Sustainability Reporting for Start ups

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Sustainability Reporting for Start ups: Recommendations for customized Instruments to promote Sustainability

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ABSTRACT

Sustainable development can be enforced by external interventions, such as laws and regulations. Sustainability research however finds that innovation, often emerging in the form of entrepreneurship, has the largest potential to contribute to sustainable development. Entrepreneurship is considered an important driver of economic growth, job creation and productivity. New businesses show innovative and creative potential to replace old products and to contribute to quality of life improvements. Yet, various sources also emphasize the negative contributions of entrepreneurial activity for development, especially in the form of environmental degradation, but also in unproductive or even criminal rent seeking. Sustainability reporting supports organizations in making their operations more sustainable as it helps to set goals, measure performance, and manage change. It was found to have a positive impact on a company's actions towards more sustainable business practices.

The primary purpose of this thesis was to identify recommendations for customized sustainability reporting instruments which can bring value specifically to start ups and thus motivate them to introduce reporting. Semi-structured interviews with CEOs and founders of start ups were conducted to generate new empirical knowledge and allow for the formulation of recommendations. The recommendations were developed along the reporting guidelines of GRI.

The findings from empirical and theoretical data allowed the formulation of key assertions. It was shown that the sustainability context of start ups is impacted by two main drivers, *growth* and *compliance*. Compliance of start ups is strongly influenced by what founders and managers consider *relevant*, their *resource capacities*, and whether the *confidentiality* of their business model allows them to disclose certain information. Sustainability reporting guidelines base on an advanced sustainability understanding, which makes them unsuitable for "sustainability beginners". Growth of start ups is strongly dependent on the *communication and sales channels* used in the business model and is driven by the notion of *creation*, but it bases in an environment that shows high degree of *uncertainty*. Start ups often base their value proposition on new technology and channels, such as mobile/internet, which are not depicted in existing reporting guidelines. Customized guidelines for start ups will need to focus more on the sustainability context of start ups and to balance disclosure and confidentiality. They will also need to show a higher level of integration of sustainability aspects to make the materiality of sustainability in economic, ecological and social issues more obvious and thus relevant to start ups. Within constantly and faster changing economies and basing on new technological developments, start ups like Facebook, Google, Twitter and Groupon have shown to become multi-national companies registered on stock markets within a few years of their existence. It is therefore expected that introducing sustainability reporting as an early tool in a start ups' growth can have a high impact on the overall promotion of sustainability in the economic sector.

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ABBREVIATIONS

B2B	Business to Business
BMU	Bundesumweltministerium (German Federal Environment Ministry)
G&A	Governance & Accountability Institute
CGA	Certified General Accountants Association of Canada
CSR	Corporate Social Responsibility
DIHK	Deutscher Industrie- und Handelskammertag (Association of German Chambers of Commerce and Industry)
DMA	Disclosures on Management Approach
EC	European Commission
EFC	Entrepreneurial Framework Conditions
EIP	Entrepreneurship Indicators Programme
EMAS	Eco-Management and Audit Scheme of the European Commission
ESG	Environmental, Social and Governance Report
EUROSTAT	Statistical Office of the European Communities
GEM	Global Entrepreneurship Monitor
GHG	Greenhouse Gas
GRI	Global Reporting Initiative
HSE	Health, Safety and Environment Reports
ILO	International Labour Organization of the UN
IDI	In-depth Interview
IRRC	International Integrated Reporting Council
ISO	International Organization for Standardization
MNE	Multinational enterprises
NACE	Nomenclature statistique des activités économiques dans la Communauté européenne
n.d.	no date
NDA	Non-disclosure agreements
n.p.	no page
OECD	Organization for Economic Co-operation and Development
R&D	Research and development
SEC	Securities and Exchange Commission
SEO	Search engine optimization
SRI	Socially Responsible Investment
TBL	Triple bottom line

TEA	Early stage entrepreneurial activity
UN	United Nations
UNCED	United Nations Conference on Environment and Development
UNGA	United Nations General Assembly
VC	Venture Capital
WCED	World Commission on Environment and Development

1 INTRODUCTION

It is widely recognized that start ups globally play an important role as drivers for economic growth, job creation and the formalization of informal sectors (Bosma & Stam 2012, DIW 2012, Fayolle 2007, Ahmad & Seymour 2008a). Governments and policy makers want to foster economic dynamics and job creation through policies, such as the EU Lisbon Strategy. Launched in 2000, the strategy aims at supporting economic competitiveness and growth in Europe, and as part of it, seeks to encourage entrepreneurial initiatives (EC 2005, Grimm 2011). For the same reasons, the German government in recent years attempted to support start ups with specific programs such as the German “Gründerfonds” or the European “EXIST” – initiative, providing scholarships for young founders (Maier 2012)[1].

New businesses show innovative and creative potential to replace old products and to contribute to quality of life improvements (Schumpeter 1984, DIW 2012, Majid & Koe 2012): “To the extent value is embodied in products and services, entrepreneurship is concerned with how the opportunity to create “value” in society is discovered and acted upon by some individuals.” (Venkataraman 2002, p.46). Economically it is therefore desirable to have a large number of well developing business start ups (Sieger et al. 2011). Also, sustainability research shows that in particular new or small businesses often stipulate innovation in an industry's transformation towards sustainability (Hockerts & Wuestenhagen 2010). As a result, the growing number of sustainable entrepreneurs attracts the attention of research and initiatives (Majid & Koe 2012).

Yet, various sources also emphasize the negative contributions of entrepreneurial activity for development, especially in the form of environmental degradation. Sustainable development-oriented potential diminishes with increasing business experience (Kuckerts & Wagner 2010). When they encounter the complexity of action in a social environment and the need to respond to often contradicting demands, entrepreneurs will evaluate opportunities more rigorously. As a consequence, fewer opportunities are deemed viable, including those for sustainability, which are generally associated with high moral legitimacy, but with lower organizational practicality (ibid., p. 529).

1.1 Problem discussion

While ecopreneurs have already understood the possibility of rent creation by addressing market failures with sustainability innovations (Wagner 2009), there is a dearth of current data on sustainability issues in conventional start ups. Conventional start ups still form the larger part of entrepreneurial activity (Schick et al. 2002), therefore the promotion of sustainability in those start ups seems an important and promising approach:

[1] Maier (2012) goes on to say, however, that such programs don’t provide reliable or repeat financial support and that as start ups face problems to find subsequent private funding from investors these state subsidies are often referred to as the “Death Valley” (ibid. 2012, p.7).

- A widespread sustainability orientation in start ups is likely to speed up the overall process of sustainable development in industry and commerce and
- unlike other established larger companies, they have yet to develop an organizational culture, which in turn would make it easier to integrate sustainability into the structure of their business.

With these core issues in mind, the focus of this thesis is to analyze ways to promote more sustainable business practices in conventional start ups.

According to Eccles et al. (2011), high sustainability companies show greater interest in understanding the needs of their stakeholders, and they invest in managing these relationships. External and internal reporting on the quality of their stakeholder relationships, increasingly in the form of sustainability reporting, often forms an integral part of their sustainability management (ibid.). Ioannou & Serafaim (2012) found that in turn, sustainability reporting can have a positive impact on a company's actions.

Sustainability reporting is an instrument of sustainability management (BMU 2007). As sustainability reporting is not mandatory in many countries, companies in general name costs, credibility and vagueness as main constraint (CGA 2005, ECC Kothe Klewes & Firshburn Hedges 2003). These reasons seem to be even more obvious for start ups. Financial restraints are seen as one of the biggest constraints for start ups in general (Wolf 2006). However, there are other schools of thought that point to the values of sustainability reporting also for a company's value proposition. The main thrust of this thesis is therefore based on two major paradigms in current research:

1: *Sustainability reporting can influence the actions of companies towards becoming more sustainable. It is therefore important to look for ways to adapt sustainability reporting for start ups*.

Sustainability reporting can help companies to better understand how sustainable business practices can create value with regard to risk reduction, improved stakeholder communication and reputation. Ioannou & Serafaim (2012) observed, in a study of 58 countries, that mandatory corporate sustainability reporting pursuant to laws and regulations increased not just the social responsibility of business leaders, but that sustainable development and employee training also became a higher priority for companies. They noted improvements in corporate governance and observed that companies implemented more ethical practices, while bribery and corruption decreased (ibid.). The Global Reporting Initiative (GRI) emphasizes that sustainability reporting provides accountability for internal and external stakeholders on the performance of a company towards sustainable development (GRI 2013c). The multitude of positive effects highlighted by research shows that it is aspirational to gain similar effects for start ups.

2: *Sustainability Reporting holds untapped potential for the specific requirements of start ups. They could be motivated to use it voluntarily once they see it brings immediate value to their business.*

Looking at the needs of businesses in their start-up phase, it seems that sustainability reporting could hold a lot of potential for start ups. Businesses in their early stages are largely focused on funding, financial forecasts, logistics and market research, and are highly dependent on outside resources: Not yet having developed a trusted brand name and equity and usually not yet operating on profit, early stage businesses rely on external capital and a fast developing consumer trust (Dai 2012). Means of non-financial reporting can support establishing communication with their stakeholders. According to Herzig & Schaltegger (2006), sustainability reporting can provide confidence in a company and increase corporate legitimation and brand value. Further benefits include that it can help gaining competitive advantage, allowing for benchmarking, increase in transparency and accountability as well as employee attraction and motivation (Wagner 2007, Wu 2010). Especially for conventional businesses, sustainability reporting is also a valuable tool for understanding potential environmental or societal and thus business risks.

Building upon these two paradigms, this thesis proposes to highlight recommendations for customizing instruments of sustainability reporting according to the requirements of start ups in order to promote sustainability in this large part of the economy. The question that will be explored within will be:

How can sustainability reporting be adapted to target start ups and therefore promote more sustainable business practices?

1.2 Scope of analysis and research design

Promotion of sustainability in traditional, non-green start ups seems an important approach: Schick et al. (2002) note that sustainability orientation in start ups can be a driver for the overall process of sustainable development in industry and commerce. Unlike entrepreneurs, ecopreneurs are very likely to perform a sustainability strategy that includes sustainability reporting, as they can link value of sustainability reports to communicating their business model (ibid.). Also larger companies explore the rising awareness of sustainability aspects in public and increasingly use sustainability reports as a means of stakeholder communication (Owen 2005, Simnett et al. 2009). Various studies observe though that smaller conventional companies are less likely to perform sustainability reporting, and the likelihood diminishes with the decreasing size of the company (CGA 2005). There have been attempts to adapt reporting guidelines to smaller and medium companies (e.g. GRI 2011, Pascual et al. 2011) However, a review of the current literature in this area exposes a lack of conclusive and consistent research. Therefore, emphasis will be placed on conventional start ups to promote more sustainable business practices.

The aim of the thesis is to formulate recommendations for a customized sustainability reporting for start ups, which will target their specific needs and motivate them to introduce sustainability reporting. A detailed analysis of the literature will further lay out the background of the problem discussed. Following the analysis, semi-structured interviews will be conducted to generate new empirical knowledge on the research question and allow for the formulation of recommendations. The recommendations will be developed along the reporting guidelines of GRI. This is based on two main considerations:

Firstly, the GRI reporting guidelines are the most renowned and widespread among reporting companies. Developing recommendations for an adapted reporting within the GRI framework will allow a gradual rolling up of reporting alongside a company's growth, while a new reporting structure might force a company to change formats at a certain point of maturity. Secondly, GRI's aim is to develop a common language to make sustainability reporting more comparable and transparent. Basing adapted reporting on existing indicators will allow for benchmarking. In considering the GRI guidelines, it is expected that recommendations for an adapted sustainability reporting could yield the highest benefits for start ups in both the short and long term.

The thesis and its empirical approach will focus on start ups in Germany, incorporating international aspects where they will add value. It will look at the wider group of start ups without giving special attention to ecopreneurs. As initiatives for sustainability reporting are international, the thesis will be written in English. This should allow for easier transfer of the findings to existing concepts. The goal of the thesis is to formulate recommendations for instruments of sustainability reporting. Communication strategies of sustainability reporting institutions to specifically target start ups are outside the scope.

The remainder of chapter 1 will set out the theoretical framework of the thesis by defining the key terms and concepts.

Chapter 2 will comprise an overview of current research on and instruments for sustainability reporting. It will describe the major initiatives that currently exist and give an introduction to the GRI reporting guidelines. This will lay the ground to tie up recommendations with established frameworks. The chapter will conclude with laying out a fit gap summary of sustainability reporting for start ups.

Chapter 3 evaluates the current situation of start ups and summarizes existing research. As already pointed out, research and findings on start ups especially with a focus on sustainability promotion is rather scarce. Existing literature and data however will be analyzed, collated and gaps highlighted. The purpose of this chapter is to form the basic assumptions of the challenges and needs of start ups. The chapter will result in a stakeholder analysis of start ups.

Chapter 4 and 5 will complement the theoretical results of the previous chapters with empirical insight, trying to bridge some of the gaps. A survey was conducted amongst start ups, using interview technique. Main focus will be on understanding the stakeholder and business environment from business practice. 7 start ups have been identified as participants. The interviews were conducted in person where possible, as start ups have less time to invest in answering questionnaires. Chapter 4 will layout the research design and give more detailed information about the research methodology. Chapter 5 is summarizes the findings and sets out initial conclusions.

Aim of chapter 6 is to conceptualize the findings from the theoretical and practical research and give meaningful recommendations for sustainability reporting. Chapter 7 will draw the final conclusion.

1.3 Theoretical framework of the analysis

The key terms in the thesis are “start ups” or “entrepreneurship” as well as “sustainability reporting”. They stand for a multitude of understandings and concepts. It is therefore necessary to first make transparent the underlying definitions for the key terminology used in this thesis.

Start ups and entrepreneurship

The terms entrepreneur(ship) and start up usually refer to the same subject: A young, not yet established company, founded with little starting capital in order to promote a business idea (Gabler Wirtschaftslexikon 2013). New venture, enterprise or emerging firms are further synonyms used. In literature and research though, the underlying connotations cover different aspects of a ‘multifaceted phenomenon’ (Ahmad & Seymour 2008a, p.13).

Entrepreneurship, according to the Organization for Economic Co-operation and Development (OECD), is the phenomena associated with entrepreneurial activity. It is concerned with the discovery, evaluation, and exploitation of opportunities (Frese 2009). The OECD, within the Entrepreneurship Indicators Programme (EIP), developed a framework of comparable indicators to measure the impact and performance of entrepreneurship (Ahmad & Seymour 2008a). The framework was designed to allow the formulation, assessment and appraisal of policy measures on entrepreneurial activities. According to the framework,

- Entrepreneurs are those persons (business owners) who seek to generate value, through the creation or expansion of economic activity, by identifying and exploiting new products, processes or markets, and
- Entrepreneurial activity is the enterprising human action in pursuit of the generation of value, through the creation or expansion of economic activity, by identifying and exploiting new products, processes or markets (ibid., p. 14).

Theory on entrepreneurship contends that the combination of environmental factors and the personal attributes of entrepreneurs will then be the influencing factors on the success of the entrepreneurial activity (Ahmad & Seymour 2008a).

The Global Entrepreneurship Monitor (GEM) developed a framework to annually assess the causal relationship between Entrepreneurial Framework Conditions (EFCs), entrepreneurship and economic development on a global level. Within the framework, entrepreneurship is defined as “any serious attempt at new business or new venture creation, such as self-employment, a new business organization, or the expansion of an existing business, by an individual, a team of individuals, or an established business.” (Bosma & Stam, p. 201)

While people can be repeat or ‘serial’ entrepreneurs (Gompers et al. 2006, p.4), the term start up usually refers to a new, innovative company. Gründerszene (2013) states that it is the innovative idea that distinguishes a start up from the newly opened bakery next door (ibid.). Start up is also the more common expression used in German language, while English literature leans more towards the terms entrepreneur or entrepreneurship.

Especially in the recent past, the perspective on entrepreneurial activity has been widened and many sources consider any new business activity, also those without growth- or innovation-orientation as relevant types of entrepreneurs (Bosma et al. 2012). In those lines of argumentation, entrepreneurship increasingly entails activities beyond a lone standing business, and also involves employee activity like ‘intrapreneurship’, ‘corporate entrepreneurship’ or ‘entrepreneur in residence’ (ibid., p.7). Shane and Venkataraman (2000) therefore distinguish between the exploitation of opportunities by existing organizations and by ‘de novo start ups’ (ibid., p.224). The European Commission officially acknowledges both types as entrepreneurship (Ahmad & Seymour 2008). Bosma & Stam (2012) underline that the distinction between ambitioned and non-ambitioned entrepreneurship is of specific relevance for international studies, when economic and cultural differences are part of the necessary background picture (ibid.2).

This thesis seeks to draw recommendations for sustainability reporting. While it is acknowledged that every entrepreneurial activity can be considered an important factor for the economy, sustainability reporting is a management tool that targets the company level. Hence, the term start up was used in the formulation of the research question to emphasize on the organizational level as well as the notion of newness. Going forward, the terms entrepreneurship and start up both refer mainly to the company level, while the term entrepreneur will be used for the entrepreneurial person. This is also consistent with large parts of the literature. Embedded entrepreneurs and the self-employed will however not be part of the subsequent analysis.

Sustainability and sustainability reporting

The overall concept of sustainable development is based on the premise formulated by the Brundtland Commission[2] in 1987, whereby “sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” (WCBD 1987, n.p.). Companies are considered to be key actors in shaping sustainable development. While it is unanimously agreed that this needs the integration of economic, social and environmental aspects, this integration is also considered the greatest challenge and most important task of corporate sustainability.

Since its early start in the 1990s, sustainability management has continuously gained importance as a function of companies to “steer ecological, social and economic impacts of business activities in such a way that an enterprise develops in the direction of sustainability” (BMU et al. 2007, p. 1). Subsequently, a large variety of concepts, systems and instruments of sustainability management has developed. A comprehensive overview can be found in the study report “Sustainability Management in Business Enterprises”, compiled by Schaltegger

[2] The World Commission on Environment and Development (WCED) or “Brundtland Commission”, named after Norway's former Prime Minister, Gro Harlem Brundtland, published the report “Our Common Future” on behalf of the UN in 1987, presenting a new concept - sustainable development.

et al. on behalf of the Federal Ministry for the Environment, Nature Conservation and Nuclear Conservation (Bundesumweltministerium (BMU))(BMU 2007)[3].

One important instrument of sustainability management is sustainability reporting. There is still no consensus on the definition of the term “sustainability” in research and theory though (Weber 2008). This makes it especially difficult to differentiate the concept of corporate sustainability from other concepts, such as corporate social responsibility (CSR), which itself has seen many permutations, from voluntary and on-top social engagement, towards an integrated management approach with inclusion of environmental and economic factors (Weber 2007). Consequently, there is no consistent use of such terms in the literature or in everyday life, neither of the distinction between the terms sustainability reporting, corporate social reporting, CSR reporting or health, safety and environment (HSE) reports (Cooper and Owen, 2007, Owen 2005).

Within this thesis, sustainability reporting is analyzed as an instrument of corporate sustainability management that extends the financial focus of corporate reporting to non-financial indicators, either as a stand-alone report or as part of an integrated report (Ioannou & Serafaim 2012). Basing on the conceptual assessment conducted by Weber (2008), CSR and other social or environmental reporting is considered a subcategory or segment of the overall concept of sustainability reporting. Weber (2008) bases this categorization mainly on two facts: Firstly, the ecological and economic dimensions are often included, but explicitly not an integral part of CSR concepts. Although recent CSR concepts usually include economic and ecological dimensions, there has not been a consistent integration of the three dimensions combined. Consequently efficiency, which is considered a key aspect for integrated concepts of corporate sustainability, has no major stake in CSR literature. Secondly, CSR is a voluntary tool, while corporate sustainability entails all aspects of social, economic and ecological sustainability, including mandatory compliance with regulations (Weber 2007).The conceptual distinction is not always apparent within the literature and research cited in this thesis. Porter & Kramer (2006) for example base their articles on a CSR concept that is almost indistinguishable from the concept of corporate sustainability and which asks for integration and efficiency gains.

The following chapter will provide a definition of sustainability reporting to make transparent the basic concepts of the term in literature and research, and the theoretical assumptions about sustainability reporting used in this thesis. The following sections will then assess the main reporting initiatives, followed by a section analyzing current research and research questions on sustainability reporting as well as the strengths and weaknesses of sustainability reporting with a specific focus on start ups.

