how planning is in large companies from her perspective, she stated that they posses more resources

especially in terms of human and therefore allocation of responsibilities might be easier while at the same time she admitted that the ISO 14001-related work (paper, operational, managerial) is probably more in a large company compared to medium-sized one due to the multi-layered structures of those organizations. (Peneva 2013)

On the other hand, GRI emphasizes on the importance of planning and allocation of responsibilities in the initial step of sustainability reporting. As mentioned already in chapter "GRI and ISO 14001 – A Theoretical Comparison", following the management commitment is the production of action plans and timescales, identification of report team, allocation of responsibilities and tasks and budgeting (Global Reporting Initiative 2011). Therefore, GRI sets a requirement for certain planning in the organization when approaching sustainability reporting while ISO 14001 is more flexible to the allocation of responsibilities. According to Mila Peneva, this flexibility presupposed the centralized allocation of responsibilities in her hands and hindered the distribution of tasks to more people in the organization. She also stated that the flexibility of ISO 14001 is comfortable for SMEs because it allows compliance without the participation of many people in the organization but at the same time compromises the quality of the environmental management system (Peneva 2013). Therefore, the next recommendation is following:

<u>Recommendation 5:</u> Plan activities with an emphasis on knowledge, allocation of responsibilities and tasks and timescales.

The planning of responsibilities, tasks and time itself requires a closer look into the organizational structure of Brunata. It was already presented in Figure 6 in chapter "Case presentation". ISO 14001 provides a different perspective on the routines in the company from the general business activities and division of tasks. Therefore, it is relevant to investigate how responsibilities have been allocated throughout the organization at the current stage. The procedures for ISO 14001 of Brunata were investigated as they contain information on roles in decision making, implementation, supporting functions and reporting back. The following figure represents the division of responsibilities in Brunata. The yellow squares list the ISO 14001 procedures of Brunata, while decision-makers are marked in green, implementation bodies in dark blue and reporting body in light blue.

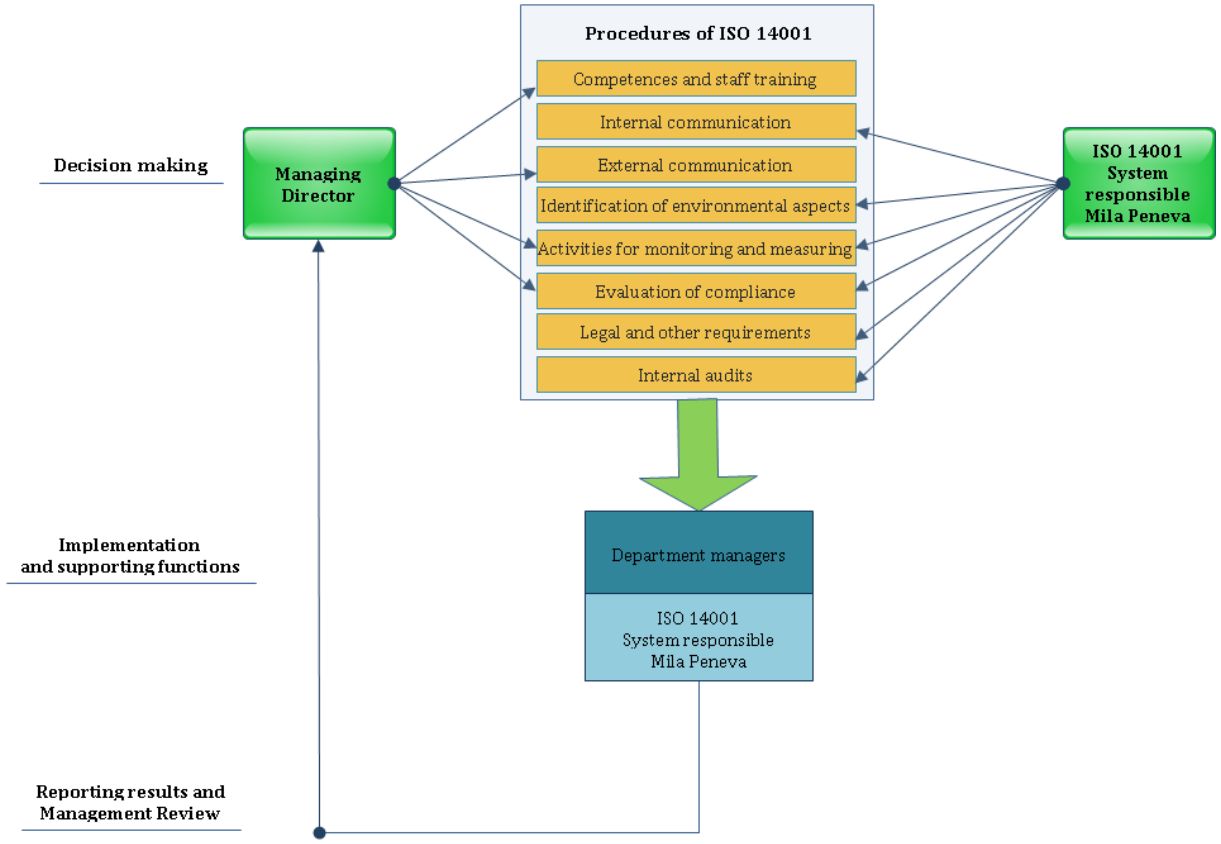

Figure 7: The division of responsibilities in ISO 14001 in Brunata (Brunata LTD 2012)

It is evident from Figure 7 that the responsibilities are unevenly allocated throughout the organization. Decision-making is concentrated in the hands of top-management and especially the ISO 14001 system-responsible Mila Peneva, while implementation and supporting functions take place in lower parts of the organization – within the departments and through the department managers. Reporting back is the responsibility of Mila Peneva whose role is to collect information and present it at the Management review.

According to Mila Peneva the allocation of responsibilities in Brunata reflects the requirements and structure suggested by ISO 14001 and the flow of responsibilities goes top-down from the management to the departments. She also emphasized the role of the managing director and the importance of his entrepreneurial skills to the overall decision-making and vision in the organization. She added that in Brunata there is a typical top-down structure of decision-making and that the managing director is the leading person when it comes to decisions. (Peneva 2013) Due to this feature of the company, she admitted that the formation of a mediating environmental body that takes on responsibilities, and especially decision-making, from the managing director is not convenient in the case of Brunata and even not realistic. At the same time, she emphasized that the managing director cannot cover all the areas of action in the organization in terms of knowledge and routines and that he needs an overall company picture. Furthermore, GRI emphasizes that the definition of the overall sustainability goals are closely related to the significant impacts (Global Reporting Initiative 2011). Therefore, stressing on the reporting

back process from lower levels to the organization to top management is a possible way to provide the decision-maker with a valuable input and to enable informed decision-making. This requires a more active engagement from lower parts of the organization in order to secure broad and meaningful input which leads to the following recommendation:

<u>Recommendation 6:</u> Engage actively more people from different parts of the organization in the implementation and operation process and therefore secure informed decision-making from top management

This recommendation implies the more active participation of the department managers as representatives of different parts of the organization compared to the structure in Figure 7. At the current stage, they have implementation and supporting functions, but according to the recommendation they should be engaged with the decision making, too, because of the following reasons. The department managers possess the specific operational knowledge and experience and deal with everyday routines within their departments. As already described above, this is a function that the managing director cannot sustain over the whole organization. At the same time, the department managers are placed closer to top management in the organizational structure and that makes them good mediators and communicators of information and knowledge downwards from top management to the employees and upward from staff to top management. Mila Peneva stated that in Brunata there is an informal procedure of reporting department-related performance to the managing director once a year. For the purposes of this process, Brunata has developed a so-called "internal questionnaire" where managers fill in department-specific information concerning the financial performance, market share, projects, supply chain management, communication and staff and discuss the results at the annual general meeting. Mila Peneva states that this process is very helpful for the organization itself as it contributes to the exchange of information and gives a good overview of the whole company (Peneva 2013). Therefore, Brunata has a good experience with this practice and Mila Peneva agreed that it can be suitable also for the needs of decision making in ISO 14001 if the department managers take on this responsibility (Peneva 2013).