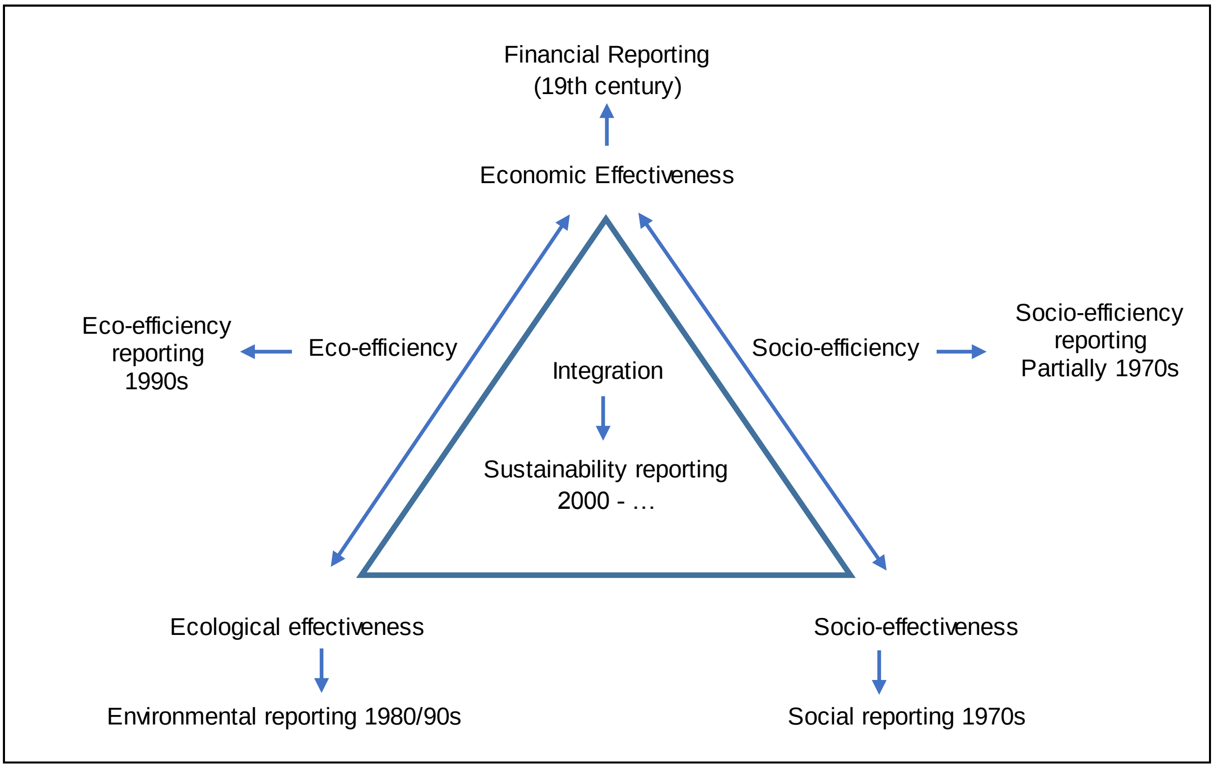
3 Bundesumweltministerium (BMU); econsense & Centre for Sustainability Management (CSM) (Eds.) (2007): Nachhaltigkeitsmanagement in Unternehmen. Von der Idee zur Praxis: Managementansätze zur Umsetzung von Corporate Social Responsibility und Corporate Sustainability. 3. vollständig überarbeitete und erweiterte Auflage. Berlin/Lüneburg: BMU, Econsense & CSM

2 SUSTAINABILITY REPORTING

As outlined earlier, there is no consistent use of the term sustainability reporting in the literature, and it is often arbitrarily used along with other terms such as environmental reporting, CSR reporting or HSE (Owen 2005). This is mainly due to the fact that corporate reporting on social, environmental and economic performance has been a constantly developing field for the last number of years.

According to Herzig & Schaltegger (2006), sustainability reporting developed in the frame of changed perspectives and directions in non-financial reporting. In the 1970s, the focus of financial reporting was widened to include social aspects. About ten years later, environmental reporting was introduced to measure and report a company's emissions and effluents. In the course of the following years, two-dimensional reporting approaches started to take into account the relationship between economic and environmental dimensions (eco-efficiency) or social dimensions (socio-efficiency). By now, the integration of economic, ecological and social aspects has led to what is considered sustainability reporting (ibid.).

Fig. 1: Perspectives of sustainable development and sustainability reporting (Herzig & Schaltegger 2006)



A number of formats and guidelines for sustainability reporting was developed by various initiatives, of which most are voluntary, stand-alone reports, or form part of an environmental or sustainability management system.

According to GRI, a sustainability report conveys information about the economic, environmental and social impacts caused by a company's activities, containing sustainability-related information in a way that is comparable with financial reporting (GRI 2013b). The aim of sustainability reporting is to manage sustainability related impacts of corporate activities, while providing stakeholders with sustainability relevant information of the company (Herzig & Schaltegger 2006). From a company internal viewpoint, sustainability reporting aims at motivating companies to systematically manage and reduce negative impacts of business activities (BMU et al. 2007). Through internal dialogue, sustainability reporting wants to encourage middle management and employees to contribute to a sustainable corporate development (ibid.).

Herzig & Schaltegger (2006) sum up the most important goals of sustainability reporting as follows:

- Legitimation of corporate activities, products and services which create environmental and social impacts
- Increase in corporate reputation and brand value
- Gaining a competitive advantage
- Signaling superior competitiveness, with sustainability reporting activities as a proxy indicator for overall performance
- Comparison and benchmarking against competitors
- Increasing transparency and accountability within the company
- Establishing and supporting employee motivation as well as internal information and control processes

(Herzig & Schaltegger 2006, p. 302). Various reporting guidelines and formats have been developed in the last years, and the following chapter will give an overview of initiatives on European and international level.

2.1 Major sustainability reporting initiatives

As mentioned before, sustainability and environmental reporting in most countries is voluntary, and so is the decision as to which guidelines or standards to use. Various initiatives developed reporting formats and standards to support companies in assessing their sustainability impacts, providing manuals as well as reporting guidelines. On an international level, the guidelines of the Global Reporting Initiative (GRI) and the World Business Council for Sustainable Development (WBCSD) are the most widespread. For environmental reporting, the international standard ISO 14063 sets forth general international principles for the communication of environmental performance. Also on a European level, there are some sector-specific guidelines for the production of environmental reports or statements as well as social, CSR and sustainability reports (Herzig & Schaltegger 2006). The following gives an introduction to the most renown and widespread reporting initiatives.

2.1.1 Global Compact

The UN Global Compact is an initiative of the UN which seeks to motivate companies to commit to ten universal and globally recognized principles in the areas of human rights, labor standards, the environment and anti-corruption. Currently, 8,700 businesses from 140 countries are participating. Global Compact is a framework for the development, implementation, and disclosure of sustainability policies and practices (UN Global Compact 2013), and offers, next to management tools, guidance on reporting instruments. For most reporting tools and guidelines, Global Compact works in cooperation with GRI, which incorporated progress reporting on the 10 Global Compact commitments in its reporting guidelines.

2.1.2 ISO 14063

ISO 14063 is the international reporting standard under the ISO 1400 standards for environmental management in private businesses. The International Organization for Standardization (ISO) published the ISO 14063 to give guidance to businesses and organizations on "general principles, policy, strategy and activities relating to both internal and external environmental communication." (ISO 2014, n.p.). ISO 1400 certification does not relate to environmental performance indicators but to the introduction of an environmental management system that is according to ISO standards.

2.1.3 EMAS

The Eco-Management and Audit Scheme (EMAS) is the EU's voluntary environmental management scheme under public law, which builds on the ISO 1400 family of standards and adds 4 pillars:

- continual improvement of environmental performance;
- compliance with environmental legislation ensured by government supervision;
- public information through annual reporting;
- employee involvement. (EC 2008)

The core intention of EMAS is to improve environmental performance (EMAS 2011). It defines reporting requirements in the form of an environmental statement and requires the verification of these reports by so called "Environmental Verifiers" (EMAS 2011, n.p.). In Europe, about 14,636 sites or organizations are part of EMAS[4]. For Germany, EMAS recorded a total of 1227 sites or organizations respectively (EMAS 2013).

2.1.4 Triple bottom line

Triple Bottom line (TBL) is not an initiative as such, but a reporting paradigm that was first developed in 1994 by John Elkington, the founder of the British consultancy SustainAbility. He suggested that companies should prepare three separate bottom lines to fully account for the cost that the company activity incurs (The Economist 2009). In addition to the traditional profit and loss accounting, TBL also measures the dimension 'people' and 'planet' (Slaper &

[4] Until 2001, EMAS was assessing in locations, since then, they asses by company but allow to combine locations if a company has more than one dependence.

Hall 2011, p. 4). The reporting framework was developed to provide a comprehensive reporting on investment results to support sustainability goals (ibid.). Triple Bottom Line reporting built the foundation of GRI reporting guidelines that were first developed in 2001.

2.1.5 International Integrated Reporting Council

In 2011, the International Integrated Reporting Council (IIRC) launched the discussion paper “Towards Integrated Reporting”. The paper contains proposals towards the development of an international Framework for integrated reporting (IRRC 2014). IRRC identifies a decline in the importance of physical and financial assets for market value. The committee therefore attempts to build a reporting framework that combines “material information about an organization’s strategy, governance, performance and prospects in a way that reflects the commercial, social and environmental context within which it operates.” (IRRC 20111, p. 6). The IRRC collected responses from over 200 companies to be incorporated into a framework for periodical integrated reporting. To date, the framework has not been released. The initiative mainly targets public companies that are listed on an international stock exchange (Steinert 2013).

2.1.6 ESG

Environmental, social and corporate governance (ESG) developed as a response to concerns over the sustainability and ethical impact of investments in a company or business. Socially responsible investing (SRI) factors in non-financial aspects in the valuation of investments or equity. It is based on the assumption that irresponsibly acting companies are likely to be penalized by key capital marketing participants (Ioannou & Serafaim 2013). ESG was integrated into international valuation models and is used by rating and research agencies as a means to measure the externalities of a company (Lexikon der Nachhaltigkeit 2013).

2.2 The Global Reporting Initiative

GRI is a non-profit organization based in Amsterdam. Its mission is “to make sustainability reporting standard practice for all companies and organizations” (GRI 2013c, n.p.). The initiative started as a project of CERES, a non-profit organization formed in 1989 by investors in response to the Exxon Valdez oil spill (Ceres 2014). In 2000, the first version of the GRI guidelines was published.

The GRI guidelines have been designed to harmonize with other prominent sustainability standards, including the OECD Guidelines for Multinational Organizations, ISO 26000 and the UN Global Compact. They are the most internationally renowned guidelines for sustainability reporting (BMU et al. 2007, Bloomberg 2013). The guidelines are developed and reviewed using a multi-stakeholder processes (BMU 2007, Simnett et al. 2009), “involving representatives from business, labor, civil society, and financial markets, as well as auditors and experts in various fields; and in close dialogue with regulators and governmental agencies in several countries” (GRI 2013, p.5).

According to GRI, the guidelines form an international framework of reporting guidelines and standard disclosures which are “useful in the preparation of any type of document which requires such disclosure” (GRI 2013, p. 5). They are meant to target any organization, regardless of the size, the sector or its location (ibid). The guidelines are periodically reviewed and in 2013, the fourth update, G4, has been published. Within this latest update, the focus of the reporting guidelines on materiality has been extended: “While organizations may monitor and manage a far wider array of sustainability-related topics due to their everyday management activities, this new focus on materiality means that sustainability reports will be centered on matters that are really critical in order to achieve the organization’s goals and manage its impact on society.” (ibid., p. 3). The latest update also includes new specifications with regard to ethics, impacts on the supply chain, anti-corruption and greenhouse gas (GHG) emissions.

Next to publishing its guidelines, GRI offers other supporting material and a database where organizations can register their reports. As per the latest reporting available, the Global Reporting Initiative registered more than 2,200 filings in 2011, and it records yearly increases in reporting companies of about 20% (GRI 2011b). Furthermore, GRI has a key role in bundling together the different recommendations and guidelines so that company managers can keep an up-to-date over-view: “In practice, companies can profit from complying with a guideline issued by a renowned institution because of image transfer effects. Guidelines often precede standards or regulations.” (Herzig & Schaltegger 2006, p. 310). GRI also developed G4ONLINE, which is a web based format of it guidelines.

The GRI reporting guidelines will be described in more detail in the following section, giving a deeper insight into the reporting process and format designed by GRI. This will later allow the development of recommendations with reference to the existing concept.

2.2.1 G4 reporting principles: sustainability, stakeholder and materiality context

G4 reporting has to follow the GRI principles of stakeholder inclusiveness, sustainability context, materiality and completeness. Stakeholder inclusiveness seeks to ensure that the report will be accountable to stakeholders that are expected to be significantly affected by the company activities, products or services. The reporting organization needs to be able to describe the stakeholders that it is accountable to. In case of conflicting expectations from its stakeholders, it should furthermore be able to document how those were balanced when deciding on the report content. To do so, the company should engage in stakeholder communication prior and during the report formulation. In the process of stakeholder engagement, the company needs to identify direct input from stakeholders, but also “legitimately established societal expectations” (GRI 2013a, p. 9) from indirect stakeholders, that can reasonably be expected to be affected by the company or its products. Stakeholder inclusiveness wants to ascertain accountability to strengthen the trust of stakeholders in the company and enhance the report credibility (ibid.).

The sustainability context aims to position the impact of the organization in a broader context. The organizational performance within a sustainability report should be presented on a sectorial, local, regional or global level (GRI 2013a). The reporting organization needs to use distinct measurements and context for global factors and factors that are relevant on local or regional level. While the company's own sustainability and business strategy is the context for the performance, reporting only on the individual performance level will, according to GRI (2013b), not account for the company's position in the broader sustainability context. The principle does however not make reference to company internal strategies for sustainability context, i.e. whether there should be an internal discourse over the sustainability context.

The term materiality is originally a financial measure for defining whether an aspect is relevant to economic decisions by the management or investors. The determination of material aspects in the sense of G4 should base on economic, but also ecological and social impacts. Social and ecological impacts are expected to have some kind of financial impact in the longer term. In accordance with the overall concept of sustainability, GRI defines an aspect as material if it affects the ability to meet the needs of the present without compromising on the needs of future generations (GRI 2013a). The reporting company should combine internal factors, such as its mission and its competitive strategy, as well as external factors, such as the organizations upstream and downstream impacts. Decisions on the report content and on the presentation of data should focus on what is most material. Further relevant information can be included in a sustainability report, but should be given less prominence than the material aspects (ibid.).

Lastly, the principle of completeness requires that a report "should include coverage of material aspects and their boundaries, sufficient to reflect significant economic, environmental and social impacts, and to enable stakeholders to assess the organization's performance in the reporting period." (GRI 2013a, p. 12) The principle seeks to ensure that the data provided in a report is complete and should reflect the true impacts of the organization. The report should allow stakeholders to assess the report boundaries with regard to the reported impacts and which timeframe the performance is reported for.

Along with these principles for defining the report content, GRI also developed principles on the quality of the report. The principles were designed to guide choices on the quality and presentation of information provided in the sustainability report:

- Balance: The report should reflect an unbiased picture of the positive and negative aspects of the organisation's performance
- Comparability: The reporting organization should use consistent, comprehensive and comparable data
- Accuracy: The report should be accurate and detailed in a way that allows stakeholders to understand the performance
- Timeliness: Reporting should be done on a regular basis always providing current data
- Clarity: The information given in the report should be comprehensible to stakeholders
- Reliability: The reporting process and data should allow to verify the information given (GRI 2013).

The public discourse on the GRI guidelines suggests that the new focus on materiality in the latest update also came as a response to criticism. Since the G3.1 version, the guidelines encompassed application levels, assigning grade A, B or C depending on the extent of the disclosure (GRI 2011a). Hsu (2013) relates to this as ‘box ticking exercise’ (ibid., n.p.) though, as achieving an A-level had no relation to the quality of a report or the organization’s activities (Hsu 2013, Bloomberg 2013). GRI introduced a new differentiation of core and comprehensive reporting, which is acknowledged to give clearer a label to stakeholders on the extensiveness of the report.

2.2.2 G4 general and specific standard disclosures

The GRI guidelines consist of general standard disclosures and specific standard disclosures, and they build upon a set of comparable indicators. Both types of disclosures are applicable to all organizations preparing a sustainability report in accordance with the guidelines, but companies can choose between a core and a comprehensive option with regard to the report content. The comprehensive option extends the core disclosures, which GRI considers essential elements of a sustainability report, by additional disclosures on strategy, governance and ethics and integrity, and it requires reporting on a larger set of the performance indicators (GRI 2013, GRI 2013a). This system has replaced the application level system of older versions of the guidelines, in which the extent of reporting on indicators would qualify the report as A, B or C level (GRI 2011a).

Tab. 1: G4 General and specific standard disclosures (own table based on GRI 2013)

General Standard disclosures	**Specific Standard Disclosures**
ŸStrategy and Analysis	Generic Disclosures on Management Approach (DMA) Indicators Specific standard disclosures for Sector
Organisational Profile	
Identified Material Aspects and Boundaries	
Stakeholder Engagement	
Report Profile	
Governance	
Ethics and Integrity	
General Standard Disclosures for Sector	

The general standard disclosures are subdivided into seven aspects that give a general strategic view on the company. They serve to provide the context for the specific standard disclosures in later sections of the report. The aspect strategy and analysis however requires a statement from the most senior decision-maker of the reporting organization about the overall vision and strategy of managing the company's sustainability in the short-, medium- and long-term. Reporting organizations have to provide an assessment on broader trends and an outlook on the main challenges and targets for the coming year, as well as goals for the next 3-5 years (GRI 2013). The disclosures under this aspect require a description of the key impacts, risks and opportunities of the reporting organization. Reporting on identified material aspects and boundaries serves to describe the process and outcome of defining the report content. Materiality, as laid out before, means to identify the aspects that "reflect the organization's significant economic, environmental and social impacts; or substantively influence the assessments and decisions of stakeholders" (ibid., p. 11), and therefore should be content of the report.

The specific standard disclosures consist of three categories: economic, environmental and social aspects. GRI has published an implementation manual that gives detailed reporting recommendations on each category and the relating aspects. The organization can disclose on identified material aspects in these categories in the form of disclosures on management approach (DMA) or as indicators. The DMA consists of narrative information "on how an organization identifies, analyzes, and responds to its actual and potential material economic, environmental and social impacts" (GRI 2013a, p. 63). The following aspects have been identified by GRI to give information on the economic, environmental and social performance or impacts of the organization:

Tab. 2: Categories and aspects in the G4 guidelines (GRI 2013a, p. 62)

CATEGORY:	**ECONOMIC**	**ENVIRONMENTAL**
Aspects	• Economic Performance Ÿ • Market Presence • Indirect Economic Impacts Ÿ • Procurement Practices	• Materials • Energy Ÿ • Water Ÿ • Biodiversity Ÿ • Emissions Effluents and Waste • Products and Services • Compliance • Transport • Overall • Supplier Environmental Assessment • Environmental Grievance Mechanisms

CATEGORY:	**SOCIAL**			
Sub-Categories	**Labor Practices and Decent Work**	**Human Rights**	**Society**	**Product Responsibility**
Aspects	• Employment • Labor/Management Relations Ÿ • Occupational Health and Safety • Training and Education • Diversity and Equal Opportunity • Equal Remuneration for Women and Men • Supplier Assessment for Labor Practices • Labor Practices Grievance Mechanisms	• Investment • Non-discrimination • Freedom of Association and Collective Bargaining • Child Labor • Forced or Compulsory Labor • Security Practices • Indigenous Rights • Assessment • Supplier Human Rights Assessment Ÿ • Human Rights Grievance Mechanisms	• Local Communities • Anti-corruption • Public Policy • Anti-competitive Behavior • Compliance • Supplier Assessment for Impacts on Society • Grievance Mechanisms for Impacts on Society	• Customer Health and Safety • Product and Service Labeling • Marketing Communications • Customer Privacy • Compliance

Environmental and social aspects form the majority of the performance indicators, while the economic category only comprises of 4 aspects.

According to GRI (2013), the economic dimension of sustainability relates to an organization's "impacts on the economic conditions of its stakeholders and on economic systems at local, national, and global levels" (ibid, p 43). This category consists of four aspects and aims to report on the flow of capital and on the main impacts on the economy in terms of value generated and distributed. It does not focus on the financial condition of the organization (GRI 2013a).

Tab. 3: G4 Category economic: aspects and indicators (own table, based on GRI 2013a)

CATEGORY	ASPECTS	INDICATORS
ECONOMIC	Economic Performance	- Direct Economic value generate and distributed - Financial implications, risks and opportunities due to climate change - Benefit plan obligations - Financial assistance received from government
	Market Presence	- Standard entry level wage by gender and compared to local minimum wage - Proportion of senior management hired from the local community
	Indirect Economic Impacts	- Development and impact of infrastructure investments and services supported - Significant indirect economic impacts, including the extent of impacts
	Procurement Practices	- Proportion of spending on local suppliers at significant locations of operation

Under the aspect of economic performance, companies need to report on their revenues and cost, such as operating costs, wages, payments to capital providers and governments and also community investments. They also need to disclose financial implications, risks and opportunities related to climate change. Risks can be physical or regulatory and the potential impact should be shown in the form of increased or reduced cost. Benefit and retirement plans are considered long term commitments and are dependent on the jurisdictions of the country of operation. The sustainability report should therefore show a calculation of the aggregated obligations in the form of international accounting standards and in accordance with the country's regulation (GRI 2013a). The aspect market presence comprises of indicators measuring the entry and minimum wages and the proportion of senior management hired from the local community at significant locations of operation. Both indicators are meant to show how the organization contributes to the economic situation of its employees and the local community it operates in. It requires specific reporting by gender. The aspect indirect economic impacts should show the organizations economic influence in the context of sustainable development (ibid.). The organization should disclose its infrastructure investments, and it should report on its impacts on employment, foreign investment and social and environmental conditions in the sector and location. In the last economic aspect, which is procurement practices, the organization needs to report on the proportion of spending on local suppliers, and how it manages dialogue and relationships with suppliers. The indicator wants to measure the sustainable economic inclusion of suppliers owned by women, vulnerable or underrepresented groups and small and medium sized suppliers.

The environmental category measures the organizations impacts on living and non-living natural systems (GRI 2013a, p. 84) and looks at inputs and outputs of the organizational activities. Main references for this category are the UN declarations *The Rio Declaration on Environment and Development* (UNCED 1992) and *The United Nations Millennium Declaration* (UNGA 2000). The aspects under the environmental category require to report on resources used and emissions, effluents and waste produced with regard to materials, water and energy.

Tab. 4: G4 category ecological: aspects and indicators (own table, based on GRI 2013a)

CATEGORY	ASPECTS	INDICATORS
ECOLOGICAL	Materials	- Materials used by weight or volume - Recycled input materials used (%)
	Energy	- Energy consumption within and outside the organization and consumption reductions - Reductions in energy requirements of products and services
	Water	- Water withdrawal by source - Water recycled and reused (% and Vol)
	Biodiversity	- Operational sites owned or managed in or next to protected areas - Impacts of activities, products, and services on biodiversity in protected areas - Red List and national conservation list species in areas affected by operations (#)
	Emissions	- Greenhouse gas (GHG) emissions Scope 1, 2 & 3 - Emissions of ozone-depleting substances (ODS) - NOX, SOX, and other significant air emissions
	Effluents and Waste	- Water discharge by quality and destination - Weight of waste by type and disposal method - Significant spills (#, Vol.) - Weight of transported, imported, exported or treated hazardous waste - Water bodies affected by the organization's discharges and runoff
	Products and Services	- Extent of impact mitigation of environmental impacts of products and services - Products sold and their packaging materials that are reclaimed by category (%)
	Compliance	- Fines and non-monetary sanctions for non-compliance with laws and regulations ($, #)
	Transport	- Environmental impact of transport (products, goods, materials, members of the workforce)
	Overall	- Environmental protection expenditures and investments ($, type)
	Supplier Environmental Assessment	- New suppliers that were screened using environmental criteria (%) - Actual and potential negative environmental impacts in the supply chain
	Environmental Grievance Mechanisms	- Grievances about environmental impacts filed, addressed, and resolved (#)

The indicators under the ecological aspects require reporting on the sources of inputs and give guidance on how to calculate consumption and output. The calculations take into account own production such as self-generated electricity, and also split out recycling or renewable resources. GRI extended the focus of GHG emissions in the G4 version of the guidelines with regard to scope 3 emissions, which also cover the indirect emissions, e.g. produced by purchased goods and services, transport, employee commuting and investments (Carbontrust 2014). The organization furthermore should report on its impact and strategy on biodiversity.