The input from different parts of the organization (as suggested, from department managers) in the decision-making should be based on a reliable and high quality data. Therefore, a relevant area to investigate is the monitoring and measuring. As mentioned already in chapter "GRI and ISO 14001 – A Theoretical Comparison", both ISO 14001 and GRI are demanding in terms of data quality and overlap each other in the requirement for measuring. Brunata will use the internal audit as a primary tool for measuring and monitoring the environmental performance. It will engage more actively people throughout the organization as every department will choose an auditor who will check other departments. This is to secure data quality and reliability. (Peneva 2013)

GRI is demanding about the monitoring and measuring of data and it introduces the principles for report quality that aim to secure data of good quality (Global Reporting Initiative 2011). They were already described in details in chapter "GRI and ISO 14001 – A Theoretical Comparison". Mila Peneva was asked to assess the practices in Brunata against

to the principles. According to her, the assessment of good performance and non-compliance in Brunata will be secured during the internal audit where people from different departments will assess objectively other departments outside their daily practices. Internal auditors will check the performance through qualitative methods like surveys and interviews and quantitative data (Peneva 2013). According to Mila Peneva, the main principle of auditing is to emphasize on the good performance and make recommendations for improvements on the non-compliance. In her perspective this approach does not compromise the principle of balance and the collection of reliable data and will not focus on emphasizing only the good performance (Peneva 2013). Furthermore, the emphasis in the monitoring and measuring will be on quantitative data which complies with the principle of accuracy in GRI. Mila Peneva states that the data will be based primarily on documentation, invoices and measuring of impacts from authorized parties (for example measuring the pollution from painting of metal parts). The data collected annually will be kept in files in order to enable comparison between different periods of time (Peneva 2013). According to Mila Peneva, this is essential for the track of improvement according to ISO 14001. It also complies with the principle of comparability in GRI which demands the data to available for comparison between different years and companies. The data collected will be used primarily for the purposes of the management review (track of progress and decisions for improvements and future changes in the environmental management system). (Peneva 2013) Therefore, the practices that Brunata has developed are fitting into the GRI requirements and represent a suitable approach to monitoring and measuring of data for both ISO 14001 and GRI. In relation to that, the following recommendation has been formulated:

<u>Recommendation 7:</u> Structure the data collection to cover the whole organization and its operations: assess the good performance and non-compliance based on both qualitative and quantitative data and track performance through keeping records for a longer period of time.

Concerning the communication of collected data and environmental performance in general, Mila Peneva stated that the information will be used for the purposes of the management review (Peneva 2013). She added that information on environmental performance is communicated externally only to authorities due to legal requirements and at the current stage the company does not plan to engage voluntarily other external interested parties or to use the information for other purposes except for the management review. Therefore, this practice compromises one of the most important characteristics of GRI – the active participation of stakeholders in the process. At the same time, Mila Peneva agreed that collected information can have different applications and can add value to the environmental management system. Due to the fact that Brunata operates in a few fields with different scope i.e. production of substations, heat cost allocation, sales of district heating infrastructure, the different departments have different stakeholders and therefore need to respond to different expectations. Therefore, it is reasonable for the process of identification and engagement of stakeholders to be planned accordingly and with a department context. Mila Peneva pointed further that, from her perspective, the process

should be suited to the stakeholder expectations in order gain benefits and this can result in responding to department specific expectations. Therefore, she identified the department managers as the people in the company who can have the responsibilities in terms of communication and establishing stakeholder relation and who can bring the information in the more general perspective of the company-wide environmental management system. Following is the last recommendation:

<u>Recommendation 8:</u> Identify stakeholders in a department context and allocate responsibilities among the staff to sustain an ongoing dialogue.

This chapter presented the findings from the data collection and the theoretical approach and compiled them in order to formulate recommendations for ISO 14001 certified SMEs to adopt when approaching GRI implementation. The overlap between GRI an ISO 14001 provided the theoretical basis for drawing the conclusions while the findings made in the case of Brunata gave and insight into the practices with ISO 14001.

Chapter 6

Conclusion

This research took its point of departure from gap found with sustainability reporting. Sustainability reporting is supported by the United Nations in the report "Future We Want – Outcome Document" from 2012 as a beneficial tool for companies to engage with sustainability practices, but it is still primarily large companies that get involved. Sustainability reporting appears to be a win-win situation for them because they aim to build image and correspond to the expectations in societies. The most commonly used reporting framework is the Global Reporting Initiative (GRI) (Brown, de Jong and Levy 2009) that provides the guidelines for creating sustainability reports and indicators to report against (Global Reporting Initiative 2011).

At the same time SMEs are barely presented within GRI even though their environmental and social impact has been reported by Eurostat to be significant in Europe – 99.8% of the enterprises are SMEs, generating 64% of the environmental impact and 66.7% employment in the non-financial business economy (Eurostat 2013).

During the last decade companies of any size (including SMEs) demonstrate growing commitment to their environmental impact and an evidence for this is the increasing number of organizations certified with ISO 14001 globally presented in Figure 1 in "Introduction". Companies implement ISO 14001 in order to manage their environmental impact in a more systematic way.

For the purpose of this research a parallel was made between ISO 14001 and GRI in order to find the level of overlap or supplement between both while keeping in mind the broader sustainability context of GRI compared to the environmental focus of ISO 14001. It was discovered that the environmental management standard and the reporting framework suggest similar structure and to the implementation process by outlining the management commitment as an initial step, the significant impacts and the allocation of responsibilities as important steps in the processes and monitoring of performance as a way of measuring success. Both ISO 14001 and GRI are structured as ongoing processes of revision of operations and continuous improvements. Furthermore, there is a level of overlap in the principles/requirements that the companies need to comply to in order to run the systems. Those are related to identification of meaningful impacts, communication with stakeholders, coverage of relevant topics, objective collection and reporting of reliable data in a meaningful format, comparability of information in terms of time.

The findings made in the comparison between ISO 14001 and GRI suggested that companies having ISO 14001certification can use their existing knowledge and experience to facilitate an easier implementation process of GRI. Therefore, this research was built on

a case study investigating the company of Brunata - an ISO 14001 certified SME - and the practices established in relation to the environmental management standard. The outcome from this research is to suggest a structured process for Brunata to adopt that is build upon a compilation of the existing practices and the principles of GRI and therefore to lead the company to an easier GRI implementation process. This was made through the formulation of recommendations to apply when approaching GRI and having ISO 14001 implemented.

The recommendations are built in a process manner starting from management commitment and ending with stakeholder communication. The following figure represents the recommendations developed.

Figure 8: Recommendations to adopt in a GRI implementation process when having ISO 14001 certification

The recommendations put an emphasis on the comprehensive identification of significant impacts as they represent the basis for running both ISO 14001 and GRI. It is essential for sustainability reporting to be based on significant impacts that are identified in sound with the overall corporate vision. Furthermore, it was discovered that the process of identification needs to cover the whole organization, use the existing knowledge and rely on allocation of responsibilities. Meaningfully formulated significant impacts and the active participation of people from different parts and levels of the organization contribute to informed decision-making of top management. Furthermore, allocation of responsibilities is essential for the smooth operation of the process as tasks are distributed to more people and not concentrated at one level.