The indicators of the ecological category furthermore require reporting on the environmental impact of the organizations products and services, including the transport of goods. The aspect compliance requires reporting on the monetary value of fines or sanctions for non-compliance with environmental laws and regulations, an the aspect environmental grievance mechanisms should serve to disclose the number of grievances filed, addressed and resolved by the organization. The G4 guidelines also extended the focus on the supply chain within the ecological category and require reporting on supplier environmental assessments conducted and the negative environmental impacts in the organization's supply chain.

The category social was developed for disclosures concerning the impacts of the organization in the social systems in which it operates (GRI 2013a). The category is divided into the four sub-categories labor practices and decent work, human rights, society and product responsibility. The relating aspects and indicators give detailed guidance on reporting requirements. They have been summarized in the table below.

Tab. 5: G4 category social: aspects and indicators (own table, based on GRI 2013a)

CATEGORY	ASPECTS	INDICATORS
SOCIAL	**SUB-CATEGORY: LABOR PRACTICES AND DECENT WORK**	
	Employment	- New hires and employee turnover by age, gender, and region (#, %) - Benefits to full-time employees not provided to temporary or part-time employees - Return to work and retention rates after parental leave, by gender
	Labor/Management Relations	- Minimum notice periods regarding operational changes
	Occupational Health and Safety	- Representation in joint management–worker health and safety committees (%) - Injury, occupational diseases, absenteeism, and work-related fatalities (Type, %) - Health and safety topics in formal agreements with trade unions
	Training and Education	- Training per year per employee by gender and employee category (Hrs) - Programs for skills management and lifelong learning - Regular employee performance and career development reviews (%)
	Diversity and Equal Opportunity	- Composition of governance bodies - Employees per category, gender, age, minority group membership, other indicators of diversity
	Equal Remuneration for Women and Men	- Basic salary and remuneration by gender and employee category
	Supplier Assessment for Labor Practices	- New suppliersscreened using labor practices criteria (%) - Actual and potential negative impacts for labor practices in the supply chain
	Labor Practices Grievance Mechanisms	- Grievances about labor practices filed, addressed, and resolved (#)
	SUB-CATEGORY: HUMAN RIGHTS	
	Investment	- Investment agreements and contracts screened for or including human rights clauses - Employee training on human rights policies (Hrs, %)
	Non-discrimination	- Discrimination incidents and corrective actions taken (#)
	Freedom of Association and Collective Bargaining	- Operations and suppliers which may violate freedom of association and collective bargaining
	Child Labor	- Operations and suppliers with risk for incidents of child labor
	Forced or Compulsory Labor	- Operations and suppliers with risk for incidents of forced or compulsory labor
	Security Practices	- Security personnel trained in the organization's human rights policies (%)
	Indigenous Rights	- Violations incidents of rights of indigenous peoples (#)
	Assessment	- Operations that were subject to human rights reviews or impact assessments (#, %)
	Supplier Human Rights Assessment	- New suppliers screened using human rights criteria (%) - Actual and potential negative human rights impacts in the supply chain
	Human Rights Grievance Mechanisms	- Human rights grievances filed, addressed, and resolved (#)
	SUB-CATEGORY: SOCIETY	
	Local Communities	- Local community engagement, impact assessments and development programs (%) - Actual or potential negative impacts on local communities
	Anti-corruption	- Operations assessed for risks related to corruption (#, %) - Communication and training on anti-corruption policies and procedures - Confirmed incidents of corruption and actions taken (#)
	Public Policy	- Political contributions by country and recipient/beneficiary ($)
	Anti-competitive Behavior	- Legal actions for anti-competitive behavior, anti-trust, and monopoly practices (#)
	Compliance	- Fines and non-monetary sanctions for non-compliance with laws and regulations ($, #)
	Supplier Assessment for Impacts on Society	- New suppliers screened using criteria for impacts on society (%) - Actual and potential negative impacts on society in the supply chain
	Grievance Mechanisms for Impacts on Society	- Grievances about impacts on society filed, addressed, and resolved (#)
	SUB-CATEGORY: PRODUCT RESPONSIBILITY	
	Customer Health and Safety	- Product and service categories assessed for health and safety impacts (%) - Non-compliance incidents with regulations and voluntary codes for health and safety (#)
	Product and Service Labeling	- Product and service categories subject to information requirements (%) - Incidents of non-compliance with regulations and voluntary codes (#) - Results of surveys measuring customer satisfaction
	Marketing Communications	- Sale of banned or disputed products - Non-compliance incidents with regulations and voluntary codes (#)
	Customer Privacy	- Complaints regarding breaches of customer privacy and losses of customer data (#)
	Compliance	- Fines for non-compliance with laws and regulationsfor ($)

The aspects under labor practices base on international standards of the UN and the International Labour Organization of the UN (ILO), such as the *Universal Declaration of Human Rights* (UN 1948) and the *Declaration on Fundamental Principles and Rights at Work* (ILO 1998). They require reporting on employee hires and turnover by age, gender and region, retention rates and notice periods regarding operational changes. Further aspects of the sub-category require reporting on occupational health and safety, training and education, diversity, equal remuneration and formalization of grievance mechanisms.

The sub-category human rights aims to cover “the extent to which processes have been implemented, incidents of human rights violations, and changes in stakeholders’ ability to enjoy and exercise their human rights” (GRI 2013a, p. 173). Main reference for this sub-category is the UN International Bill of Rights and its relating treaties, conventions, declarations and laws. Aspects under human rights cover investments in human rights, non-discrimination, the freedom of association and collective bargaining, child labor, forced or compulsory labor or indigenous rights, and within the category, compliance as well as grievance mechanisms are reported.

Society as a sub-category requires reporting on the impacts of the organization on society and local communities. Again, the UN *Universal Declaration of Human Rights* (UN 1948) and relating UN and ILO conventions and declarations build the basis for this sub-category. The relating aspects and indicators cover impacts on local communities, anti-corruption, public policy, compliance and also formalized grievance mechanisms.

The aspects under the last sub-category product responsibility serve to report on the product responsibility of the reporting organization. Basis form the OECD *Guidelines on Consumer Interests of the Guidelines for Multinational Enterprises* (OECD 2011). The aspects covered are customer health and safety, product and service labeling, marketing, customer privacy and compliance. While health, safety and product labeling mainly refer to physical impacts, the aspect customer privacy requires reporting on the protection of customer data.

The latest version of the guidelines, G4, is receiving some critical attention. Along with the focus of materiality, G4 has introduced new disclosures beyond the organizations boundaries, for example on GHG and supply chain risks. Various articles criticize that the guidelines are highly ambitious and complex, and companies could therefore refrain from reporting (Hsu 2013, Rat für Nachhaltige Entwicklung 2012). Thurm (2013) questions whether the application of the new standards going forward will reflect the right ambitions form the authors, or whether a lax reporting process could impede the accountability of the reports (ibid. 2013). Kolk (2004), already in revision of earlier versions of the guidelines, noted that overall, many of the indicators do not reflect performance as such, but often ask for the existence or implementation of internal and external policies and procedures. He argues that the introduction of ‘actual performance indicators’ (ibid., p. 60) would increase the likelihood of a company implementing a sustainability report.

According to the literature and research, an increasing amount of larger, companies engage in sustainability reporting to communicate their social, ecological and economic performance to internal and external stakeholders. The following chapter will look more closely into trends in sustainability reporting and the current state of research as to why organizations are and are not reporting.

2.3 Current situation and state of research

Various statistics show a constant increase in the number of companies engaging in sustainability reporting in the past decade. In the US, an analysis conducted by the Governance & Accountability Institute (G&A) showed that 53 percent of the 500 companies indexed by Standard and Poor's issued some form of environmental, social and governance report (ESG) in 2011, most of them under the guidelines of GRI, while in 2010 only 19 percent reported (G&A 2012). The corporate register, the largest online directory for corporate responsibility reports, published that about 5,600 out of the roughly 63,000 globally registered companies published a sustainability report in 2011 (Ioannou & Serafaim 2013). EY as well as KPMG assess that 95% of the Global 250 issued sustainability reports in 2011 (E&Y & BCC 2013)[5].

While the overall number of businesses introducing sustainability reporting as an instrument of sustainability management is constantly increasing, the relative ratio of reporting companies is still considered low (Ioannou & Serafaim 2013). Research on sustainability reporting is therefore concerned with finding out about the constraints to sustainability reporting, resulting in companies not reporting, but also the communicable benefits. The following table summarizes the findings of a survey conducted by AccountAblility and UNEP as to why companies are (not) reporting:

Tab. 6: Companies' motivations for reporting or non-reporting (Kolk 2004)

Reasons for reporting
▪ It enhances ability to track progress against specific targets ▪ It raises awareness of broad environmental issues throughout the organization ▪ It helps to convey the corporate message internally and externally ▪ It improves credibility through transparency ▪ It allows to communicate efforts and standards ▪ It has reputational benefits and secures the license to operate and campaign ▪ It identifies cost savings, increases efficiency, shows business development opportunities and enhances staff morale

[5] The Global 250 emerging private technology companies are selected in an annual competition by the AlwaysOn network, an initiative founded in 2003, along with various consulting, capital and business partners and experts from industry

Reasons for not reporting
▪ The advantages it would bring to the organization are doubtful ▪ Competitors are neither publishing reports ▪ Customers and the general public are not interested in it, it will not increase sales ▪ The company already has a good reputation for its environmental performance ▪ There are many other ways of communicating about environmental issues ▪ It is too expensive ▪ It is difficult to gather consistent data from all operations and to select correct indicators ▪ It could have legal implications or wake up sleeping dogs, such as environmental organizations

Research finds positive evidence that the process of putting together a sustainability report can help companies to uncover cost savings and value creation through sustainable business practices. Sustainability Reporting can lead to improved stakeholder communication and reputation, and uncover hidden business opportunities or risks. (Ioannou & Serafaim 2013) Examples of hidden opportunities are increased operational efficiency through improved resource management, while risks can involve “reputational risks within the supply chain due to the possibility of human rights’ violations, or the detection of unwanted bribery and corruption activities” (ibid. 2013, n.p.). Wagner (2009), in analyzing various empirical studies, finds positive influence of good environmental performance on corporate success, economic performance and competitiveness. Ioannou & Serafaim (2012) in turn observed in a study with 58 countries that mandatory corporate sustainability reporting resulted in increased social responsibility of business leaders. Kolk (2004) finds that reporting companies have been included in the Dow Jones Sustainability Index or the FTS4Good Index.

According to a study of the Certified General Accountants Association of Canada (GCA), sustainability reporting demonstrates a company’s responsiveness to societal issues and signals a company’s intention “to position itself within a broader community or societal perspective.” (CGA 2005, p. 9). By monitoring and managing the sustainability issues in their industries, companies can protect their license and freedom to operate, while being less exposed to enforcement of regulation or other outside interference. On a financial side, sustainability reporting can effect in cost savings through managing and controlling eco efficiency on the input side (BMU et al. 2007, KPMG 2011).

On the side of constraints, companies state costs and the availability of the necessary data as a challenge, and they fear that sustainability reporting could wake sleeping dogs. Also, some companies simply don’t report because it is not mandatory (E&Y 2011, Ioannou & Serafaim 2012, CGA 2005). Resource limitations will particularly affect the willingness of small or young businesses to take on sustainability reporting. Accordingly, various studies observe that smaller companies report less, and the likelihood is decreasing with the size of the company (CGA 2005, KPMG 2011, Herzig & Schaltegger 2006). Especially for start ups, those reasons seem to be even more obvious, as resource and financial restraints are seen as the biggest challenges that new or young ventures are facing (Wolf 2006). ECC Kothes Klewes & Fishburn Hedges (2003) summarize that stakeholders or target groups of sustainability reports mainly criticize the vagueness and missing credibility.

A central constraint to the credibility of sustainability reporting is assigned to the fact that there is no commonly used and internationally shared standard. This makes the cost of stakeholders to obtain and verify sustainability information too high. Charged with finding their own standards, companies often fail to develop a comprehensive reporting and management approach and instead keep shifting the focus and the target group of sustainability reports. As a consequence, Herzig & Schaltegger (2006) observe that many sustainability reports are non-specific, “aiming at a diffuse and excessively wide group of potential readers.” (Herzig & Schaltegger 2006, p. 309). They put together the specific challenges which tend to compromise on the ‘development of confidence and credibility’ (Herzig and Schaltegger 2006, p. 309) in sustainability reporting:

- In management, there is often no agreement (-process) over the terms sustainability or sustainable development,
- the identification, measurement and operationalization of corporate sustainability is a set of interrelated goals and needs interdisciplinary development of solutions,
- the cost (time and money) of stakeholders to access information about the sustainability of a company is often high, leading a climate of low credibility,
- sustainability reports lack target orientation to meet stakeholders’ information needs and
- there are no accepted comparable standards on data collection, quality and content (ibid, p. 309).

Porter & Kramer (2006) mainly assign those challenges and constraints to the fact that existing approaches for CSR and corporate sustainability are disconnected from business and strategy and almost “pit business against society, when clearly the two are interdependent” (ibid., p. 1). In fact, while reporting initiatives and sustainability research underlines the positive effects of sustainability reporting for companies, the broader part of sustainability reporting related literature and guidelines, including the GRI guidelines, has a focus on a company’s external impacts. While especially GRI puts strong effort in the development and integration of international and comparable standards as such, the internal dimension of sustainability reporting is thereby often reduced to managing change due to external sustainability developments and to motivate managers and employees to reduce negative impacts on society, environment and economy. A good integration of sustainability reporting, according to the Leuphana Corporate Sustainability Barometer 2012 (Schaltegger et. Al 2013), requires that the existing conflicts between ecological and social performance on the one side, and economic performance on the other side, are reduced as much as possible, while positive synergies are increased (ibid.).

When looking at benefits and constraints of sustainability reporting, the aspect of mandatory sustainability reporting must be included in the discussion. Governments increasingly mandate social responsibility reporting or legislation (Porter & Kramer 2006). On an environmental side, companies are obliged to report when they cross certain usage or emission thresholds. Elkington (2004), in what he calls the sustainable capitalism transition, expects that going forward, some forms of corporate disclosure will still be voluntary, “but others will evolve with little direct involvement from most companies” (Elkington 2004, p. 3). Governments in the recent past, and following public scandals such as Enron, are introducing new regulations, such as the ruling of the Securities and Exchange Commission (SEC) which mandates that climate risk is material to investors (Lubin & Esty 2010). In 2014 the European Parliament adopted the directives on disclosure of non-financial and diversity information (Council Directives 78/660/EEC and 83/349/EEC for disclosure of non-financial and diversity information by certain large companies and groups). The directives applies to public companies with more than 500 employees. It has been discussed in the past whether the introduction of legal requirements will lead to defensive reaction in business, which is why various authors vote that this is not recommendable (AccountAbility & UNEP 2004). However, engaging early in sustainability reporting can help a company to position itself if mandatory reporting is introduced.

2.4 Stakeholder engagement

Sustainability theory argues that the long term success of a company highly depends on the sustainability of its stakeholder relationships (Perrini & Tencati 2006). According to Freeman (1984), stakeholders are individuals and groups that have a material or immaterial interest in a company. An important paradigm of the stakeholder approach is that companies have to obtain and maintain their license to operate from their stakeholders. Companies depend on the resources that stakeholders can or cannot make available for its success. Stakeholders thereby often have different or even conflicting expectations of a corporation (Venkataraman 2002). Stakeholder management is a strategic task in which the company has to ensure that value is distributed in a way “that the continuing supply of resources by stakeholders-and especially the critical stakeholders-is secured as economically as possible over the long term” (Figge & Schaltegger 2000, p. 11). The stakeholder approach therefore analyses constructive relationships between companies and stakeholders through integration and management (ibid.). According to Figge & Schaltegger (2000), stakeholders will only make resources available if there is a profitable relationship “between what they put into the company and what they get out (ibid., p. 11)”. They group three types of material or immaterial resources that stakeholders can provide to a company:

- Capital resources (financial assets, tangible assets (land, buildings) or natural resources)
- Goodwill resources (social acceptance, good working environment)
- Information and know-how (ibid., p. 11))

There are various ways in which companies can communicate and engage with their stakeholders, e.g. via staff surveys, community panels, and stakeholder statements. Some companies carry out external stakeholder surveys (Kolk 2004). Manetti (2011) distinguishes three different stages of stakeholder involvement, with the first stage being the stakeholder mapping, the second the stakeholder management, and the third stage is the stakeholder involvement.

Traditional frameworks for stakeholder analysis use the company as the focal point from which to map and categorize stakeholders by their salience for the company, using aspects like power, legitimacy or urgency (Mitchell et al. 1997). Those models as e.g. suggested by Mitchell et al. (1997) could lead to ignore highly affected stakeholder groups with little direct power, and Vanderkerckhove & Dentchev (2005) note that such an approach could lead to overlook opportunities for constructive stakeholder collaboration in creating feasible shared behavioural expectations (ibid.). Recent literature stresses that stakeholder management rather needs dialogue, and adopts a network perspective. The network perspective not only assumes relationships amongst stakeholders of a company, it also recognizes that stakeholders and the firm itself can be part of other stakeholder networks of (many) other focal points. Schalteggeer & Petersen (2008) consequently develop a stakeholder network perspective that casts the company, next to its institutional basis and technical infrastructure, as a social construct with cooperative and conflicting interrelations in the company environments Schaltegger & Petersen 2008).

Within the guidelines and principles of major sustainability initiatives, stakeholder inclusion or engagement is considered the key to identifying relevant and material data to a company's report. According to Manetti (2011), stakeholder engagement is both process and product of sustainability reporting. Stakeholders are considered to be the target audience and the indicator as to which sustainability issues should be considered material and thus be reported on (AccountAbility 2008, GRI 2013). Stakeholder inclusiveness is one of the main principles for defining the content of a GRI report. The reporting organization should map its stakeholders and use the 'reasonable expectations and interests' (GRI 2013a, p. 9) as a reference for decisions about the report content. Within the general standard disclosures, the reporting organization has to disclose the identified stakeholders and how it has identified and engaged these stakeholders.

There is a line of discussion on whether companies currently manage to meaningfully engage stakeholders. Cooper & Owen (2007) especially question whether stakeholders will have influence on corporate decision making in situations of distributional conflict. They argue that, within sustainability reporting, companies tend to "happily subscribe to the business case 'win-win' scenario, whereby no conflict is seen between promoting shareholder interests whilst being responsive to the needs of other stakeholder" (Cooper & Owen 2007, p.10).

2.5 Fit gap summary

"So far, small and medium sized enterprises (SMEs) are particularly reluctant to issue sustainability reports. Since SMEs constitute a large part of the economy and of its social and environmental effects, it is necessary to emphasize the benefits and to keep the costs of sustainability reporting low." (Herzig & Schaltegger 2006, p. 310)

In the foregone chapter it was shown that sustainability reporting is a management tool that companies introduce in addition to their overall corporate reporting requirements to report on and manage their external impacts. SMEs collectively have a great sustainability impact, but compared to larger companies, they also have less human, technical and financial resources to measure and manage those impacts (GRI 2011). GRI has developed a beginner's guide in 2011 with a procedure of five basic steps and case studies on how to successfully create a sustainability report (ibid.). It aims at companies that prepare a sustainability report for the first time or that want to get a better understanding of sustainability reporting under the GRI guidelines. Within the guide, GRI identified main drivers for SMEs to start up a reporting process:

- Access to capital and markets:

  As set out in earlier chapters, sustainability reporting was found to provide enhanced credibility and reputation amongst stakeholders. According to GRI (2011), sustainability reporting can be a valuable communication tool with banks and other credit providers, as it makes transparent sustainable performance. Ioannou & Serafaim (2013) observe an increasing integration of ESG-data in valuation models and conclude that irresponsible firms have a high probability of being penalized by key capital market participants.

- Being part of the global supply chain:

  Even if small businesses may not be subject to international regulations in the supply chain for multinational enterprises (MNE), they can become part of the supply chain themselves. Requirements of existing responsible sourcing initiatives assign shared responsibilities and will therefore be likely to be passed on or requested from MNE. The process of sustainability reporting will prepare and position the small business for such requirements, and also if mandatory reporting requirements will be introduced.

In addition it was shown that stakeholder engagement within sustainability reporting can be a tool to help improve stakeholder communication and be an active form of receiving feedback seeking. As will be shown in the coming chapter, both have proven to be success factors for entrepreneurship (Frese 2009).

However, sustainability reporting is a voluntary and complex tool, and many sources question that especially smaller companies will invest resources to comply with guidelines such as G4 (DIHK 2013, Hsu 2013). GRI (2011) acknowledges that sustainability reporting incurs staffing costs and, especially in smaller companies or for first-time reporters, and it may require additional resources (ibid.).

Herzig & Schaltegger (2006) assess that there are two perspectives of reporting: the inside-out perspective bases reporting activities on the company's strategic priorities, while the more commonly used outside-in perspective structures sustainability reporting along the criteria of rating agencies, rankings, and published guidelines (ibid.). While companies need a healthy environment that provides skilled workforce, purchasing power and sustainable access to resources, a healthy society also needs productive companies (Porter & Kramer 2006). Large parts of the literature are therefore skeptical as to whether early stage businesses will divert their resources to extend their reporting activities beyond existing requirements.

The next chapter will provide an analysis on the subject of entrepreneurship while complementing the theoretical background for the empirical part of this thesis.