The recommendations are formulated in close relation to ISO 14001 practices but aim to build a bridge between them and GRI. They suggest an approach for structuring the ISO 14001 operations in a manner to facilitate an easier GRI implementation process. In the following chapter “Perspectives” the focus will be extended to cover SMEs in general and to translate the recommendations to a broader SME context.

Chapter 7

Perspectives

This research investigated an ISO 14001 certified SME in order to draw recommendations on how can a company use the existing knowledge and experiences with the environmental management system in the process of approaching sustainability reporting. In this chapter, the focus will be extended to SMEs in general and the findings will be applied to a broader context.

SMEs deal with different circumstances compared to large companies due to different organizational structure and characteristics. First, they depend to a great extend to the role of the owner and his/her vision for the company, but are more flexible and responsive to market changes. Second, they experience resource poverty in terms of financing, time and personnel but have more efficient and faster internal communication. (Bos-Brouwers 2010) Therefore, the recommendations developed in this research are transferable to other SMEs as they deal with similar circumstances as the case company Brunata does.

As the role of the owner in developing the vision for SMEs is essential it is important that the whole process of approaching GRI is suited to the vision. Once the owner has recognized sustainable development as part of the corporate vision, it is important that all efforts in the company are suited in this direction. Therefore, SMEs should work on formulation of vision in sound with their significant sustainability impacts in order to facilitate an efficient and integrated process.

Even though, as outlined earlier in this chapter, SMEs experience lack of resources in terms of time, capital and human, it is still the people who are the driving source for SMEs. Approaching a new field as sustainability reporting, and complying with reporting framework like GRI can be challenging for SMEs as this implies allocation of new responsibilities among the staff together with running the everyday tasks as usual. It is essential for SMEs to realize that the staff possesses the expertise for the company and this knowledge should be utilized in the most beneficial way. Therefore, it is important to investigate the organizational structure and allocation of responsibilities to date and discuss ways to distribute the new tasks among people. This needs a careful planning as people possess different type of knowledge, skills and occupation. New responsibilities should be allocated with emphasis on those characteristics in order to create the most efficient process possible as time is one of the great challenges for SMEs, too.

Engaging more people from different levels of the organization might be challenging and slow, but it is a precondition for few positive outcomes for the company in a long term.

First, it will boost exchange of knowledge from different parts and levels of the organization and generation of ideas internally which creates new capacities. Second, allocation of responsibilities to more people prevents one from being overwhelmed with tasks. Furthermore, this enables more flexible communication outside the organization as there are more people engaged who contribute with their personal connections with external parties.

The process of exchanging knowledge can be also supported by the internal measuring and monitoring of performance in cross-organizational internal checking. This will enable different participants to get an insight into more activities without being involved actively in them. Furthermore, a comprehensive review of performance gives a more detailed information to top management about compliance and basis for decision-making on future improvements.

Approaching the organization in a more systematic and balanced way as suggested in this report, will enable SMEs to use the practices they have from ISO 14001 and to upgrade them for the purposes of GRI. It is important that SMEs get involved with sustainability reporting as they represent a big part of the businesses globally. Sustainability reporting will enhance transparency for SMEs, legal compliance and accountability of their practices and will contribute to the sustainable development that we aim today for securing the needs of future generations.

Appendix A

Questions for the interviews with Mila Peneva, ISO system responsible in Brunata

- What was the reason for Brunata to get an ISO 14001 certification?
- How the responsibilities in relation to ISO 14001 were allocated in the company – decision-making, implementation, supporting functions?
- How would you assess the availability of resources in terms of time, finance and human?
- How do you see the connection between the environmental policy and the identification of the significant environmental impacts?
- How were the significant impacts formulated?
- How closely did you stick to the ISO 14001 requirements in the implementation process?
- How do you see the role of the managing director?
- How do you plan to measure and monitor performance?
- How will you use the data collected in the company?
- What kind of interested parties have you identified in the process?