3 START UPS

The terms entrepreneur(ship) or start up cover a large area of concepts and have been subject to various scientific fields recently. There is no widely accepted definition of the term entrepreneurship (Ahmad & Seymour 2008a). The same holds true for the definition of sustainable entrepreneurship, which sometimes appears to be positioned on very far ends of the same scale, as different concepts of sustainability are used. It is therefore necessary to first clearly define the scope of the analysis and to agree on the assumptions behind the terminology used in the following chapters.

If recommendations are to be drawn, this thesis needs to analyze the specific characteristics of start ups in comparison to larger companies and to get an understanding of the constraints and opportunities with regard to sustainability reporting. This section will therefore focus on the specific characteristics of start ups by analyzing current research to narrow down existing gaps and ensure that existing best practice is taken into account. As stakeholders are considered the target group of sustainability reporting, the chapter will end with a description of the specifics of the stakeholder environments of start ups.

3.1 Definition and theoretical framework

Literature, research and policy makers use qualitative as well as quantitative factors to define entrepreneurship and distinguish it from other forms of businesses. On a quantitative side, most factors relate to size, age and growth. Start ups are usually summarized under classifications of SME[6] or in some cases are equated with the number of self employed in an economy (Ahmad & Seymour 2008a, Eurostat 2011). In addition, stage models of business growth were introduced for a categorization of a business according to its maturity, whereby businesses would follow a set number and sequence of stages. Those models were not proven to be valid for all companies though, as companies have shown to dynamically alter their resources to adjust to growth or decline (Levie & Lichtenstein 2008).

Overall, quantitative factors can help position start ups and entrepreneurial activity within the economic context, but they don't provide indicators to distinguish a start up from other business types[7]. Consequently, none of the current research and literature entirely relies on quantitative factors, except where they can contribute to the validity of indicators, such as the performance indicators of the OECD (Ahmad & Semour 2008).

On the qualitative side, the most common factors used to categorize start ups are newness or innovation and value creation through the creation and *exploitation of opportunities*. Also, resources scarcity, flexibility and a flat personalized management structure are considered central qualitative characteristics referred to in the literature.

[6] The EC categorization of micro, small and medium-sized enterprises (SMEs) includes enterprises which employ fewer than 250 persons and which have an annual turnover not exceeding 50 million euro, and/or an annual balance sheet total not exceeding 43 million euro (EC 2005a)

[7] For example, self-employment can be long term, or some high growth companies, such as spin offs, can be far from being a start up even after a short period of existence (Levie & Lichtenstein 2008)

3.1.1 Innovation and opportunity creation

“Rather, entrepreneurship implies that people act to change the world and this often comes about by not just “detecting” opportunities but by establishing them.” (Frese 2009, p.436) Entrepreneurship theory regards identifying and creating business opportunities as a major motivation for entrepreneurs, as they expect to transform those resources into profit (Gompers et al. 2006, Ahmad & Seymour 2008a). Innovation and opportunity creation are regarded as the core of successful entrepreneurship.

Opportunities according to Baron (2010) show three central characteristics: they have potential economic value, i.e. in the form of profit, they have a notion of newness, i.e. in the form of a new product or service, and they carry a ‘perceived desirability’ (ibid., p.121) in terms of moral and legal acceptability of the new product or service (ibid.). The successful identification and evaluation of business opportunities is often summarized under the concept of entrepreneurial alertness (Archdivili et al. 2000). Kirzner (1973), who first developed the concept, casts the economy as a market in constant disequilibrium. Consequently, the main effect of entrepreneurial activity is market equilibration (Foss & Klein 2010). For defining innovation, large part of research and policy makers follow the Schumpeterian view. Schumpeter (1984) considers the innovative and creative potential to replace old products or technologies and to contribute to quality of live improvements as a specific of entrepreneurs (Schumpeter 1984, DIW 2012, Majid & Koe 2012). According to Schumpeter, entrepreneurs take advantage of change by introducing new or improved goods or methods of production, by opening new markets, exploiting a new source of supply or by re-engineering a business management process. Schumpeter’s definition therefore equates entrepreneurship with innovation in the business sense; “that is identifying market opportunities and using innovative approaches to exploit them” (Ahmad & Seymour 2008, p.8).

According to OECD, opportunities are very dependent on the market conditions in a country (Ahmad & Seymour 2008a). Innovations in technology and an ongoing trend to digitalization change the economic and societal processes that form the business environment for start ups (DB 2011). Innovative start ups therefore increasingly expand their infrastructure to internet based channels. During the financial and economic crisis however, venture capital investments (VC) went down, while the overall spending on research and development (R&D) remained fairly stable. “The result is a lack of start ups that experiment with completely new business models.” (DB 2010, n.p.) In some markets, the degree of public involvement, limited access to foreign markets, or procurement regulations can outweigh the benefits of entrepreneurship. If opportunity costs are too high, the combination of opportunity, capabilities and resources will not necessarily lead to innovative entrepreneurship (Ahmad & Seymour 2008a). Some especially transitional economies rather develop forms of necessity driven forms of entrepreneurship (Frese 2009).

Next to market conditions, opportunity creation is dependent on the possession of information and on personal characteristics and forms a cyclical and iterative process (Ardichvilia et al. 2003, Ahmad & Seymour 2008a, Shane & Vankataraman 2000). Thereby, “the entrepreneur is being involved in what can be described as the dance between two questions – “what is possible?” and “what is needed?”- and the interplay of these two questions are shaped by changing knowledge of the external environment, by social and business networks by changes in the legal system, changes in the competitive environment and by market forces." (Jack & Rose 2010, p.273). Traits theory has therefore attempted to gain more understanding on which characteristics are conducive for the management of changing environments, as will be shown in later chapters. Also, Jack & Rose (2010) assign high importance to the stakeholder environments of entrepreneurs in managing knowledge and change.

3.1.2 Resource scarcity

The factor resource scarcity stands for the access to capital, human resources, Research and Development (R&D) and technology. In a typical scenario, an entrepreneur does not hold or control all necessary resources, but "has to assemble, organize, and execute the market development and value-chain infrastructure before potential profits can be realized and conjectures proven to be insights" (Venkataraman 2002, p.47). While resource capacity conflicts may also exist for established companies, it is obvious that small or new companies have fewer resources than large companies, especially in the form of management, manpower and finances (Hudson et al. 2001). Additionally, a lot of the relevant information when creating new products and the related infrastructure will only exist once the market has been successfully created (Venkataraman 2002).

Various studies emphasize that capital is one of the most critical factors for success of small companies and especially start ups (Wolf 2006). Sustainable growth of young businesses highly depends on optimal financing, which allows them to work with the critical workforce and potential for growth (Maier 2012). Financial constraints have various components, ranging from bad financial management and planning to restricted access to bank loans, dependency on unpredictable funding from investors as well as underperforming business income.

Access to human resources can be another limiting factor for the sustainability and growth of start ups. Not having developed a trusted brand name and equity yet and usually not yet operating on profit, start ups need to put special effort up to attract high potential employees. The flat, flexible structures of small businesses come along with little 'devolution of authority' (Hudson et al. 2001, p. 1105), little job security and highly flexible working hours. Companies with a strong employer brand are less vulnerable to competitors, but brand equity first needs a high level of brand awareness and positive brand image.

R&D used to be an in house facility of larger corporations and a critical factor of competitive advantage. While economies of scale for a long time led to large size companies, business ownership and small business rates increased again with the rise of new industries like software and biotechnology (Carre & Thuric 2010). The new technologies reduced the importance of specialization and internal coordination, and small companies can profit from being flexible and more efficient (ibid.). R&D and technology are a resource that can be created or purchased, "whether directly or in an embodied or diffused form" (Ahmad & Seymour 2008a, p. 18).

3.1.3 Flexibility and a flat personalized management

All forms of companies in one way or the other entail a production and a governance system. Governance systems have external mechanisms, such as regulations and markets, and internal mechanisms that govern and manage the allocation of control and responsibilities among the company's providers of 'input resources' (Gabrielssen & House 2010, p. 229). Start ups are considered to have flat and rather non-formalized organizational structures, which allow for flexibility.

According to Ashe-Edmunds (n.d.), the particular organizational structure of a start up grows around two central requirements: Firstly, innovative businesses require flexible structures that promote frequent interaction and communication among their marketing, sales and product teams. Secondly, the limited size requires resource maximization through multitasking instead of departmentalization (ibid.). Within start ups, ownership and control are usually consolidated within the person of the owner and founder, to whom all individuals and groups report (Gabrielssen & House 2010). In addition to the internal management, start ups often require additional equity from external investors, who in turn receive shares and also partake in the governance of the company, while they remain an external resource.

Such a structure however can become inadequate if the company grows. Also, in the case of entrepreneurial exit, when the founder leaves the company, such concentrated forms of management can bear a risk for the company (DeTienne 2010). In a positive scenario, the entrepreneurial exit can empower the firm with cash, new resources, and a professionalization of management structure. Other parts of the literature suggest negative impacts, such as disruption of work routines, increased insecurity amongst employees, and some studies even found increased organization mortality after exits (ibid.).

3.1.4 Sustainable entrepreneurship

SMEs constitute a large part of the economy and of its social and environmental impact (Eurostat 2008). Korsgaard and Anderson (2010) argue that the concepts of entrepreneurship and sustainability are linked by the notion of resources. Even though it seems that entrepreneurs, in pursuit of profits, are unlikely to have practices that are sustainable, "perhaps because of the unique ability of entrepreneurs to innovatively combine self and circumstance, researchers are exploring entrepreneurship as a potential mechanism for sustainable development" (ibid., p. 2).

In addition to traditional concepts of entrepreneurship, there is a growing number of sustainable entrepreneurs in terms of the business concept or activity. Sustainable entrepreneurship is defined as "the process of discovering, evaluating and exploiting economic opportunities that are present in market failures which detract from sustainability, including those that are environmentally relevant" (Majid & Koe 2012, p. 298). Sustainable entrepreneurship, often also referred to as ecopreneurship, green/environmental entrepreneurship and social entrepreneurship, is a relatively new phenomenon (ibid.). Classifications depend on the dimensions of sustainability or the degree of innovation. Sustainable business activity can promote environmentally benign products or sustainable innovation (Kuckertz & Wagner 2010). Frese (2009) emphasizes that entrepreneurship does not necessarily have to imply the start up and growth of a business. It is a rather general phenomenon of starting and changing organizations. He therefore extends the definition of sustainable entrepreneurship to social service organizations, such as Greenpeace or Medicine without borders (ibid.). Kuckertz and Wagner (2010) find that sustainable entrepreneurship is highly linked to an individual's sustainability orientation. For sustainable entrepreneurs, rent seeking is combined with 'satisficing behavior' (Kuckertz and Wagner 2010, p. 527) on the dimension of sustainability, which leads to pursuing opportunities with less profitability, yet higher sustainability benefits: "Even in a utility maximization framework such behavior of entrepreneurs could be explained in that nonmonetary benefits could be a significant element of an entrepreneur's utility function." (ibid., p. 527)

This thesis is explicitly not focusing on start ups whose value proposition is to meet customer needs by sustainable practices and products (Majid & Koe 2012, p. 298) but to look into the added value that sustainability (reporting) can bring to growth oriented, opportunistic and business minded entrepreneurs. Ecopreneurs have already understood the opportunity of value creation through sustainability innovation are more likely to use sustainability reporting also at an early stage of their business.

3.2 Current situation and state of research

Entrepreneurship is often referred to as an important driver of economic development and employment creation. Research tries to measure the contribution of entrepreneurship towards policy targets, such as GDP growth, employment or income distribution in the informal and the formal sector. But the impact of entrepreneurship performance can't always be linked in a straight line to performances on macroeconomic level (Ahmad & Seymour 2008a). Majid & Koe (2012) underline that there are also negative contributions of entrepreneurship towards development, especially in the form of environmental degradation due to market failures (ibid., p. 295). And Hockerts & Wuestenhagen (2010) relativize: "However, while their actions are important, there are arguably a number of limitations to the impact that small firms can have on the sustainable transformation of industries." (Hockert & Wuestenhagen 2010, p. 481). The following will give an overview on the current state of research with regard to the impacts of start ups on economy and sustainability.

3.2.1 Job creation

Measuring the impact of entrepreneurship on economic performance is complex, especially because there is usually a time lag between changes in the composition of a business sector and the related effects (Carree & Thuric 2010). Some research regards the direct economic impact of entrepreneurship as tenuous and rather assigns a societal role in terms of diversification of the socioeconomic portfolio (Harris et al. 2009).

Economic research discusses whether employment effects of entrepreneurial activity are usually generated by the large number of small businesses, or by a small number of extraordinary high growth ventures: "While there are many societal benefits to small and new firms, the real economic impact is generated by "gazelles"" (Acs 2010, p. 1). GEM findings show that during economic downturns or in economies with high unemployment, necessity driven entrepreneurship, often in the form of self-employment, has a large economic impact (Bosma & Stam 2012). In assessing regional, national and international studies on the impact of entrepreneurship Carree and Thuric (2010) identify that entrepreneurial impact happens in stages: While in the first stage, there is often an easily identifiable direct positive employment effect, the second stage is characterized by infant mortality of start ups and crowding-out of incumbents, which can have negative effects on employment growth. In the third and last stage, start ups again positively contribute to employment through direct or indirect supply-side effects (Carree & Thuric 2010).

Overall it is unanimously agreed that entrepreneurs account for a relatively large share of the overall economic activity and that the creation of new businesses has the potential for job creation (Gabrielssen & Huse 2010). Governments and policy makers are therefore aiming to create framework conditions that form a conducive environment for entrepreneurial activity in any form, as embedded entrepreneurship as well as innovative, high growth entrepreneurial activity (Bosma & Stam 2011).

3.2.2 Innovation and growth

Innovation is considered an important factor for economic growth. It can have the form of product or process innovation, but consist of knowledge spillovers (Harris et al. 2009). Start ups show a high tendency of innovativeness, proactiveness and risk taking (Wiklund & Shepherd). Yet, there is no agreement over the specific link between entrepreneurship and its effects on economic development in economic theory (Carree & Thurik 2010). From a sustainability standpoint, research shows that new or small businesses often stipulate innovation in an industry's transformation towards sustainability. Seeing the market success of such ‘Davids’, pioneer ‘Goliaths’ often follow (Hockerts & Wuestenhagen 2010, p.481).

As shown earlier, growth models on a micro-level have not proven to be appropriate to categorize start ups within the larger group of businesses as such. At the same time, growth is still considered a major impetus for the success of entrepreneurial activity. Most businesses start with external capital and will only be able to create profit through economies of scale, even in niche markets (Marino et al. 2011). On a macro-level, Carree & Thurik (2010) find that increased competition or rivalry through entrepreneurial innovation can stimulate growth. They constitute that “variety, competition, selection, and imitation expand and transform the productive potential of a regional or national economy via the replacement or displacement of obsolete firms, via higher productivity and via the expansion of new niches and industries” (ibid., p.587). However, these effects can also phase out.

For certain economies though, imitative entrepreneurship or necessity driven entrepreneurship was found to be a bigger driver and more common than innovative entrepreneurship (DIHK 2012, Kelley et al. 2012). Minniti & Lévesque (2010) observe that in some emerging economies, where the environment is less conducive for innovation as spending on R&D is low and access to finance limited, imitative entrepreneurship has shown to have the biggest impact on economic growth.

3.2.3 *Ethical decision making and uncertainty*

Entrepreneurial ethics are a relatively new scientific subject. Harris et al. (2009) reviewed the various streams in this academic field and found that the greater part of the streams look at the micro level of ethical behavior and the specific dilemma that an individual entrepreneur encounters in a new venture setting (ibid.). A smaller amount of research includes the organizational level, trying to shed more light on the dynamics that impact ethical behavior at the company level. With regard to ethical decision making, research is especially interested in the influence of the specific entrepreneurial setting and the personality attributes of entrepreneurs. The entrepreneurial environment is strongly characterized by constant change and limited resources (Harris et al. 2009, Maier 2012). Compared to other companies, start ups show increased willingness to position themselves in uncertain environments (Marino et al. 2010). In contrary to routine actions, this involves that it is often unclear which effects certain actions will have (Frese 2009). There is an overall tendency towards shorter product an business life cycles (Wiklund & Shepherd 2005). A sub-stream of entrepreneurial research looks at the peculiar ethical dilemmas (Harris et al. 2009, p. 409) arising from technological innovation and progress. Often stimulated by small firms, technological advancement raises new, not yet structured ethical questions regarding its impact on society (Martin & Freeman 2004).

Further specific dilemmas exist with regard to the division of profits and the balance between impression management, legitimation, and honesty (Harris et al. 2009). As the growth of new ventures is assumed to expose the business to intense organizational and environmental forces, research asks how an ethical infrastructure can be formed and sustained (ibid.). The formation and resilience of an ethical infrastructure in new ventures would help to draw conclusions on larger companies. Kuckertz & Wagner (2012) found that entrepreneurs, when encountering increasing complexity of action and the need to respond to often contradicting demands, would evaluate those opportunities more rigorously, which are generally associated with high moral legitimacy, but with lower organizational practicality, including those for sustainability (ibid.).

Trait differences between entrepreneurs and non-entrepreneurs are being discussed in various scientific streams. Trait theory is an approach in psychology that deals with dispositions or characteristics as components of human behavior. Relevant research summarizes that entrepreneurial minded persons often show certain dispositions, such as locus of control, risk taking, optimism self-efficacy and creativity (Ardichvili et al. 2003, Vandekerckhove & Dentchev 2005). Some sources also show the possible negative implication of entrepreneur-specific characteristics. Vandekerckhove & Dentchev (2005) for example name constraints in analytical capacity and the problem of information selection (e.g. consulting only certain people or information), which result from the specific environment, but also the interpretation experience of entrepreneurs: “This problem results from decision-makers being interested only in a particular range of issues” (ibid., p. 222). Some authors argue that the qualities required for successful entrepreneurship, such as imagination, creativity, novelty, sensibility, are also crucial qualities for ethical decision making. Other research finds that fairness and procedural justice are important in managing the relationship to key investors, and Harris et al. (2009) quote authors that raise the question whether entrepreneurs have a disposition to 'over-trust' (ibid., p.9).They suggest that therefore, entrepreneurs may tend to put larger emphasize on ethical behavior or moral reasoning. Other strands question stable and systematic trait differences which would "carry over into corresponding systematic differences in ethical perception and action" (ibid., p. 408). Overall, entrepreneurs show a strong 'action bias' (ibid., p. 408), and their motivation for personal financial gain is higher than for managers of large companies. It is therefore expected that entrepreneurs will accept success on the expense of others or on the norms of fairness (ibid.).

3.3 Stakeholder environment of start ups

The aim of this chapter is to analyze stakeholder relationships of start ups in general, and the outcome is expected to provide better guidance on how sustainability reporting in general should be targeted.

According to Venkataraman (2002), "entrepreneurship involves joint production where several different stakeholders have to be brought together to create the new product or service." (ibid., p. 4). Vandekerckhove & Dentchev (2005) assume that locus of control as well as the need for independence and achievement will make entrepreneurs try to take a central position in their stakeholder networks. Network theory distinguishes between network density and network centrality (ibid., p. 224). Network density describes the interconnectedness of the environment by measuring the relative number of ties in the network that link actors together. It is calculated as a ratio of the number of existing relationships to the total number of all possible ties. High density networks tend to have more efficient communication structures and increased shared behavioral expectations. Network centrality refers to the individual power of an actor in a network, stemming from their position relative to others. There are three types of centrality: degree centrality describes the number of ties an actor has with the others, closeness centrality describes an actor's ability to directly access the other network members, and betweenness centrality looks to what extent the focal actor within a network is an intermediary for other actors to access each other. According to this framework, the higher the centrality of the focal point, the higher will be its possibility to resist stakeholder influence or pressure (ibid., p.224).

Start ups are deemed to be difficult environments, characterized by high complexity, dynamics of growth, and uncertainty. Vandekerckhove & Dentchev (2005) assume that the characteristics of entrepreneurs lead them to create networks with strong centrality and low density, which could lead to overlooking opportunities in the complete value chain. A network with low density and high centrality resembles the hub-model, as it puts the entrepreneur in a central position with high ability to resist stakeholder influence and to influence the stakeholders, while stakeholders have less ability to coordinate their efforts. On the other hand, a high density network with increased shared behavioral expectations could be desirable as it might reduce conflicts of interest between stakeholders. Better and larger social networks can positively influence entrepreneurial success. Frese (2009) finds that Entrepreneurs will put effort in developing their networks if they find them useful in their endeavors.

Studies suggest that stakeholder networks of start ups show distinctive characteristics that are different to networks of larger companies:

- Unique intense relationships

  A fairly new stream of entrepreneurial research looks at the application of stakeholder theory to the unique and personal stakeholder relationships that center around an entrepreneur. (Harrison 2002; Venkataraman 2002).

  Recent research argues that there is a close alliance between the founder and the company, which leads to important organizational stakeholders also tending to be individuals who have a close or personal relationships with the founder. Entrepreneurs, in the early stages of venture formation, are often required to manage social relationships with family and friends who may also be investors and employees; “in other words, entrepreneurial stakeholders always have ‘names and faces” (Harris et al 2009, p.12). The distinct stakeholder environments of entrepreneurs can also negatively impact ethical behavior, “since social ties can also facilitate collusion and misconduct” (ibid., p.12). In general, research finds that good social networks positively influence the success of entrepreneurial activity. Especially network size and active network development have proven to be strong indicators for successful entrepreneurship (Frese 2009).

- A recent change or break in relationship: relationship before and after launch

  Psychology and ethics recognize that entrepreneurship has a pre-launch phase and a launch phase (Frese 2009, Harris et al. 2002). During the pre-launch phase, the entrepreneur needs to assemble the resources necessary for the launch. The launch phase is then characterized by company activity and sales, but also by survival: “Dealing with diverse and often conflicting demands (the latter implies that the entrepreneur is in a constant state of being overwhelmed by the demands and has to be able to make quick decisions), and dealing with errors, setbacks, and barriers, of setting goals, both short term as well as long term (strategy).” (Frese 2009, p. 445). There is a break in the involvement of the social environment between those two phases, characterized by changes in roles of certain stakeholders and the expectations of the stakeholders formed pre-launch towards the entrepreneur. Harris (2009) states that “this can give rise to unique and complex ethical problems, especially when the pre-venture and post-venture roles of the stakeholding individuals change; a choice to invest or not invest, or a mere change in the social character of a relationship, may lead to conflicts of interest or other incentive problems” (ibid., p. 410).

- Customer focus

  Important stakeholders sometimes have conflicting interests, and companies have to manage their stakeholder relationships and expectations. Profit maximization for shareholder gain is an objective commonly ascribed to large companies (Spence 2004). Smaller companies have more limited resources and need to make strategic choices in their relationships. Vitell et al. (2000) find that small business owners will rather prioritize the interests of customers over those of employees or stockholders. Spence (2004) concludes that the dictum of shareholder interests is inappropriate for small companies.

- Hardly imitable network structure

  Stakeholder environments of start ups are considered to be firm specific complex social systems which are not or hardly imitable. The resource-based view of competitive advantage has therefore lately given specific attention to start ups, seeking to analyze success and failure factors of entrepreneurial action in a competitive environment (Harrison 2002). Wu (2010), in a case study showed that a companies´ competitive advantage depends on its resource capacity combined with activities that respond to the competitive context (ibid.). In her study, Wu (2010) found that stakeholder management significantly influences positional advantages, "as stakeholders are relevant to activities and drivers that determine cost and differentiation. Moreover, stakeholders are key players in the competitive context, who help to shape the competitiveness of a firm" (Wu 2010, p.i). Korsgaard & Anderson (2010) elaborate that entrepreneurs show unique ability to innovatively combine self and circumstance.

4 METHODOLOGY

In research, knowledge is created through a series of steps in which data is collected, assessed, and information about causal relationships is inferred. To ensure that the methodology used meets the requirements of scientific approaches, the following principles of empirical research were applied (Gläser & Laudel 2010):

- Principle of openness: The research process must be open for unexpected information, even if it has not been discovered in the research preparation or if it contradicts the developed assumptions.
- Principle of empirical guidance: Existing theoretical evidence or knowledge about the research object needs to be taken into account. One way to do this is to deduct the research hypothesizes from theory.
- Principle of measurable evidence: research must follow communicable rules to ensure that other scientists can reconstruct the research methods to gain confidence in the results. This means to set out the steps taken and rules applied (Gläser & Laudel p. 29-33).

4.1 Research ethics

Ethics in research in the recent past received growing attention. In particular forged statistics and the question of how to protect the interest of participants in studies made this topic gain importance (Flick 2009). Various ethical codices were developed, first in the US and later also in other countries, to define that study participants need to be informed on the purpose of the study and in agreement to participate. Participation needs to be voluntary, and should never result in any kind of impairment or disadvantage for the participants (Gläser & Laudel 2010). Lastly, the data published needs to give a true report of the data obtained.

In this context, the information received in interviews could especially affect the career or economic success of the participants or their businesses (Gläser & Laudel 2010). Start ups in their early phases very much depend on the uniqueness of their business idea and/or process. Any information from the study that could give information to an outsider that might compromise on the early mover effect of the participating businesses could be detrimental for their success. This could result in negative effects on the economic performance of the business or on the stakeholder relations within the start up like the founder team. The following measures were taken to protect the privacy of the participants and avoid any negative effects from data publishing:

- Informed consent: Prior to participation, all interview participants were informed about the research objectives by way of covering letter inviting them to participate. This letter also contained assurances regarding confidentiality and anonymity, as well as the contact details of the researcher.

- Anonymity and protection of personal data: All interviews were made anonymous at point of transcription by using a numbering system. It will therefore not be possible to draw conclusions on the interviewee from any of the documents produced. In addition, where certain data would allow to reveal the interviewee, the data was either amended or deleted.
- Protection of business relevant data: All sections of the interview that would allow inferences to be drawn about the business model were taken out or amended. This was an especially complicated task as it sometimes directly related to relevant answers towards the research question.

To ensure true and accurate data within the study, all interviews were recorded and then transcribed. Answers were recorded literally and adjusted only to ensure anonymity.

4.2 Research approach and methodology

Empirical research begins with exploring existing knowledge about a subject to then subsequently generate new knowledge (Gläser & Laudel 2010). For this thesis, a qualitative research approach was used. Qualitative methods are well designed to identify issues and answer questions of "how" and "why" of human behavior within a conceptual domain (Guest et al. 2013, p. 4). In-depth-interviews (IDIs) are the most common method in empirical research (Kromrey 2009) and are considered an appropriate way to answer such questions (Guest et al. 2013. Following an exploratory analysis of existing literature, the research question was formulated. Based on that, the research strategy was designed. Semi-structured expert interviews were conducted.

In expert interviews, the interviewee is regarded as the specialist in a certain area of the research, or they aim at capturing attitudes, beliefs or interpretations of the interviewee. In English speaking literature, they are also differentiated as 'respondents' or 'informants'. (Gläser & Laudel 2010, p. 12). In reality, it is not always possible to draw a clear line between those two functions, but it is assumed that the prevailing function is the guiding frame for the type of interview. Expert interviews can help research to reconstruct a certain (social) issue. For expert interviews, it is any person that has specific knowledge, relevant to the research topic. Gläser & Laudel (2010) suggest that guided interviews are the most appropriate technique for conducting expert interviews, as certain different topics need to be addressed that would not be covered in free or narrative interviews. Guided interviews should be chosen when different topics need to be covered within the interview which are not guided by the responses of the interviewee. The interview guide is a list or set of questions that from the basis of the interview.

4.2.1 Sample

The sampling type used for this study was homogenous, non-probabilistic sampling. Homogenous sampling means that one is looking for 'common themes' in a group (Guest et al. p. 48). In designing the research it became clear that the type of start up as well as the sustainability aspects for the start up needed to be considered as a case. In a first step, certain characteristics of start ups were selected that make or don't make a case. Following the previous analysis of theory and literature, it was decided to (not) include as per the following criteria:

Tab. 7: Case company characteristics (own table)

CHARACTERISTICS OF CASES	CHARACTERISTICS OF NON-CASES
Founders, CEOs, higher management Profit oriented New founders as well as serial founders Traditional start ups	Freelancers Self-employed Embedded entrepreneurial action Ecopreneurs, social entrepreneurs

Given that no complete central register with contact information of the target group is accessible, this study is based on non-probability sampling with a purposive approach, which means to use all volunteers that have certain common characteristics. Because accessibility, or the will to participate in such a study is extremely restricted.

Non-probabilistic sampling is among the most common sampling methods in qualitative research, especially as qualitative sample sizes in general are too small to allow for applicability of the probability theory (Guest et al. 2013). A possible flaw in non-probability sampling is that there are certain groups within each target group that are more readily accessible than others. This can lead to stronger representation within the results. On the other hand, qualitative research does not intent to create comparable or quantifiable data, but 'rich, contextually laden' information (ibid., p. 47). Guest et al. therefore conclude that the understanding of common processes or shared experiences does not need probabilistic sampling (ibid., p. 47).

For qualitative empirical studies, a sample size of four to ten cases is usually considered sufficient for theory building. Other sources suggest a range of six to ten cases, however, Guest et al. (2013) summarize that the majority of the relevant literature recommends an inductive approach to determine the sample size, in which decisions about the sample are taken along the process of data collection and analysis. The criterion for expanding the sample within theoretical sampling is whether a person or group can add new aspects to the contextual information (Fritsch 2009). "That is, sampling should continue until *theoretical saturation*-the point at which no or little new information is being extracted from the data-is reached." (Guest et al. 2013, p. 58). The rapidity at which theoretical saturation can be reached is influenced by the degree of structure in the instruments used, the degree of sample homogeneity, the complexity and focus of the study topic and the study purpose: "[…] the more broadly shared something is-cultural knowledge, a socially shared experience-the easier it is to investigate and the smaller the sample size required. […] Moreover, the purpose of such inquiries is typically to understand the norm, the usual, and the general process of something. While variation is not ignored in such cases, it is not the primary point of interest" (Guest et al. 2013, p. 114)

The sample selected for this study was German based start up companies. The focus of their business could still be international. Reason for the selection was that it is preferable to conduct qualitative, semi structured interviews in person.

4.2.2 Questionnaire design

The scope and the structure of an interview should be designed according to the research objectives. For designing a questionnaire, the research question needs to be broken down and translated into questions that match the cultural context of the interviewee. The decision on the interview guide structure is a trade-off between less structure and comparability – structured forms lead to more comparability, but could compromise on the openness of the answers (Guest et a 2013). On the other hand, if questions are formulated too open, the interviewee will be confused or possibly led into a wrong direction (Gläser & Laudel 2010). It was decided to prepare a guided interview. To avoid unnecessary lists of questions, for the majority of the questionnaire, assumptive questions were used. Instead of needing to use a filter question and then a follow up question, assumptive questions can indicate that something happened or changed, and ask for the impact of it directly. The answer will imply a yes or no (Guest et a 2013). This technique can lead to exclusion of non-opinionated answers. The interview guide was designed so that questions of one thematic area would be grouped together in a section. The interviews started with a brief recap of the interview purpose and goals as set out in the introducing email. All interviewees were asked for their explicit consent to participate in the study and whether or not they would agree to the interview being recorded.

The first section of the interview guide contained questions with regard to the stakeholder environment and the key risks and opportunities in their business environment. The GRI general standard disclosures, next to strategic information on the company, require the reporting organization to provide an overview of the stakeholder engagement during the reporting period[8], and to provide a description of the key impacts, risks and opportunities. Based on this information, they have to define material aspects for the report content. It can be expected that founders have good knowledge about their stakeholder environment and that this question will be easy to answer. It will also guide their thoughts towards the company setting and environment, which will help with the further questions. This is scientifically recommended to allow for a phase, during which the interviewee can get orientation of the interview setting (Gläser & Laudel 2010). The second section of the interview contained standardized questions with regard to the importance of the existing G4 aspects for start ups. The G4 aspects were clustered before the interview, and the interviewees were asked to assess the relevance of the aspects with regard to the sustainability of their company. Based on findings from the test interview and to avoid an excessive amount of questions, some aspects were left out or grouped[9]. In many cases, the GRI indicators were used instead of the aspects to formulate the questions as they would give a better understanding of the question, especially for respondents that are not used to the given terminology. At the end of this section, inter-

[8] The stakeholder engagement in this standard disclosure is not limited to engagement that was conducted for the purpose of preparing the sustainability report (GRI 2013)

[9] In the test guide, the aspect economic performance included the indicators “Financial implications and other risks and opportunities for the organization’s activities due to climate change” and “Financial assistance received from government”. Both were found to confuse the interviewee when summarized under economic performance and were therefore singled out as separate questions. Other aspects were grouped, when the separate naming would likely not have added valuable data; “Supplier Assessments for Labour Practices”, Supplier Human Rights Assessments” and “Supplier Assessments for Impacts on Society” were for example grouped under “Supplier Assessments”

viewees were asked which instruments they think could help improve the sustainability of the company. This question should help to measure whether the fact that participants had started to think about sustainability was reflected in the answers given, compared to the beginning of the interview. The narrative part of the interview concluded with the possibility for the interviewee to add any aspects that he or she considered might not have been considered or left out. Such a question will not only make sure that the interview ends in a setting that is comfortable for the interviewee as the question is most likely easy to answer, but it also allows to voice any concerns or additional thoughts that would otherwise remain unspoken, leaving the interviewee with the feeling that important things might not have been addressed.

All interviews ended with statistical questions about the company background. The statistical section of the interview guide was developed using existing categories from developed by the EC. Categories are useful as they provide comparable data. Furthermore, interviewees will not feel forced to disclose confidential data. The EC categorization of micro, small and medium-sized enterprises (EC 2005a) was used to design categories to assess the number of employees and the annual turnover. To categorize the business area, the EMAS statistical classification for economic activities within the European Union (EC 2008a) was used.

4.2.3 Qualitative analysis

In qualitative content analysis, a system of categories is derived from theory (Mayring 2007). There are different methods of qualitative data analysis (Saldana 2013):

Free interpretation: The researcher reads interview and summarizes important interpretations. As there are no process steps defined and the analysis method cannot be described further, this method does not allow to reconstruct the approach used.

Sequential analysis: Sequential Analysis looks at the connections of thematic and time based statements. Gläser & Laudel (2010) identify this method as very time intense and therefore it is used rather rarely.

Coding: Coding is a method that developed out of the grounded theory and is today an independent method of data analysis. Codes are being assigned to passages of the interview and text. This method is used to answer research questions by comparing themes or by analyzing common themes.

The qualitative content analysis uses an analytical framework that consists of categories. Information from the research material is assigned to the categories. Unlike most other methods, the categorical framework is developed ex ante (Gläser & Laudel). It is most appropriate for very clearly defined research outcome. If a researcher attempts to “provide new theory about a phenomenon or process, then classic or re-envisioned grounded theory […] are your recommended but not required options” (Saldana 2013, p.61). In coding, the researcher assigns a word or a short phrase to a passage of text (or visual data) that symbolically captures the essence of the data (ibid.). Such codes can be predefined through the research objectives (deductive), but also be developed along multiple readings and the analysis of the raw data (inductive) (ibid.). Within this thesis, the data was coded using first cycle coding and second cycle coding. During first cycle coding, the raw data is summarized and codes used to capture the essence of the data. This was done manually, using excel and concatenation technique. Three different first-cycle coding methods were used:

In vivo codes, which are codes taken from the interviewees replies directly, were used to derive translated statements from the interviews. The direct quotation therefore remains visible. Structural codes are seen as a labeling and indexing device to gather major topics or themes from semi-structured data, most often interview transcripts (Saldana 2013). Structural coding allows to capture frequencies to identify commonalities. This technique was used for all open questions in sections one, two and four, to structure the relevant segments in the data and to allow for a first categorization. To analyze the data from the third section, in which participants were asked to assess the importance of the existing G4 aspects for their sustainability, additionally versus-coding was used. "Versus coding is appropriate for policy studies, evaluation research, critical discourse analysis, and qualitative data sets that suggest strong conflicts or competing goals within, among and between individuals." (ibid., p. 115). The results from *in vivo* coding suggested that a large amount of statements in this section would contain conflicting or dichotomous data. In such cases, versus coding allows to extract power balance patterns:

Tab. 8: Coding methods examples (own table)

CODING CYCLE	EXAMPLE IN VIVO CODING	EXAMPLE STRUCTURED CODING	EXAMPLE VERSUS CODING
B0506C15	*"Data protection is also such an issue. We need to abide by data protection laws and regulations, and for big companies (our customers) there are very strict and sometimes odd regulations […]. And if we work for a big customer, we have to make sure to abide by the regulations. If one is being really honest, and this is why it is good that this interview is anonymized, most small companies can't always abide by the rules, and therefore they don't always abide by the rules…. Many just don't have the resources."*	Data protection - lawsuits - external lawyers - compliance - resources for compliance	Data protection VS Resource constraints

Second cycle coding methods are used to "link seemingly unrelated facts logically" (Saldana 2013, p. 207). During various coding cycles, first cycle codes were reorganized into less and broader categories. Second cycle coding allowed the grouping of relevant findings in the interviews as a basis for presenting findings and recommendations. The next chapter will summarize those findings, while chapter 6 will the present the recommendations.

5 EMPIRICAL

The primary purpose of this study is to get a better understanding of which aspects of sustainability are relevant in the start-up phase when the general impact on any dimension of sustainability of the company is still minor, but is expected to increase. It seeks to shed light on the obstacles start ups face regarding sustainability reporting and aims to analyze necessary preconditions for sustainability reporting. The findings should help establish recommendations for adapted instruments of sustainability reporting. **The research question is**:

How can Sustainability Reporting be adapted to target start ups and therefore promote more sustainable business practices?

The **research objective** is to identify recommendations for customized sustainability reporting for conventional start ups which will fit their specific needs and thus motivate them to introduce sustainability reporting. The recommendations will be developed along the reporting guidelines of GRI.

5.1 Overview over case companies

All interviews ended with statistical questions about the company background. The following gives an overview of the case companies interviewed and adds comments to the interview setting. For the purpose of anonymity, the order of presentation is different from the interview numbering system used in the data analysis.

Interview 1 (test interview)

Interviewee background

Founder of two start ups, which both were a spin off of a large incubator. The second company was bought by a larger competitor and is now a global corporation. The interviewee is member of the senior management team of the second start up.

Company background

What is your Position in the company?	Senior manager
When was the company founded (actual start of business activity)?	2009
What is your number of employees?	over 250
What is your estimated annual turnover or balance sheet total?	not disclosed
What is your area of Business?	Trade
Do you use instruments of sustainability reporting or do you use any other means to report on your social or environmental performance?	no

Interview setting/comment

The interview was conducted as the test interview. First, the questions from the interview guide were asked one by one to make sure they were understandable, guiding the interviewee to respond to the range of information the interview is about. As a second step, the interviewee was asked whether he felt that any area of information regarding the topics covered could have been left out. Based on this, 2 questions were added and some of the wording modified to ensure better understanding of questions. The results of the interview were not included in the empirical data.

Interview 2

Interviewee background

Co-founder of an internet based start up. Holds a senior management position in the company. After working in an incubator, the company is his second start up.

Company background

What is your Position in the company?	CEO and co-founder
When was the company founded (actual start of business activity)?	2013
What is your number of employees?	0 - 5
What is your estimated annual turnover or balance sheet total?	up to €1 mio
What is your area of Business?	other services
Do you use instruments of sustainability reporting or do you use any other means to report on your social or environmental performance?	no

Interview setting/comment

The interview took place in a quiet area of a café with only few other guests. The interviewee was very open and gave very detailed answers. He pointed out however that he considered the confidentiality important to be as open.

Interview 3:

Interviewee background

Founder of an innovative retail start up. Before that, the founder was a senior manager of an internationally operating group. It is his first start up.

Company background

What is your Position in the company?	CEO and founder
When was the company founded (actual start of business activity)?	2011
What is your number of employees?	51 - 250
What is your estimated annual turnover or balance sheet total?	up to €10 mio
What is your area of Business?	wholesale and retail trade
Do you use instruments of sustainability reporting or do you use any other means to report on your social or environmental performance?	no

Interview setting/comment

The interview was conducted in the cafeteria used by the start up. Not only the founder, but also the controller were present most of the time. The interview took about 45 minutes. The founder had to leave after about 30 minutes, which has been indicated in the transcript. The atmosphere of the interview was very open and friendly, but was also conducted under time pressure of the interviewees. From the cases characteristics defined, the case could be classified as an ecopreneur. By organizing for the other interviews, the contact to this company was however obtained and the interview was spontaneously set up. During the interview it became obvious that, while the company business model bases on retail in a sustainable product, the company itself does only partly show the characteristics of an ecopreneur, and the concept of sustainability was only considered to be ex-ante. The interview was included in the qualitative data as additional context, but was not used to measure counts and prevalence, as this would have distorted results.

Interview 4:

Interviewee background

Co-founder of an internet based start up who holds a senior management position in the company.

Company background

What is your Position in the company?	CEO and co-founder
When was the company founded (actual start of business activity)?	2008
What is your number of employees?	51 - 250
What is your estimated annual turnover or balance sheet total?	up to € 10 mio
What is your area of Business?	other
Do you use instruments of sustainability reporting or do you use any other means to report on your social or environmental performance?	no

Interview setting/comment

The interview was conducted as a phone interview late in the evening. In the first call, the interviewee asked to postpone the interview for another 30 minutes due to other commitments. At the second call, the interviewee however was very focused on the interview and took time to give detailed responses.

Interview 5:

Interviewee background

Co-founder of an innovative trading start up who holds a senior management position in the company. After working for other start ups, this company is his first own start up.

Company Background

What is your Position in the company?	CEO and co-founder
When was the company founded (actual start of business activity)?	2012
What is your number of employees?	51 - 250
What is your estimated annual turnover or balance sheet total?	not disclosed
What is your area of Business?	Trade
Do you use instruments of sustainability reporting or do you use any other means to report on your social or environmental performance?	no

Interview setting/comment

The interview took place late evening in a meeting room in the office of the company. The interview atmosphere was very friendly, but the interviewee put strong focus on confidentiality. At various points of the interview, confidentiality needed to be reaffirmed. The interviewee also asked significantly more counter questions than other interviewees to ensure that he understood the real focus of the interview. The company built an online trading platform and an offline sales structure, and it holds various company operation sites. The company is growing fast and the segment is already very competitive.

Interview 6:

Interviewee background

Co-founder of an internet based start up. Holds a senior management position in the company. The company is his second start up.

Company background

What is your Position in the company?	CEO and co-founder
When was the company founded (actual start of business activity)?	2013
What is your number of employees?	0 - 5
What is your estimated annual turnover or balance sheet total?	not disclosed
What is your area of Business?	other services
Do you use instruments of sustainability reporting or do you use any other means to report on your social or environmental performance?	no

Interview setting/comment

The interviewee preferred to answer the interview questions in writing via the online research tool that had been set up for such requests, taking into account that founders are not always available in person, but would still be willing to attend to the questionnaire when possible. The interviewee provided detailed answers for most of the questions. This was the only interview completed as online questionnaire, using an extended version of SurveyMonkey. The online questionnaire had been set up to give interviewees the possibility to view the interview guide before the interview and to choose to complete the interview online. The setup of the online questionnaire allowed interviewees to skip questions that they did not want to complete, e.g. due to confidentiality or time constraints. The interviewee used the online questionnaire to give detailed and very open answers. He was motivated to give his view on the questions raised and took time to return a fully completed questionnaire.

Interview 7:

Interviewee background

Co-founder of an internet based start up who holds a senior management position in the company.

Company background

What is your Position in the company?	CEO and co-founder
When was the company founded (actual start of business activity)?	2008
What is your number of employees?	51 - 250
What is your estimated annual turnover or balance sheet total?	not disclosed
What is your area of Business?	other services
Do you use instruments of sustainability reporting or do you use any other means to report on your social or environmental performance?	no

Interview setting/comment

The interview was scheduled as face-to-face but had to be conducted over the phone in the end. It was conducted on a Sunday, and the interviewee took time to answer all questions exhaustively. He also re-assured his understanding if he wasn't certain about the meaning of a question.