Appendix B

Statements from Mila Peneva, ISO system responsible in Brunata

- "We initiated the implementation of ISO 14001 and OHSAS 18001 due to new requirements from the district heating company in Sofia that we need to comply with because of our participation in public trends"
- "We had difficulties especially with the formulation of the environmental policy because ISO 14001 and all related topics were new to us and we had to kick-start the process somehow"
- "I see the environmental policy as a broad statement showing overall commitment"
- "We stick closely to the standard (ISO 14001) because we needed the certification as soon as possible. Therefore, we didn't spend time on thinking how to structure everything"
- "The environmental policy should lead the company straight to the point besides pointing the overall commitment. Therefore, I think, broad environmental policies compromise the formulation of precise goals"
- "The environmental impacts should be tightened to the policy in order to create an integrated vision for the company"
- "We used an external consultant for the formulation of the environmental impacts. This is quite typical for SMEs in Bulgaria"
- "I, personally, do not like this approach because no consultant can know you company better that you can"
- "In the identification of the significant impacts the external consultant focused on the most obvious impacts"
- "The lack of time was the main barrier for me in the implementation process"
- "I would have preferred that we internally worked on the environmental impacts but we experienced a lack of time and knowledge in the initial phase"
- "We faced a lack of knowledge among the staff in terms of managing the environment"
- "If we had more time, we would have definitely invested in training and courses for the staff and then generated the knowledge internally"
- "Our staff is multifunctional and any additional activity interferes with the urgency of daily tasks"
- "If we worked on the impacts, I think the outcome would have been more company-specific"
- "Our office division, the administration, is the biggest consumer of paper in Brunata"
- "ISO 14001 was structured to cover the whole organization but there are absences in reality"
- "We used the categories suggested by ISO 14001 – emissions, waste, resource consumption – as an inspiration and guidance in the formulation of impacts"

- “I think there was enough money in the certification. I got everything I asked for (certification costs, costs for the external consultant etc.)”
- “In my perspective, large companies possess more resources in terms of human, but paper work is more there due to more complex organizational structures”
- “ISO 14001 is flexible and therefore comfortable for SMEs but this flexibility sometimes compromises the quality of the system. For example, now the responsibilities are centralized in my hands and that would compromise the implementation of the system at some point (if I am very busy with many things, for example). But we will still be certified and complying with ISO 14001”
- “The allocation of responsibilities in Brunata reflects the structure suggested by ISO 14001 and goes top-down”
- “We have a typical top-down structure in Brunata. The role of the managing director is essential as he points the overall direction for the company. He is the generator of ideas here”
- “I don’t think the formation of a mediating environmental body is realistic for Brunata. Especially, if it takes on decision making responsibilities”
- “The managing director cannot know all everyday routines in the company. But he needs to have an overall picture in order to make informed decisions”
- “We have an informal procedure. We established it few years ago in relation to the management review in ISO 9001. Every department manager fills in a questionnaire concerning the performance in the department over the year – financial, supply chain, staff, communication with clients, projects etc. Then we present it at the meeting and it’s valuable because it boost exchange of information and gives a nice overview. I think it will be working also for ISO 14001 and we will implement it”
- “We will use the internal audit as a main tool for measuring and monitoring of environmental performance. Every department will have an auditor who will audit another department. Auditors will focus on good performance and making recommendations. They will use qualitative methods in the audit (interviews, conversations)”
- “The overall data collection will be based on quantitative methods. I will use only documents, invoices and authorized measuring and no assumptions when collecting the data. This will secure good data quality”
- “The data collected through auditing and measuring will be used in the Management review. At the current stage, we do not plan to communicate the information to other parties (internally and externally) but if I think about it I see more applications of this data that can add value to the environmental management system”
- “Brunata covers a great variety of operations. We have the substations, the heat cost allocation and sales departments and they all have different groups of stakeholders. Therefore, I think that in order to establish good stakeholder relations and to respond to expectations, the department managers should come into play. They are the most convenient to maintain ongoing dialogue with department-specific stakeholders and transfer the information to a broader company context”

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