5.2 Secondary data

An exploratory analysis of literature was conducted and presented in chapters 2 and 3 to create contextual knowledge and to position the research question in the existing theories and scientific research (Flick 2009). Theoretical analysis of the existing literature is necessary to assess the current scientific state of research and allows the formulation of the research question, define categories, design indicators and construct variables (Gläser & Laudel 2010). Relevant scientific sources are:

- Existing scientific theories
- Results of existing empirical studies

Variables in empirical research are not the same as in statistical science. They describe social constructs, which are not quantifiable and are sometimes even unresolvably complex (Gläser & Laudel 2010, Kromrey 2006). Frese (2009) for example describes that the firm climate is a typical variable of entrepreneurship.

The exploration of the existing literature on sustainability reporting and start ups formed the basis to structure available information, to support the problem formulation and to find influencing factors that need to be taken into account. This allowed the inclusion of existing knowledge on dynamics and factors influencing the research topic.

5.3 Primary data

A research question for qualitative empirical research should be based on common or existing scientific knowledge and must aim at generating new theoretical knowledge in this field (Gläser & Laudel 2010). Research questions are formulated within a context rather than a single case and they ask for the how’s and why’s of human behavior (Guest et al. 2013, p. 5). As shown in earlier paragraphs, it is well documented that start ups rarely perform sustainability reporting and the general reasons for companies not so doing have been evaluated in various qualitative studies. However, the underlying mechanisms as to why start ups as a subgroup of companies do not report and how sustainability reporting could be promoted have not yet been evaluated. The research question does not ask for perceptions or beliefs but attempts to look into the underlying constellations and mechanisms. Such research questions are best addressed by using expert interviews (Gläser & Laudel 2010). Within this thesis, seven guided interviews were conducted with founders and CEOs of start ups. The first interview served as a test interview to ensure the research instrument has been designed properly. The following chapters will give an overview of the findings.

5.4 Results/findings

The interviews were conducted to find out what potential sustainability reporting might hold for start ups, and also to identify possible gaps with regard to the specific characteristics of start ups and their environments. The primary aim was to establish recommendations for adjusted reporting which could motivate start ups to introduce sustainability reporting, thereby promoting sustainability. Similar to the structure of the questionnaire, the analysis of the empirical data was divided in two parts:

- The first part of the questionnaire contained questions relating to the general standard disclosures under G4. Participants were asked about the business and stakeholder environment of their start up. The resulting data was analysed using structural coding. This method allowed for the finding of common themes and subthemes and for evaluation of their prevalence by counting the repetition of themes.
- The second part of the interview guide consisted of questions inquiring about the potential of existing G4 categories for start ups under the specific standard disclosures. It was analysed whether the interviewees found an aspect important or unimportant to the sustainability of their start up. Where interviewees provided further context or remarks, these were categorized using *in vivo*, holistic and versus coding.

Many interviewees repeatedly point in their answers to sustainability. This can be attributed to the fact that interviewees tend to respond in a socially desired manner. All interviewees were educated about the study purpose and goals prior to the interview. Even though the interview questions were formulated openly and neutrally, the interview content would lead interviewees to specifically add facts or opinions with regard to sustainability. A supporting question was added in circumstances where it was felt that this might narrow down the answer of the interviewee and where important facts were possibly left out. This was done by using neutral language such as “and just in general, if you think of XXX and disregard the aspect of sustainability for a moment, what would you consider…”.

The following chapters summarize the findings from the interviews. The chapters are organized along the interview guide structure. This will allow the reference to possible connections in the sequences, where interviewees purposely or unconsciously refer back to earlier questions.

5.4.1 General standard disclosures: stakeholder engagement

GRI (2013) emphasizes that sustainability reporting provides accountability for internal and external stakeholders on the performance of a company towards sustainable development. Stakeholder engagement consequently has become an important principle of sustainability reporting (GRI 2011b, Manetti 2011). All interviews started with the question:

"As a company, you depend on internal and external groups of people to develop and run your business. Which groups/stakeholders do you see as most critical to the success of your company?"

As was expected, interviewees had a fairly good knowledge of their stakeholder environment. This question also served to allow for a warming up phase in which the interviewees became orientated in the interview setting. In general, the question was answered rather briefly, which is common for a warming up question. The interviewees made further reference to the groups that they named in this initial question in the later interview. The responses of the interviewees may be summarized in to the following stakeholder groups:

Tab. 9: Stakeholder Mapping

INTERNAL STAKEHOLDERS	EXTERNAL STAKEHOLDERS
Managing directors (self), founders (self)	Associates, capital investors, business angels
Employees (incl. freelancers)	Customers, partners, B2B
	Service providers (tax, legal)
	Network, incubator
	Google

Stakeholders can be internal or external to a company. Other sources add the dimension of formal and informal stakeholder networks, whereby formal networks can consist of public associations, universities or training centers and financial institutions, while informal networks comprise (close) relationships, family and friends (Pinho & de Sa 2013). Employees was the most consistently named group, but was however only considered in third or fourth place, behind investors, B2B or customers:

"*Thirdly, in my perception they are also a stakeholder, em… is the staff, because they have an interest that the company is well placed… and in relation to everything that ensures the success of the company sustainably.*" (B0601C14).

Second most mentioned were MDs or founders, who were the same people in all cases. Associates / Capital Investors / Business Angels, Customers / Partners / B2B as well as Service

Providers were in third most. Network / Incubator as well as Google were only mentioned once. However, they were repeatedly named in answer to later questions by most of the interviewees and therefore should possibly have been given more importance as stakeholders. The literature suggests that entrepreneurs have highly personalized stakeholder networks, in which founders, employees and investors are often family or friends (Harris 2009). All interviewees mentioned that they were founders and managers of the company at the same time. Family and friends however were not mentioned. This can partly be attributed to the fact that, within the warming up phase, interviewees tend to reply in a socially desired, professional manner. It leaves open the question whether or not there is a general consciousness of this in the stakeholder environment.

The second question was formulated to discover the importance start ups assign to their stakeholders by engaging in stakeholder dialogue:

“*How regularly do you communicate with those stakeholders and which means of communication do you use?*”

The answers were analyzed using structural coding. The analysis resulted in the application of three main categories to the data: *Formalization*, *frequency* and *channelization*. The following table shows the categorization and the related interview moieties:

Tab. 10: Categories of stakeholder communication (own table)

CATEGORY / STAKEHOLDER	FORMALIZATION	FREQUENCY	CHANNELIZATION
Employees	- Informal - Openness - Tone	- Weekly all hands - Yearly reviews - As much as possible	- HR mechanisms - Direct - Telephone, email, IM, social networks - Newsletter - All hands - Feedback Box
Co-founders	N/A	- Extremely often - In the beginning daily meetings	- Direct
End customers	- Not formalized	- Every day, every minute - Every transaction	- Tracking - Test labs - Mostly indirect - Interaction on platform
B2B	- Key account management - Relationship management - Personal communication	- Make every transaction possible	- Make transactions possible via direct communication - Tracking of successful transactions and mechanisms to re-activate - Telesales - Newsletter
Capital Investors	- Emails - Reports	- Quarterly meetings	- All typical means of modern communication - In the beginning also via social networks and business networks
Associates	- Corporate requirements - Everything is formalized	- Regularly	- Reports - Meetings
Service Providers (Tax, Legal)	N/A	N/A	N/A
Network, Incubator	N/A	N/A	N/A
Google	N/A	N/A	N/A

Formalization and *frequency* were introduced as categories to summarize data with regard to the grade of formalization or frequency of the communication. The start up that recently was taken over by a larger corporate group showed the highest grade of formalized communication compared to the other sample companies, which were privately owned and had capital investors. The start up has a range of “classical HR mechanisms” (B0602C14) and mentioned a high degree of formalization in communication with the corporate structure:

“*We are now part of XXX and this means that everything in relation to our associates is very formalized.*” (B0602C11).

All other interviewees underlined that their means of communication with stakeholders were generally non-formalized. This could mean that the grade of formalization might be related to the non-mature structures of young businesses. It could also mean that it is a manifestation of the more personalized stakeholder relationships. However, frequency of communication was generally high with regard to employees, investors and business partners:

Tab. 11: Category communication: frequency datums (own table)

STAKE-HOLDER	**EMPLOYEES**	**INVESTORS**	**BUSINESS PARTNERS/ B2B**
DATUM	*"We communicate as much as possible personally and directly with our employees."* *"Ideally very often. A weekly all hands company meeting has shown positive results. Content-wise it is rather a question of how open and in what tone communication with employees takes place."*	*"Very regular, about every other week, in critical or very successful periods more often. In addition there is one meeting per quarter in the company."* *"We mostly communicate via telephone or personally with our investors, but sometimes also use instant messaging or social networks."*	*"We try to make every transaction possible by speaking to our buyers and sellers, because we want to have a sustainable relationship with our buyers. If something goes wrong in a transaction, we compensate this in the next transaction."* *"With our partners we speak via the key account management and we regularly check whether everything is going as we expect it to. That is not super formalized…."*

Channelization served as a category to group datums with reference to the communication channels used. This term is often used in marketing, where communication is managed via different channels. Interviewees defined most of their communication with stakeholders as “direct” and mentioned various channels of communication such as email, telephone, personal communication and meetings. They described their customer communication as indirect, whereas the academic term would probably be “asynchronous”. They used this expression to describe that their interaction with customers mainly happens through online channels. Direct communication can be synchronous but also asynchronous. Communication is regarded as a cultural dimension, and indirect communication usually refers to the phenomenon when a communication message is not expressed directly, but through subtle or even non-verbal messages (Meißner 1997). Especially innovative start ups build large parts of their business infrastructure on web based tools (The Wall Street Journal 2014). This allows for extended reach and bears less initial cost as opposed to physical business infrastructure. Therefore, large parts of their interaction with customers are also web based. The interviewees described the interaction as indirect (asynchronous), less tangible and also channeled:

"Then there are our users, which are the customer group that is the least tangible, because they only interact on our website, but not on the phone. We can measure a lot, because we have all the tracking possibilities via the internet. This is a very, how should I say that, channeled communication, because you only see aggregated data […], a different form of communication I would say." (B0602C13)

The sample companies use professional and self-built tracking tools to measure traffic and they depend on free and fee based online marketing tools to reach their customers. Online tracking can provide enhanced visibility of customer transactions, e.g. in the form of click streams, which map a user's activity on a website in a way that is not visible in brick and mortar business. It further allows detailed analysis of the cost of customer interaction with the business:

"For example, we always know the cost of our customer acquisition. This is a risk that I monitor daily, every minute […]. This is not a third party system, we have built that on our own, and it tracks all people that interact with our platform and what they do there. And it measures whether they do there what I want them to do there, and what it costs me. And if this crosses a certain level, then we have to react and find a solution." (B0306C11)

However, they also showed high awareness of their dependency on the availability of data and described their customer communication in general as a rather as a one-way communication. They also added that while web based infrastructures may incur less cost than real estate for example, the online channel incurs high costs for marketing and maintenance, e.g. in the form of search engine optimization (SEO).

5.4.2 General standard disclosures: risks and opportunities in the business environment

As previously outlined, the general standard disclosures apply to all reporting organizations that prepare a report along the GRI reporting guidelines. The general standard disclosures are subdivided into seven aspects and strive to give a general strategic view on the company with regard to the organizational profile and its governance and ethics. The company is also required to provide an overview of the report profile and the identified material aspects including report boundaries. This section serves to provide the context for the specific standard disclosures in later sections of the G4 report. While most aspects in the general standard disclosures are descriptive, the aspect "strategy and analysis" requires a statement from the most senior decision-maker in the reporting organization about the overall vision and strategy of managing the company's sustainability in the short-, medium- and long-term. Reporting organizations must provide an assessment on broader trends and an outlook on the main challenges and targets for the coming year; as well as goals for the next 3-5 years (GRI

2013). The disclosures under this aspect require a description of the key impacts, risks and opportunities of the reporting organization. Therefore, in the second section of the interview guide, interviewees were asked to assess the main risks and opportunities for their businesses in the coming years and to describe how they monitor these in their business environment. The interviewees were firstly asked to name the main risks and opportunities in the coming year and a follow up question extended the focus to five years. The section concluded by asking the interviewees to describe how they manage and monitor risks and opportunities in their business environment.

The following table summarizes the categories and the underlying structural codes that were formed through first and second cycle coding, and gives examples of the interviewees' replies:

Tab. 12: Structural codes and categories: Risks and opportunities in the business environment (own table)

CATEGORY	STRUCTURAL CODES/ SUB- CATEGORIES	DATUM
RESOURCES	Uncertainty - Reserves and flexibility Finances - Cost of labor - Not enough projects/jobs - Payments from customers for jobs - Recurring revenues - Transactional cost - External factors Employees - Relating job profiles do not yet exist - Employees leaving - Need for external resources Compliance	*"The biggest risk for the next year, as we are still in a very early stage, is clearly to employ too many people at the wrong time and not have enough jobs."* *"In general I think the biggest risk are the costs for each successful transaction. Those costs depend on several external factors."*
COMPLIANCE	Data protection - Unnecessary regulation - Public incitement - Policy makers lack expertise Taxation - Affected by regulation in the past - Affects profitability	*"Data protection is an existential risk for us- not the protection of data itself, but unnecessary and unreasonable regulation and the public incitement against anything relating to tracking or so. They have no expertise. "* *"On a five year perspective for risks it means that the likelihood of changes in laws or taxation rises. […] Taxation is a*

		driver for our profitability."
CHANNELIZATION	Online marketing - Paid traffic - Unpaid traffic - Media presence / representation in the Internet - Branding Monopolies in the internet - Dependency on Google - Diversification - Dependency	*"In a long term perspective it is in general questionable, whether internationalization into markets, that are dependent on google, is worthwhile. You can diversify on a short term, but Google also has a long term strategy."*
UNCERTAINTY	Young sector - Competition - Transformation process - Uncertain projections - No experience from past Buying power Europeanizing - New markets - Little regulation of market / Internet (EU)	*"Because our sector is so young, it is difficult to think of risks and opportunities in the next five years. If I think of how the sector was five years ago […] no one would have anticipated many of the developments."*
GROWTH	Business model - Adaptable, flexible - Technology development - Scalability Growing pains - Efficiency - Target orientation - Cohesion Grow - Other countries - Within the markets - Revenue - Reach and use - Europe - Global	*"The biggest chance is to exploit new markets… that we keep growing. A lot depends on whether we can keep profitable growth, by expanding our offer, using new technologies that improve our service and increase our reach."* *"Growth is a big opportunity. In general, our platform doesn't exist in other countries, so there are many markets where our business model works. There are many markets with a similar structure. I also see a chance to grow within the markets. If I look at the main types customers we have, then I can create transactions again within those."*

The category *resources* combines financial and human resources, which were strongly interlinked in most responses. Harris et al. (2009) summarize that limited resources affect the actions of start ups and Hudson et al. (2001) see severe resource limitations in terms of management, manpower and finance as typical characteristics of companies in their start-up phase. The risks that respondents mentioned under the category *resources* were uncertain financing and cost, loss or financing of employees and also the scarcity of well-trained manpower. Interviewees further mentioned resource constraints with regard to compliance with laws and regulations:

"*Data protection is also such an issue. We need to abide by data protection laws and regulations, and for big companies there are very strict and sometimes odd regulations […]. And if we work for a big customer, we have to make sure to abide by the regulations. If one is being really honest, and this is why it is good that this interview is anonymized, most small companies can't always abide by the rules, and therefore they don't always abide by the rules…. Many just don't have the resources […].*" (B0506C15)

Resource constraints were also mentioned with regard to the ability to abide by laws and regulations in general, referring to the bureaucratic and tax burdens they felt go hand in hand with founding a company. Therefore, the separate category *compliance* was introduced. Regardless of the size or maturity of their company, many respondents mentioned that they subcontracted tax advisors and lawyers. In later sections of the interview they also attributed importance to this category having regard to their sustainability. They felt that the laws and regulations were time intensive, burdensome and sometimes unfair:

"*The big companies get the good people, because there is so much risk when you start your own company. And then the good people rather work for the big companies, but this is not where innovation starts. I see this as a problem for our sustainability… especially for us. I mean, one, that it is so risky to start your own company, and two, for economy as such*." (B0209C11)

Others also named reputational risks with regard to compliance and expressed that they felt that policy makers were sometimes lacking the necessary expertise when formulating regulations that affected them:

"*Data protection is an existential risk for us- not the protection of data itself, but unnecessary and unreasonable regulation and the public incitement against anything relating to tracking or so.*" (B0503C14)

Channelization again served as a category to summarize common themes mentioned by the respondents having regard to the web based parts of their business structures. In particular they mentioned that branding, online marketing and traffic were important aspects to their risk environment and in their statements all identified monopolies like Google as having the main influence on their business sustainability:

"*If google isn't there, nothing is there.*" (B0301C12)

As mentioned earlier, start ups build large parts of their infrastructure online and the share of web based infrastructure in comparison to their overall business structure is very high compared to larger companies. Companies like Google and Facebook have developed into monopoly-like distribution models that have dominated the social and search market over the past decade (DB 2014, FAZ 2014). One respondent illustrated why he considers the current influence of such monopolies as a main business risk, not only for his company but also in general for the economic environment of the company:

"*There is zero regulation in the Internet, […] but a "the winner takes it all"-situation. There is only one big twitter, only one big Facebook, and only one big Google. […] For some offers, this is not a problem, but with regard to information, where the user assumes he is self-determined, and Google is seemingly neutral, this is a problem. And I think it is a huge problem that the politicians… As Miss Merkel said, the internet is "Neuland" for them, this is highly explosive. […] I think there is no consciousness of how many jobs indirectly depend on Google*."

All interviewees mentioned *growth* as the main opportunity in the coming year. They immediately were able to articulate their conceptualization of the areas in which their business could grow. They felt that they had the flexibility and scalability for growth because important areas of their businesses are based on technology and digitalization. While more mature companies usually show a stronger focus on profit increase, start ups are more often measured by their revenue (The Wall Street Journal 2014). Therefore, start ups look for opportunities for revenue growth through technological advancement and diversification from monopolies:

"*The biggest chance is to exploit new markets… that we keep growing. By expanding our offer, using new technologies that improve our service and increase our reach*." (B0604C11)

G4 disclosures with regard to the long term prospects of reporting organizations should provide relevant information to financial stakeholders and describe the governance mechanisms to manage these risks and opportunities (GRI 213a). Ioannou & Serafaim (2013) content that sustainability reporting can be a means to a more accurate depiction of the foundations of a company's performance and therefore reveals potential weaknesses in the business model. Companies that impose significant negative externalities on society are in the longer term at a higher risk of regulatory action which can result in a loss of their license to operate (ibid.). In these circumstances the dangers for a company with a bad reputation are twofold: customers might be likely to boycott socially and environmentally irresponsible behavior and the retention and hiring of high quality employees can be very difficult, not to mention costly. The interviewees were therefore asked to describe the risks and opportunities for their businesses in the next five years, and how they monitor their business environment with regard to those risks:

"If you think of the next five years now, are there any risks or opportunities that you would need to add?"

Many interviewees found it rather difficult to make projections for a five year period:

“Because our sector is so young, it is difficult to think of risks and opportunities in the next five years. If I think of how the sector was five years ago […] no one would have anticipated many of the developments.” (B0505C11)

The category *uncertainty* was introduced to bundle common themes together where interviewees mentioned their business environment not just as an important opportunity but also as a source of uncertainty. They felt that changes in the economy, especially internationalization and the advancement of technology bore important risks and opportunities at the same time:

"*In economy, there is a massive transformation process towards our business model and the digitalization of business processes in general*." (B0504C12)

As start up business models are often based in young or new sectors, risks and opportunities are harder to predict in the long term. Frese (2009) argues that there is no complete preparation for entrepreneurship and the business context is usually complex and uncertain. Venkataraman (2002) notices that in a new sector most information will only become available once the sector develops.

The interviewees maintained when asked for a five year outlook about risks and opportunities that while opportunities would often remain the same, certain risks might change or new ones may arise. Entrepreneurial alertness for opportunity evaluation and creation is considered a main characteristic of entrepreneurs (Archdivili et al. 2000). All interviewees mentioned *growth* as a main opportunity also in the coming five years:

“*You can always think further regarding our opportunities, to see for example that there are not only regional markets in Europe, but also global… there are huge markets that we can conquer*” (B0305C11)

But some considered that there are certain risks related to their growth:

“*On a five year perspective… I would say opportunities are the same. They are about conquering land by land, and the potential is everywhere. So with regard to the scalability of the business model, there is an opportunity in the next five years. On a risk side, does really something change for us in the next five years? I would… generally spoken I would say no. But we will certainly have “growing pains” […] This we don’t have actually yet… And the risk is that it will be harder to be efficient and target oriented. Building separate, international offices in other countries in the next years bears the risk that the organization moves away from each other*.” (B0205C112)

The interviewees identified long term opportunities where their businesses focused primarily on new technologies, making them both flexible and potentially for scalable:

“*In general we have a platform, therefore it doesn’t matter which type a transaction belongs to, the technology can be adapted*.” (B0304C12)

Risks identified with a five-year outlook alongside risks related to growth fell under the categories *compliance* and *channelization*. Legal regulations with regard to data protection were considered a main issue, as were possible changes in legislation and taxation. The profitability of start-up business models who are based on innovation, is usually highly affected by (non-) existing regulation or taxation in that field. As young businesses usually operate on very low profit margins, any change in regulation has the potential to pose a risk to the sustainability of their business model:

"*On a five year perspective for risks it means that the likelihood of changes in laws or taxation rises. […] Taxation is a driver for our profitability*. (B0305C12)

Interviewees felt that any regulation that could affect their online presence was a risk and they repeatedly noted that they felt existing regulation was partially inadequate. While they were missing a stronger regulation of monopolies online, they felt that there was unnecessary overregulation in the field of data protection:

"*In a long term perspective it is in general questionable, whether internationalization into markets, that are dependent on google, is worthwhile. You can diversify on a short term, but Google also has a long term perspective*." (B0605C11).

The next question asked the interviewees which means they use to monitor the risks in their business environment:

"*How do you assess or monitor your business environment with regard to internal or external risks?*"

Most interviewees stated that overall, they don't have formalized means of monitoring their business environment. In the course of answering the questions many expressed that that this part of their business activities should get more attention:

"*But openly speaking, these points are usually underrepresented in start ups*." (B0406C11)

As an example of non-formalized means, interviewees named tools like competitor analysis and how frequently they would contact their partners. Online presence was primarily monitored by tracking tools with one interviewee adding that they were also able to use secondary data through working with large business partners:

"*And you can also see risks in the data, when for example demands diminish and people stop searching for certain buzzwords. This doesn't affect us directly, but our customers, and therefore indirectly us, too*." (B0506C13)

To manage compliance with laws and regulations, many mentioned that they employed tax and legal advisors who would monitor and flag changes in legislation. One interviewee mentioned that they had built a customized tool to track their customer acquisition and retention cost, with another interviewee mentioning that they would like to have better tools to monitor their employee fluctuation. He pointed out however that he felt that this could not be measured in a meaningful way:

"*Concerning our employees it is hard to measure… For example fluctuation, we do measure this, but a bigger fluctuation in a less critical area for example is less problematic than small fluctuation in a critical area, and I wouldn't know how to measure that*." (B0606C14)

5.4.3 *Specific standard disclosures: the G4 Aspects*

The specific standard disclosures within a GRI sustainability report are divided into the three categories of economic, ecological and social aspects. Organizations should present information relating to material aspects, either in the form of DMA or as indicators (GRI 2013a). GRI defines material aspects as those aspects that "reflect the organization's significant economic, environmental and social impacts, or that substantively influence the assessments and decisions of stakeholders" (GRI 2013a, p. 63). Organizations can group aspects, but they have to provide a statement of intent to manage the impacts. The second section of the interview guide was set up to assess the relevance of the G4 specific standard disclosures for start ups, and to identify gaps in current reporting guidelines. The questions in this section were formulated along the G4 categories of economic, ecological and social performance. In line with that, the G4 aspects were grouped into sub-sections under the three categories, and the interviewees were asked to rate the importance of the aspects with regard to the sustainability of their company, using a scale from 1 (unimportant) to 4 (very important). Every subsection concluded with an open question, inquiring whether the respondent would consider any additional aspects important for their sustainability. In addition, all comments made by the interviewees on the topics covered were transcribed and evaluated. Some G4 indicators were left out in the questionnaire as they could be considered irrelevant for start ups and would only have led to an excessive amount of questions.

Overall, the interviewed companies assigned the highest relevance to economic and social aspects for the sustainability of their company and considered their ecological externalities as low. Below is a table summarizing the importance that interviewees assigned to the grouped aspects:

Tab. 13: G4 aspects: importance in the sustainability context (own table)

QUESTION	**AVERAGE**
How important do you consider the following economic aspects for the sustainability of your company?	
Value Distributed: Operating costs, Wages, Payments to capital providers or Governments, Community Investments	**2,4**
Risks / Opportunities due to Climate Change	**2,4**
Financial Assistance received from Government	**1,6**
Entry level wages by gender and % of management hired from local community	**2,2**
Impact on other companies or the sector in total, e.g. jobs, foreign investments, location	**3**
Which other economic aspects do you consider important for the sustainability of your company?	**-**
How important do you consider the following ecological aspects for the sustainability of your company?	
Materials, energy and water used (incl. reductions in usage or reuse/recycling)	**1,4**

Emissions, discharge or waste (incl. reductions in emissions/discharge)	**1,2**
Environmental impact of your product/service (incl. transport)	**1,8**
Environmental protection expenditure or investments	**1,6**
Environmental supplier assessments	**1,2**
Environmental Grievances and mechanisms	**1,8**
Which other ecological aspects do you consider important for the sustainability of your company?	-
How important do you consider the following social aspects for the sustainability of your company?	
Rates of new hires & turnover by by age and gender	**2,2**
Employee injury rates, health risks (incl. formal agreements with trade unions)	**2**
Employee training/year, career development programs	**4**
Diversity, non-discrimination and equal opportuntity (e.g. composition of your government bodies, remuneration distribution)	**2,6**
Prevention of child- and forced labor, respecting of human rights (also at supplier level)	**1,6**
Freedom of association	**1,6**
Anti-corruption	**2,8**
Customer health and safety	**2,6**
Customer privacy: loss of data or customer complaints	**4**
Product and service labeling	**1,4**
Cost of non compliance with laws and regulations	**3,2**
Which other social aspects do you consider important for the sustainability of your company?	-

The economic category looks at the organization’s impacts on the economic conditions of its stakeholders and on local, national and global systems (GRI 2013a). If a company identifies an economic aspect as material, the GRI guidelines provide guidance on disclosures with regard to its economic performance, its market presence, its indirect economic impacts and its procurement practices. The interviewees were asked to assess the importance of the aspects with regard to the sustainability of their company. Overall, the ratings showed that the interviewees gave rather high importance to the economic aspects.

Economic performance, the first economic aspect under G4, requires reporting on direct economic value generated and distributed in terms of revenue and costs e.g. operating costs, wages and benefits, payments to capital providers and governments and also community investments. Interviewees overall assigned high importance to the indicators under economic performance. With regard to the overall economic performance of their company, interviewees considered employees an important cost factor, along with taxes and online marketing costs. On contrary, the aspect "financial assistance received from government" was seen as unimportant as it does not target their needs and comes along with ambitious requirements:

"*Governmental financial assistance is extremely complex, and it takes time to apply for that… And the time you need to spend on customer acquisition, especially in the early stages, because every paying customer is more important for your financing in the beginning… this should also be more important for the Government, but it isn't, but as seed money, every customer is more valuable that getting the high-tech founders fund XY or I don't know… And it is a wrong incentive*." (B06083C11)

One respondent identified a direct risk related to climate change, as his business model includes a highly affected product. However, other respondents identified climate change also as a possible opportunity with regard to the creation of a new sector that could build a potential market for them.

Market presence aims to assess entry level wages by gender and the ratio of management hired from the local community at significant Locations of operation. Only one respondent added that he considers this aspect as generally important and as a result pays attention to an equal remuneration scheme. Although most other interviewees clarified that they didn't see the relevance of this aspect considering it not to be an issue in their company or sector. One respondent also acknowledged that this aspect could bear potential risk if unmonitored:

"*This is in general not an issue for us. We don´t take notice of that. I mean, it is important, but it's equally important with regard to men. […] We are aware that this is generally an important topic, but you only realize, when you screwed it up*." (B06084C11)

One interviewee added that he felt raising this issue could create problems where there were otherwise none.

The aspect indirect economic impacts measures the direct and indirect impact of the company on the location and the sector through for example jobs or investments. The importance of the indirect economic impact was generally rated high. Despite the fact that large parts of their infrastructure is online based, the situation of their sector and location was considered an important aspect. In turn, the interviewees mentioned that they regarded themselves as important to the sector and location:

"*After all we are a company that creates jobs, especially for first-time employees*." (B02085C11)

The category of environmental aspects in the G4 guidelines provides indicators for measuring the organization's impacts related to inputs and outputs and transport-, product- and service-related impacts and environmental compliance and expenditures. Overall, respondents gave least importance to the ecological aspects with regard to their company. Accordingly, they commented less on the aspects put to them. From an input view, the companies would only see energy and data centers as possible important input factors. Also on an output side, the interviewees estimated their possible externalities as very low. Interviewees were rather confused about the questions relating to environmental expenditures and grievances:

"*Who does that*…?" (B030810C11)

Two respondents mentioned that while they don't conduct supplier assessments, they would certainly react if they learned that one of their suppliers would not work according to ethical standards:

"*I mean, if I exaggerate a little, if we would for example get to know that XXX employs child workers in China, we would certainly re-consider, whether we still want to buy their Laptops….*" (B020812C11)

Another respondent mentioned that they in fact tried to raise a general awareness in their company with regard to ecological issues but that this was rather economically driven:

"*We try to generate a general awareness amongst our employees, and we do argue from an ecological viewpoint… But this is rather economic sustainability*." (B060810C11)

The social aspects within the G4 categories aim to measure the impacts of an organization on the social systems that it operates in. The category has been divided into four subcategories to group aspects under disclosures with regard to labor practices and decent work, human rights, society and product responsibility. Interviewees highly rated employee training along with diversity and non-discrimination under the sub-category labor practices and decent work but with ambiguous reasoning. All interviewees considered employee training important but mentioned that their actual processes don't sufficiently reflect that. The reasons they gave for the importance of training were employee retention and the lack of trained personnel in their sector:

"*I think this will play an important role in future, but it is… well, today it is not yet a focus for us. But in future this will certainly have importance for us, because we want that the good employees stay with us and see that there is potential for them in our company, and we surely want to consciously support that. So in that sense it has a high relevance for us, but if you ask whether we act upon that today…..*" (B020817C11)

Also, most interviewees rated diversity and non-discrimination as very important. Again, they would consider this an important factor for their human resources and mentioned that current legislation made it hard for them to use additional resources from outside the country:

"*Anti-Discrimination actually is important, because in IT and Business Intelligence…you don't find enough people in Germany. This is how it is. So treating people equally, and also anti-discrimination… That on political level… that it is possible for foreign experts or students to* *come to Germany, this is very important with regard to the sustainability of our company*." (B050818C11)

Two interviewees added that in addition to the social aspects mentioned, they found voluntary social engagement valuable:

"*Well, in general I find it great if a company shows social commitment…. I know that from XXX who works for XXX, that they have these joint activities, where the employees…, I don't know, paint a children's home or so. So I mean company led social engagement, I think this is good. And I think we will do something like that soon. To create a feeling of belonging, and to see that we can have an impact together.*" (B020826C11)

The second interviewee explained that they would occasionally make donations. He considered it important to be able to decide where to engage. Weber (2007) however notes that if companies engage in societal issues in an unstructured and fragmented way they can fail to reach their full potential.

As the previous section demonstrated, the interviewees provided a lot of context as to why an importance was assigned to aspects and gave additional information as to their understanding of the indicators. The comments were transcribed and organized as empirical data. The data was analyzed using holistic coding and versus coding. Holistic coding serves to identify broad topic areas and common themes, which are refined, grouped and categorized. Holistic coding was used for all data in which the interviewees expressed opinions, preferences or added new themes. Versus coding was used when the recorded statements expressed conflicts or used dichotomous language, such as "but", "on the other hand" etc. After the application of various coding cycles, the categories *compliance*, *creation*, *relevance* and *confidentiality* were extracted. Those will be explained in more detail below.

Relevance was introduced to categorize codes and themes from replies that implied an issue was not considered relevant for one or the other reason:

Tab. 14: Category relevance (own table)

CATEGORY RELEVANCE		
CODE TYPE	**CODE/ THEME**	**DATUM**
Holistic Code	Impact	*"I would give us a 2 here, because we hardly have any suppliers."*
Versus Code	Impact vs Size	*"Well, one has to ask, what type of technical suppliers do we have? I mean, sure, we do buy laptops somewhere and buy our coffe and host our website… "*
Versus Code	Future vs Today	*"Well, this is not about whether I am a fan of this, but whether this is an issue for us? [Correct] […] Well, I do think that we will have to deal with this one day, but at the moment it is not an issue, because all is currently going well."*
Versus Code	Resources vs Relevance	*"Well, we have a somewhat green consciousness, […], so we use green energy. But this is not important for our sustainability. […] We do tell the employees though to turn off the computers and shut the windows if they leave, but this is rather economically driven, we think that our energy bill is too high."*
Versus Code	Needs vs Reality	*"And the time you need to spend on customer acquisition, especially in the early stages, because every paying customer is more important for your financing in the beginning… this should also be more important for the Government, but it isn't, but as seed money, every customer is more valuable that getting the high-tech founders fund XY or I don't know… And it is a wrong incentive. […] I mean, the founders funds are even quite OK, because they economically make sense, but in general, governmental financial assistance is too time consuming, too little money, and it creates dependency. Good founders don't need it."*
Versus Code	Attitude vs Business Context	*"Well, I don't know really, I mean, basically this is important for everyone. And it has importance for us, because of our personal values, but for the sustainability of our company…? "*

The category *relevance* consists of various codes and themes. In many cases, interviewees pointed out that an aspect was not considered important because the overall business impact was too small, either in terms of size or because the business model was considered to have low impact:

"*As a general tendency one would think that the internet business is a rather clean business, you can basically sit naked in front of a computer, don´t need a car… I mean, you have to use power, but by tendency, ecological aspects are subordinated in internet companies.*" (B06089C11)

Many Interviewees would however also assume that their impact could be bigger in the future, which is why the code "future vs today" was added. Also, in many statements, interviewees would find an aspect relevant, but would intuitively assign it to the economic rather than the social or ecological category. According to GRI (2013), social and ecological impacts will have financial implications in the medium and long term. Furthermore, interviewees often found the economic impact for their current activities as trying "*to generate a general awareness amongst our employees, and we do argue from an ecological viewpoint […] But this is rather economic sustainability.*" (B020810C11)

Resources as a theme was present in many datums were interviewees drew a connection between the aspect questioned and their own resources. In the example datum, the interviewee refers to financial resources in terms of costs. Other resources mentioned in data were human resources and time. "Needs vs reality" was introduced to group all sections in which interviewees mentioned conflicting requirements with regard to their business needs. As in the example datum, many interviewees underlined that financial assistance from government was not targeting their needs appropriately and that it was irrelevant to them. Moreover, some datums showed that interviewees found existing regulations were sometimes conflicting with their business needs:

"*Well, this is indeed an issue in Germany. I mean, the thing really is, it doesn't matter at all how a company is performing at the moment, the state always want its money, and this also destroys many companies, so it is very important for our existence.*" (B05081C12)

Relevance as a category had the highest amount of corresponding datums and was also often directly used by the interviewees. It does not only comprise holistic codes but also has many versus codes. This is an indicator that many aspects were not considered relevant because there was either a different underlying connotation to the aspect by the interviewee, or the interviewee did not see the direct link between the aspect and the sustainability context of his company:

"*Well, I don't know really, I mean, basically this is important for everyone. And it has importance for us, because of our personal values, but for the sustainability of our company…?*" (B050818C11)

Compliance as a category combines all codes and themes in which interviewees commented on their ability to comply with the regulatory environment.

Tab. 15: Category compliance (own table)

CATEGORY COMPLIANCE		
CODE TYPE	**CODE/ THEME**	**DATUM**
Holistic Code	Compliance	*[Anti Corruption] "Well, as a service provider that tries to get budgets von decision makers… one has to consider this important, but… well, I will rate this important either way, it is in fact sometimes an issue."*
Versus Code	Business Model vs Regulation	*"Yes, in our competitive environment. There is zero regulation in the Internet, […] a "the winner takes it all"-situation. There is only one big twitter, only one big Facebook, and only one big Google. […] For some services this doesn't matter, but with regards to information, where the user assumes he is self-determined, and Google is seemingly neutral, this is a problem. And I think it is a huge problem that the politicians… I mean, as Miss Merkel said, the internet is "Neuland", this is highly explosive."*
Versus Code	Outside in vs Inside out	*"Anti-Discrimination actually is important, because in IT and Business Intelligence…you don't find enough people in Germany. This is how it is. So treating people equally, and also anti-discrimination… That on political level… that it is possible for foreign experts or students to come to Germany, this is very important with regards to the sustainability of our company."*

Compliance in general is used as a concept to describe how companies manage their conformity with laws and regulations (Silveira et al. 2012). In most cases, laws and regulations are the same for all companies, regardless of their age or size (Baur 2014). Non-compliance with laws and regulations, such as corruption, is regarded as a main driver for the breakdown of institutional regulatory capture in economies (Adams et al. 2007). Three major themes were extracted under the category of compliance: Firstly, even small companies face problems with compliance. The areas mentioned in the interviews were data protection and corruption. Secondly, interviewees mentioned areas where they found regulation inappropriate, thereby affecting their business in negative ways. They mentioned for example that they were highly affected by inappropriate regulation the internet. Data protection was perceived to be too strict and excessive, while regulation with regard to online-monopolies was felt lacking, as shown in the example datum above. With regard to taxation they expressed that they felt that regulations could lead to disadvantages for smaller companies:

“And also, that it is too easy for large companies to avoid taxation in Europe. […] And this also annoys me, because it increases the 1:0-problem. Because they can invest this in R&D to get even better, and we… This is a huge risk.” (B06086C12)

Thirdly, the answers themselves would often show that problems that are addressed on a global level by introducing regulation and codes of conduct, might have the opposite meaning for small start ups. Particularly in the area of social aspects, interviewees often felt adversely affected by regulation and showed a high interest in contributing to overall policy discussions:

“Anti-Discrimination actually is important, because in IT and Business Intelligence…you don’t find enough people in Germany. This is how it is. So treating people equally, and also anti-discrimination… That on political level… that it is possible for foreign experts or students to come to Germany, this is very important with regard to the sustainability of our company.” (B050818C11)

Therefore, *compliance* also served as a category to summarize statements where interviewees were seemingly of the opinion that an aspect is important but in fact having a different understanding of what the category actually meant.

The category c*reation* was used to combine the themes or codes which were found to show active involvement in an issue or the will to create and participate.

Tab. 16: Category creation (own table)

CATEGORY CREATION		
CODE TYPE	**CODE/THEME**	**DATUM**
Holistic Code	Resources	*"Education... education of people in general. University education, vocational education… regardless. There is an extreme lack of people with education or training in our sector. It already starts with the school education. Education should be much closer to economy and todays reality. […] Actually there should be much more method teaching, and what todays challenges are… This has a lot to do with IT, this is exactly as with mathematics I think, IT today is a cross-cutting issue."*
Versus Code	Compliance vs Creation	*"Unimportant, we do that ourselves."*
Versus Code	Outside in vs Inside out	*"What I find generally important… what we do is donate. Because this allows you to control what you do."*

Creativity and self-efficacy are regarded as central qualities of successful entrepreneurs (Archdivili et al. 2003). Entrepreneurial opportunities often arise from societal shifts or the creation of new knowledge: “According to the knowledge spillover theory of entrepreneurship, entrepreneurship is an endogenous response to investments in knowledge made by firms and non-private organizations that do not fully commercialize those new ideas, thus generating opportunities for entrepreneurs.” (Audretsch 2005). This requires customized business solutions as no out-of-the-box systems are available and it requires the company to remain flexible in order to adjust to the dynamics and changes along with its development (*cf.* chapters 3.2.3 and 3.3). In turn, entrepreneurial companies were found to have higher levels of experimental learning leading to the creation of new knowledge, often distinct to the particular organization (Marino et al. 2010)

Many larger companies are now trying to create an entrepreneurial mindset by creating more open and flexible structures to support innovation and flexibility, even within larger corporations (brandeins 2013).

Overall the interviews displayed a high sense of willingness to create systems or processes that secure or expand growth. Especially with regard to economic and social aspects, interviewees would usually be in agreement that those are important. However, they repeatedly pointed out that they preferred to control certain aspects through internal or customized instruments, rather than using external guidelines or measures. Such datums were summarized under the theme “compliance vs creation”.

The category creation furthermore combined statements in which respondents would take an inside-out perspective, while sustainability reporting usually applies an outside-in perspective. A third theme assigned to statements was resources. As pointed out in earlier chapters, resource constraints are seen as a major limitation for start ups. Interviewees often showed that they had identified key areas on a macro-level which could help to minimize resource constraints, for example in the areas of human resources or investments.

Confidentiality is a category that combines themes and codes from this interview section, but also from earlier notes or later ones in the interview.

Tab. 17: Category confidentiality (own table)

CATEGORY CONFIDENTIALITY		
CODE TYPE	**CODE/THEME**	**DATUM**
Holistic Code	Anonymity	*"So for our company, of which the name should not be mentioned under any circumstances…"*
Holistic Code	Confidentiality	*"If I can`t give an answer because we don`t publicize something I will say that, OK?"*
Holistic Code	Anonymity	*"If one is being really honest, and this is why it is good that this interview is anonymized, most small companies can’t always abide by the rules, and therefore they don’t always abide by the rules…"*

Interviewees repeatedly sought reassurance that the interview would remain anonymous or they added that they were only disclosing the information on the basis of anonymity. The innovative business model, often starting in a niche and the requirement for fast growth and scalability necessitate an early mover advantage. Accordingly, start ups have a high degree of overall confidentiality. At a very early stage of their business they will usually introduce non-disclosure agreements (NDA) as part of their employee contracts, and also for their negotiations with capital providers. Therefore, while they may find certain information and measurements useful, they are not willing to publish company information to a wider group. This can also be the case for larger companies. It is questioned whether the perceived confidentiality of aspects, such as negative environmental contributions, will lead to non-disclosure rather than communication (Bubna-Litic 2002).

5.5 Interim conclusion

Combining the findings from both interview sections conducted within this thesis show eight main categories under which common themes can be summarized. The categories have been constructed from the empirical data derived from the six guided interviews. These were complemented with data from the theoretical analysis. A summary of the categories helps to draw an interim conclusion on the overall findings from the primary and secondary data:

1) Resources

As also shown in the primary data, resources have a high relevance in the entrepreneurial context (Hudson et al. 2001, Maier 2012). The statements in the interviews show that the availability of resources for start ups is highly affected by the business environment and existing laws and regulations, which are usually the same as for larger companies (Bauer 2014). Internally, resources or lack thereof will in turn affect the ability of the start up to comply with laws and regulations.

2) Relevance

Relevance has shown to be the main indicator by which the interviewees would rate the importance of sustainability aspects. It has also been shown that relevance assigned does not only depend on the actual relevance, it will also be influenced by competing interests in the entrepreneurial environment (Kuckertz & Wagner 2012) and the existing knowledge about the indicator. The degree of knowledge on the sustainability context has been shown to be low overall. However, interviewees repeatedly found the economic relevance of a social or ecological aspect.

3) Channelization

Channelization was created as a category to depict the share that digital and online infrastructure have of the overall infrastructure of start ups. Compared to larger companies, this share is often very high, either in form of the business model itself, but always as a channel for marketing and communication (DB 2010, DB 2011). Channelization was regarded by the interviewees as a main category for risks and opportunities in the business environment, but also emerged as a category that showed high prevalence when speaking about the importance of economic, ecological and social aspects.

4) Compliance

Compliance was identified as a main risk to the business models of start ups (Baur 2014), and showed high relation to the category relevance: While start ups are willing to employ external tax and legal advisors even at an early stage of their business to monitor regulations that could affect their profitability, they would not consider corruption as an important aspect with regard to their sustainability.

5) Growth

The growth potential of start ups is regarded as an important aspect on the macro-economic level, even though there are only tenuous theories about the long term effects (Caree & Thurik 2010). On a micro-level, growth is the main target for start ups, as they need to turn their business model into profits, usually starting with external capital and no revenue. All interviewees showed to have clear concepts of their growth potential and considered it the main opportunity for their business in the coming years.

6) Uncertainty

As business models of start ups are usually based on new knowledge or technology, there is a high degree of uncertainty in their business environment (Marino 2010) with regard to longer term sustainability and growth. Frese (2009) therefore acknowledges that there is no complete preparation for entrepreneurship, and that the complex environment and active character of entrepreneurs will also lead to more mistakes (ibid.). Missing or changing regulation as well as dynamics of the competitive environment make it hard to measure or predict sustainability related information in many areas specific to start ups.

7) Creation

Creation symbolizes what psychology research summarizes as a main motivating factor of entrepreneurs: trait and action theory agree that self-efficacy, creativity and locus of control are major characteristics of entrepreneurs (Archdivili et al. 2003). This is what makes them successful in new, risky and unstructured environments, which are considered typical for innovative business strategies (Audretsch 2005). Accordingly, interviewees overall showed a high tendency to prefer and take control or build customized solutions, rather than working with external standards.

8) Confidentiality

Confidentiality evolved as an overall category because its presence was obvious in statements at any point during the interviews. It became clear during the interviews that confidentiality will pose a constraint to the willingness to disclose certain information. This is something that was not previously evident in research concerning the constraints of sustainability reporting. Confidentiality has in fact been identified as the most prevalent intuitive constraint, directly identified by the interviewees, and was something also inherent in statements with regard to non-compliant behavior in the business activities.

Based on this, the following chapter will formulate the recommendations on customizing instruments for sustainability reporting.

6 CONCEPTUALIZATION OF FINDINGS

The aim of this theses is to formulate recommendations for customizing instruments of sustainability reporting. It was decided to mainly focus on the reporting guidelines of the Global Reporting Initiative (GRI) which should ensure that recommendations are developed along an internationally recognized instrument that harmonizes with existing sustainability standards on international level (BMU et al. 2007). For that purpose, the empirical was built upon the GRI G4 general and specific standard disclosures, which form the framework for reporting under GRI. The following section will provide recommendations along the gaps that have been identified as well as the overall findings from secondary and primary data.

6.1 Summary findings

In combining the findings from the primary data with the findings from secondary data, and in line with the theoretical requirements for theory building from Saldana (2009), the following assertions can be formulated as a basis for recommendations:

Key assertion

Growth and compliance are central drivers in the sustainability context of start ups.

As summarized in the theoretical analysis but also the empirical data, growth is a requirement for most innovative start ups. Their business models bases on external financing and need to aim at profitability after the launch phase. It is therefore desirable to build out contributions to a sustainable growth of start ups. Compliance with laws and regulations will be necessary to secure the license to operate within a country’s or economy’s legislation. In the sustainability context, compliance is an important driver to the institutional regulatory capture in economies. Both, growth and compliance can therefore be considered the main aspects also for the sustainable existence of a start up. At the same time, both aspects have shown to have a major impact on the sustainability context of start ups. Firstly, growth of start ups is often based negative externalities, such as environmental degradation. Secondly, compliance of companies is seen as an overall requirement for macroeconomic development. Non-compliant behavior, such as corruption, can cause the breakdown of necessary institutional regulation in markets.

Sub assertions:

1) *Compliance of start ups will be a result of a favorable combination of resources, perceived relevance and confidentiality*

While the theoretical analysis has already shown that resource constraints are likely to prevent start ups from reporting, those constraints have also shown to affect overall compliance of the companies. Start ups will divert their limited resources to issues that they consider relevant. As traditional start ups are hardly exposed to sustainability related issues in their direct economic environment, (because they don`t cross certain thresholds and, due to their immature branding hardly face reputational punishment), the sustainability context is not obvious and therefore often not considered relevant by them. As the interviews show, the discourse on sustainability aspects during the interviews surfaced certain issues that were not of concern before the interviews. Additionally, intangible assets in the form of an innovative business model often form the majority of assets in the early stages of a business. Confidentiality of the business model and process will prevent young businesses from engaging in a broader stakeholder communication.

2) *Growth of start ups is influenced by innovative channelization, a notion of creation, but also uncertainty*

In the theoretical analysis, growth was found to be both, a major impetus for entrepreneurship and a function of economy to foster job creation and the improvement of living conditions in a society. Start ups use creation and channelization as instruments for their growth. Opportunity creation is seen as a central motivation and success factor for entrepreneurs. Innovative opportunities are often found in areas of new knowledge. The findings of the research show that the reporting guidelines do not sufficiently take into account impacts along innovative channels such as mobile/internet, and that the outside-in perspective of the reporting aspects misses out important impacts on the sustainability of start ups. Building upon the motivation of creation within the start ups could not only be a motivation for start ups to engage in reporting, but could also provide important information for policy makers and society on the actual sustainability context of start ups.

6.2 Recommendations for instruments of sustainability reporting

The key assertions show that it is recommendable to customize instruments for sustainability reporting to allow start ups manage their activities within their greater sustainability context. This context is impacted by two main drivers, *growth* and *compliance*. Compliance is strongly influenced by what founders of start ups consider *relevant*, which *resources* they are willing to and can invest, and whether the degree of *confidentiality* in their business model allows them to disclose certain information. Growth is strongly dependent on the channels used in the business model, which are highly focusing on mobile/internet. Growth is furthermore driven by the notion of creation, but it bases in an environment that shows high degree of uncertainty. The recommendations for customizing instruments are therefore developed along these categories:

Relevance and perspective

The empirical data has shown that start ups will more likely be motivated to assess or report on an issue if they can relate to its relevance to the company. Growth and compliance showed to have high relevance as overall concepts, but the related aspects in sustainability reporting are often extractions from concepts that are unknown to founders and managers of traditional start ups. Interviewees would either intuitively assign a different meaning which has relevance to them, or rate the aspect as irrelevant. From the findings in the previous chapters, the following recommendations are summarized:

- Sustainability context discourse

  Sustainability as a buzzword is not unknown to the interviewees. Sustainability guidelines like G4 however base on an understanding of the sustainability context on macro-economic level. GRI wants to initiate a discourse on the sustainability context within the reporting process of a company. However, such a discourse requires a sustainability management structure within a company that manages the internal dialogue. It furthermore requires an advanced understanding of the conventions and concepts from complex policy dialogues, which are not necessarily suitable for “sustainability beginners”. Sustainability reporting guidelines for start ups need clearer guidance on the sustainability context, overall and in relation to the G4 reporting aspects. Guidelines for start ups should allow to start reporting on a lower complexity level and with more focus on the internal discourse.

- Inside out versus outside in

  It has been shown that a considerable part of the G4 indicators measure the implementation of external conventions. The testimonies from the empirical research showed that interviewees could often relate to G4 aspects, but repeatedly in the form of change requests, input from their specific business context, or they would see a social or environmental aspect to rather belong to the economic category. This was shown to be an expression of the will of entrepreneurs to create rather than to abide. Many of the underlying policies showed to have negative impacts on the start ups and their perceived sustainability. The perspective of reporting for start ups should not only disclose compliance of outside-in regulations, but allow more for an inside out dialogue. Assessing the specific concerns of start ups related to their sustainability could increase their motivation to participate in a broader discourse and give important input to the overall sustainability discourse in a way that does not exist as of yet.

Compliance and confidentiality

Societies can expect companies to reasonably measure and report their impacts. Start ups however, due to their increased level of confidentiality, require a specific balance of needs to be disclosed publicly. The overall concept of sustainable development wants companies to manage their impacts on the economic, ecological and social environment. Communication of these impacts to external stakeholders is an important, but possibly also second step. The first step is to start an internal discourse on sustainability issues and to identify and measure material aspects. Taking into account the findings from primary and secondary data, the following two recommendations can be drawn:

- Introduce two-level disclosure

  As already mentioned, society can expect companies to report their externalities in a true and accurate manner. However, as sustainability reporting is not mandatory, it is also not standard. Especially smaller companies could be negatively affected by disclosing information that their competitors don’t publish. The introduction of a two-level disclosure, by which companies can start with internal reporting, will be more likely to be implemented by start ups. This could be organized also by introducing modular disclosure, by which companies can gradually increase the amount of reported aspects, and by meta- disclosure.

- Introduce meta-disclosure

  Sustainability reporting is, among other benefits, seen as a tool that allows for enhanced internal and external communication, progress tracking and benchmarking. The high level of confidentiality and their innovative but uncertain environment makes it hard for start ups to identify actual and adequate performance indicators for internal progress tracking as well as benchmarking. A meta-level for disclosure, positioned between internal reporting and the existing GRI database for sustainability reports, would allow companies to disclose internally, among other reporting companies or public. This is could provide an important tool for start ups to see and benchmark against disclosures from other reporting start ups.

Channelization and focus

Already in 2006, SustainAbility & UNEP in their Global Reporters Survey question how corporate disclosure, reporting and communication can further be developed to manage new risks and opportunities arising from new markets and products (SustainAbility & UNEP 2006). The testimonials from the interviews showed that the innovative business models of start ups base on the increased use of new and innovative channels, especially in the form of mobile/internet. These channels have shown to have important effects on the sustainability of start ups, both as opportunities and risks especially for growth. However, the channels have been found to not yet be part of the sustainability reporting guidelines of GRI. G4 reporting aims to make abstract issues tangible and concrete, to help understand and manage the effects on the organization's activities and strategy (GRI 2013). Therefore, two recommendations can be concluded:

- Focus reporting aspects

  To make sustainability reporting reflect the most important risks and opportunities in the business environment of start ups, it has to be focused on important aspects in the sustainability context of start ups. The existing G4 guidelines have been developed to support companies of any size in their reporting, which is why they have to provide reporting standards that are relevant for MNE, but not necessarily start ups. If aspects are not material for a company, the company does not have to report on those; however, the overall complexity of the guidelines could be reduced for start ups if such aspects could be excluded from a customized reporting framework. At the same time, new markets and technologies have evolved but are not yet reflected in indicators under G4. If sustainability reporting for start ups should reflect the true foundations of the value proposition and allow them to manage risks in their business environment, it needs to put new focus on the impacts within technology and especially mobile/internet as a new channels and market.

- Use new channels for sustainability reporting

  Compiling a yearly sustainability report under the G4 guidelines incurs costs and may require extra resources in smaller companies. Herzig and Schaltegger (2006) recommend that, when deciding about the approach to sustainability reporting, companies weigh the costs and benefits against the target groups' information needs and the companies' resources (Herzig & Schaltegger 2006). As outlined before, especially young businesses increasingly use an internet based infrastructure as their marketing, communication and sales channel. Internet-based sustainability reporting tools could be a more appropriate and at the same time cost saving approach for start ups, and it would be more in line with their overall stakeholder communication approach. Online reporting formats furthermore would allow for easy publishing of reporting sections. In addition, a rather continuous than yearly reporting format could be more appropriate for the changing and flexible environment of start ups.

Uncertainty and growth

Next to compliance, growth has been identified as a foundation of the value proposition of start ups. Growth as such is a requirement for start ups to be able to monetize on the business opportunity and thus exist. This will define how start ups allocate their limited resources. However, growth of start ups happens in an environment of uncertainty, which has influence on the decisions taken by entrepreneurs. Jack and Rose (2010) describe this situation as a dance between the two questions "what is possible?" and "what is needed?" The GRI guidelines have a strong focus on the external impacts of a company. Start ups themselves consider their external impacts, especially in ecological and social aspects, very low. It can be argued that the impact of the individual company is in fact low, but sustainability research has shown that the relative impact of small businesses on macro-economic level is considerable. Sustainability reporting, without compromising on the overall aim to promote sustainable development, has to position itself in a way that start ups will see a direct value for their business. This can be achieved by adjusting the GRI reporting guidelines with indicators that will help start ups monitor their performance in a more integrated way, allowing them to assess the foundations of the value proposition in an extended form:

- Integrate social, ecological and economic performance

  Valuation models increasingly incorporate social and economic performance. The analysis of the G4 guidelines showed that the guidelines focus on the company's external impacts and they categorize indicators under social, ecological and economic performance separately. To achieve better transparency of a company's sustainability, the relation between the economic, social and ecological performance of a company should receive more importance. If sustainability reporting can help start ups to achieve a more comprehensive understanding of their overall performance it could be a valuable tool to assist them in measuring their performance.

7 CONCLUSION

The primary purpose of this thesis was to get a better understanding of the sustainability aspects relevant in the starting-up phase of businesses, when the general impact on any dimension of sustainability is still minor, but is expected to increase. It wanted to furthermore shed light on the obstacles start ups face regarding sustainability reporting, and work out values. The research question was:

How can sustainability reporting be adapted to target start ups and therefore promote more sustainable business practices?

The research objective was to establish recommendations for customized sustainability reporting for conventional start ups which fits their specific needs and thus motivating them to introduce sustainability reporting. The recommendations were developed along the reporting guidelines of GRI, which should allow for better transfer to internationally recognized reporting standards. For this purpose, research on sustainability reporting was analyzed and benefits and constraints of sustainability reporting were laid out, with specific focus on the reporting guidelines of the GRI. The GRI has been identified as the most renowned initiative that provides reporting guidelines that harmonize with international standards. In a fit gap summary it was found that sustainability reporting is a complex process that bases on an advanced sustainability understanding. It can bring added value by positioning small companies to prepare for supply chain requirements, and it can improve stakeholder communication, also to capital market participants. Whether a company will engage in sustainability reporting strongly depends on the resource capacities and the perceived added value to the organization. Overall, smaller companies are less likely to report. The reasons for this are strongly linked to the characteristics of start ups. However, overall no research as of yet specifically looks into adapted sustainability reporting instruments for start ups as of yet.

Therefore, a qualitative analysis was conducted to create new knowledge on the basis of a literature research and through semi-structured interviews with founders and CEOs of start ups. The empirical data showed that growth and compliance are central drivers in the sustainability context of start ups:

Compliance of start ups will be a result of a favorable combination of resources, perceived relevance and confidentiality. Start ups were found to be in a constant equilibrium process between what is needed and what is possible (Jack & Rose 2010), and they will divert their limited resources to activities that they consider relevant. Traditional start ups are hardly exposed to sustainability related issues in their direct economic environment, because they don`t cross certain thresholds and are often not yet part of the global supply chain. Sustainability reporting therefore needs to lay out the sustainability context and give better guidance on why certain issues or impacts can be material to the company. It furthermore needs to balance confidentiality and disclosure by introducing new reporting levels, i.e. in the form of internal and external reporting sections, and by introducing reporting communities, where start ups can publish among other reporting start ups. Growth of start ups was found to be influenced by entrepreneurial alertness for opportunity creation and the use of innovative communication and sales channels, but also by uncertainty in the business environment. Start up business models often base in an innovative niche. They require flexible business structures that can be adapted to the fast developing business environment. At the same time, risks in the business environment are hard to predict. Often, the sector is too young and is only evolving along the growth of the business. This creates a gap in the area of instruments to monitor and manage risks in the business environment, and the basis for projections is weak. Providing enriched indicators, that give a more profound view on the foundations of a company than pure financial reporting, could help manage sustainable growth. In addition, reporting institutions such as GRI should start introducing meta reporting for start ups, organized as reporting level amongst others. Such communities could support start ups in benchmarking against similar businesses.

To make sustainability reporting less time and cost intense, the complexity of reporting guidelines should be reduced by aspects that are not relevant for start ups. As start ups consider their externalities low, the focus of reporting on external impacts should be shifted to a better integration of all material aspects. The external focus of reporting guidelines usually assumes the existence of an internal structure that manages the company’s impacts. Such a structure does not exist in businesses in their starting-up phase. They will therefore need a more direct integration of economic, ecological and social aspects. Herzig & Schaltegger (2006) underline that corporate sustainability is a set of interrelated goals that needs an interdisciplinary development of solutions. In that sense, their flexible, non-departmentalized structures can be of advantage when addressing sustainability in an integrated way.

Lastly, within this thesis it became apparent that the communication, marketing and sales channels used by start ups, which are strongly built on mobile/internet, constitute intangible assets that are strongly influencing the value proposition of start ups. Traffic, subscribers and customer data are often a central indicator for the valuation of such companies. If a new search algorithm is for example introduced by google, a company can lose its traffic and therefore customers within days (FAZ 2014a). Sustainability reporting for start ups needs to look into ways to incorporate the new markets evolving around technological innovation. Sustainability reporting formats should furthermore increasingly base on the new channels used by companies for stakeholder communication, of which mobile/internet is the largest one. This will make them more adaptable to the structures of innovative businesses and allow for the development of lighter tools.

In today’s fast changing economy fueled by technological advancement, start ups like Facebook, Google, Twitter or Groupon have shown to become multi-national companies registered on stock markets within a few years. It is therefore expected that introducing sustainability reporting as an early tool can have a high impact on the overall promotion of sustainability in the economic sector.

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ANNEXURES

Annexure 1) **Covering letter**

Barbara Schäfer
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Interviewanfrage

Im Rahmen meiner Masterarbeit (MBA) führe ich Interviews mit (Mit-)Gründern oder Managern von Start ups durch. Thema der Arbeit ist

„Sustainability Reporting for Start ups: Recommendations for customized Instruments to promote Sustainability„ /“Nachhaltigkeitsberichterstattung für Start ups: Empfehlungen für angepasste Instrumente“

Ich selbst habe Start up-Erfahrung und mache derzeit nebenberuflich meinen MBA, der durchgeführt wird vom CSM der Leuphana Universität Lüneburg (s.u.).

Aus den Interviews werde ich Empfehlungen ableiten, wie Sustainability Reporting an die Bedürfnisse von Start ups angepasst werden kann. Sustainability Reporting ist ein Instrument des Nachhaltigkeitsmanagements, das Unternehmen freiwillig nutzen, um zum Beispiel Risiken und Kosten im ökonomischen, ökologischen oder sozialen Bereich zu managen. Das Interview dauert mündlich etwa 30 Minuten, und ich rufe gerne an oder wir vereinbaren ein Treffen. Das Interview kann auch online ausgefüllt werden:

https://de.surveymonkey.com/s/XXXXX

Alle Interviews werden komplett anonymisiert, sodass keine Rückschlüsse auf die Firma oder das Geschäftsmodell möglich sind (außer dies ist explizit gewünscht). Bei Fragen oder um einen Termin zu vereinbaren bin ich erreichbar unter

Tel: +49 177 xxxxxxx, xxxxxxxxxxxxx@gmail.com

Viele Grüße

Barbara Schäfer

Centre for Sustainability Management

MBA Sustainability Management am CSM der Leuphana Universität Lüneburg http://www.leuphana.de/institute/csm.html

Annexure 2) **Interview guide**

1. As a company, you depend on internal and external groups of people to develop and run your business. Which groups do you see as your main stakeholders or interest groups, critical to the success of your company?

2. How regular do you communicate with those stakeholders and what means of communication do you use?

3. What do you consider the biggest risks for your business in the next year?

4. What do you see as the biggest opportunities?

5. If you think of the next five years now, are there any risks or opportunities that you would need to add?

6. How do you assess or monitor your business environment with regards to internal or external risks?

7. Do you use instruments of sustainability reporting or do you use any other means to report on your social, environmental or financial performance?

8. Many especially larger companies use sustainability reporting to assess and report on the economic, ecological and social impacts of their activities. On a scale of 1 (not important) to 4 (very important, how important do you consider the following aspects for the sustainability of your company?

How important do you consider the following economic aspects for the sustainability of your company?

Value Distributed: Operating costs, Wages, Payments to capital providers or Governments, Community Investments

Risks / Opportunities due to Climate Change

Financial Assistance received from Government

Entry level wages by gender and % of management hired from local community

Impact on other companies or the sector in total, e.g. jobs, foreign investments, location

Which other economic aspects do you consider important for the sustainability of your company?

How important do you consider the following ecological aspects for the sustainability of your company?

Materials, energy and water used (incl. reductions in usage or reuse/recycling)

Emissions, discharge or waste (incl. reductions in emissions/discharge)

Environmental impact of your product/service (incl. transport)

Environmental protection expenditure or investments

Environmental supplier assessments

Environmental grievances and grievance mechanisms

Which other ecological aspects do you consider important for the sustainability of your company?

How important do you consider the following social aspects for the sustainability of your company?

Rates of new hires & turnover by age and gender

Employee injury rates, health risks (incl. formal agreements with trade unions)

Employee training/year, career development programs

Diversity, non-discrimination and equal opportunity (e.g. composition of your government bodies, remuneration distribution)

Prevention of child- and forced labor, respecting of human rights (also at supplier level)

Freedom of association

Anti-corruption

Customer health and safety

Customer privacy: loss of data or customer complaints

Product and service labeling

Cost of non-compliance with laws and regulations

Which other social aspects do you consider important for the sustainability of your company?

9. Can you think of any factors or instruments that could help increase the sustainability of your company?

10. Is there anything else that you would like to add?

Background / Statistical

11. What is your Position in the company?

12. When was the company founded (actual start of business activity)?

13. What is your number of employees?
    - 0 – 5
    - 6 – 20
    - 21 – 50
    - 51 - 250

14. What is your estimated annual turnover or annual Balance sheet total?
    - up to €1 million
    - up to €1 million
    - up to €10 million
    - up to €50 million (Balance sheet total: ≤ € 43 million)

15. What is your area of Business? Multiples are possible

A - Agriculture, forestry and fishing
B - Mining and quarrying
C – Manufacturing
D - Electricity, gas, steam and air conditioning supply
E - Water supply; sewerage; waste management and remediation activities
F – Construction
G - Wholesale and retail trade; repair of motor vehicles and motorcycles
H - Transporting and storage
I - Accommodation and food service activities
J - Information and communication
K - Financial and insurance activities
L - Real estate activities
M - Professional, scientific and technical activities
N - Administrative and support service activities, equipment and tangible goods n.e.c.
O - Public administration and defense; compulsory social security
P – Education
Q - Human health and social work activities
R - Arts, entertainment and recreation
S - Other services activities
T - Activities of households as employers; undifferentiated goods - and services -

producing activities of households for own use