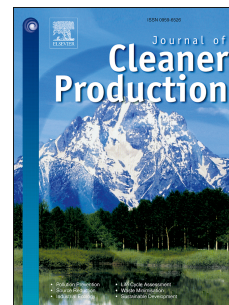


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## Elucidating the relationship between Sustainability Reporting and Organisational Change Management for Sustainability

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### Abstract

An increasing number of companies have, during the last two decades, engaged in reporting their sustainability efforts. Although Sustainability Reporting is considered to be a key driver for organisational change in companies; research into the link between these two processes has been limited. This paper is aimed at elucidating the interrelations between these processes. A survey was applied to 91 companies from the Global Reporting Initiative's Sustainability Disclosure Database that published sustainability reports in 2013. The data from the survey were analysed using a combination of descriptive, Grounded Theory, and inferential analyses. The results showed that the decision to publish the first sustainability report has been primarily driven by company internal motivations, whilst for subsequent reports it has been due to a combination of internal motivations and external stimuli. The development and publication of a sustainability report drives sustainability changes in the company, leading to a transition period during the development of the next report. This leads to changes in data and indicators, strategy, organisational change, reputation and validation, stakeholders, and the report itself. The changes become part of the organisation until the start of the following report. The research shows that Sustainability Reporting and Organisational Change Management for Sustainability have reciprocal reinforcing relationships, where Sustainability Reporting provides a starting point for planning organisational change for sustainability and organisational change for sustainability improves the reporting process. The paper reinforces that planning organisational changes can help companies better and more holistically integrate their efforts for sustainability into their systems.

*Keywords: Corporate sustainability; sustainability reporting; organisational change management for sustainability; Global Reporting Initiative.*

### Highlights

- There has been considerable research on sustainability reporting (SR) recently.
- The link between SR and organisational change management (OCM) is under-explored.
- A survey was applied to 91 companies that have published sustainability reports.
- The SR and OCM processes have reciprocal reinforcing relationships.
- Understanding linkages between these processes can make companies more sustainable.

## 1. Introduction

Corporations have been accused of being responsible for many negative impacts on the environment and on the societies wherein they operate (Dunphy, et al., 2003; Hart, 2000). This has made them a key focus of attention in the sustainability debate (Cannon, 1994; Elkington, 2002, 2005). In response to this, corporate leaders and employees have been including sustainability issues in their activities (C.E.C., 2001; Elkington, 2002; Langer and Schön, 2003). Some authors have proposed Corporate Sustainability (CS) as a way to explain and address such actions. Dyllick and Hockerts (2002) defined CS as: “...meeting the needs of a firm’s direct and indirect stakeholders (such as shareholders, employees, clients, pressure groups, communities, etc.), without compromising its ability to meet the needs of future stakeholders as well”. Lozano (2012b) defined CS as: ‘Corporate activities that proactively seek to contribute to sustainability equilibria, including the economic, environmental, and social dimensions of today, as well as their inter-relations within and throughout the time dimension (i.e. the short-, long-, and longer-term), while addressing the company’s systems, i.e. Operations and production, Management and strategy, Organisational systems, Procurement and marketing, and Assessment and communication; as well as with its stakeholders’. The latter definition is used in this paper, since it provides a more detailed explanation of the company system.

A number of authors have indicated that to make real progress, CS should encompass a holistic perspective (e.g. Linnenluecke, Russel, and Griffiths, 2009; Lozano, 2013b), where the company elements interact as part of the whole system (as discussed by Bartelmus, 1999). In this context, Sustainability Reporting (SR), a part of Assessment and communication, has been considered an important catalyst for change towards sustainability (*see* Adams and McNicholas, 2007; Doppelt, 2003a) and one of the main drivers of CS (Lozano, 2015). However, there has been limited research explicitly discussing the link between SR and Organisational Change Management for Sustainability (OCMS). This paper is aimed at elucidating the inter-linkages between SR and OCMS. It should be noted that each of these processes have been researched thoroughly in other publications. This paper is aimed studying the juxtaposition between them.

This paper is structured as follows: Section 2 presents a literature review in two parts, Sustainability Reporting (SR) and Organisational Change Management for Sustainability (OCMS); Section 3, the research methods used; Section 4, the results, findings from the survey, the descriptive statistics, and analysis of the inferential statistics; Section 5, discussion; and Section 6, conclusions.

## 2. Literature review

This section presents a discussion on two usually separated processes, Sustainability Reporting (SR) and Organisational Change Management for Sustainability (OCMS).

### 2.1. Sustainability Reporting

Sustainability Reporting (SR), an element of Assessment and communication, has become an important part of companies’ contribution to sustainability (Gamerschlag, et al., 2011; Herzig and Schaltegger, 2006; Lozano and Huisinigh, 2011). During the last 15 years there has been an increase in the number of published corporate sustainability reports (ACCA, 2004; GRI, 2009; Lozano, 2013b), particularly in Europe and Japan (Kolk, 2008). The KPMG surveys of the largest 250 global companies in the world showed an increase in reporting from 35% of those companies in 1999 to 93% in 2013 (KPMG, 2013). The Global Reporting Initiative (GRI) database listed 6,284 organisations that have published a sustainability report at the

time the research was conducted (GRI, 2014). In general, European companies have been at the forefront of sustainability reporting (Kolk, 2008; Lozano, 2013b).

SR is a voluntary activity<sup>1</sup> with the following purposes: (1) to assess the current state of an organisation's progress towards sustainability, and (2) to communicate the efforts and progress in the economic, environmental and social dimensions to stakeholders (Dalal-Clayton and Bass, 2002; GRI, 2011); (3) to assess sustainability performance over time; (4) to benchmark against other companies; (5) to demonstrate how the organisation influences, and is influenced by, expectations about sustainable development (Daub, 2007; Schaltegger and Wagner, 2006); and (6) as a base for planning changes for sustainability (Adams and McNicholas, 2007; Lozano, 2013c).

According to Burritt and Schaltegger (2010), SR can help managers deal with different decisions in their CS efforts. They highlighted that there are two main approaches driving sustainability reporting: "outside-in", focusing on the opinions and perceptions of stakeholders towards the organisation; and "inside-out", relating to the decisions taken inside the organisation regarding social and environmental problems, which strengthen the competitive position of the organisation.

A large number of voluntary standards and guidelines have been developed during the last two decades to help managers report the myriad sustainability issues (see Lozano and Huisinigh, 2011; Perrini and Tencati, 2006). Among the many guidelines, the GRI guidelines are considered the best option available for SR (Hussey, Kirsop, and Meissen, 2001; Morhardt, Baird, and Freeman, 2002). The GRI Guidelines are voluntary and intended to serve as a generally accepted framework for reporting on an organisation's economic, environmental, and social performance (GRI, 2011).

A number of factors, such as company size, industry membership and perceived corporate impact (economic, environmental, social) play a key role in a firm's decision to start publishing sustainability reports (Alonso-Almeida, Llach, and Marimon, 2014; Frynas, 2010; Gamerschlag et al., 2010). In the companies that have been publishing sustainability reports, the report has, usually, been developed by only one designated department, which results in a compartmentalised SR process (Schaltegger and Wagner, 2006).

SR presents a number of challenges, such as gaining knowledge, experience, and understanding of sustainability (Adams and McNicholas, 2007), providing the extra resources needed to gather data and engage stakeholders, and the need to keep a balance between the details and core information (Lozano, 2006). However, SR can help to diffuse sustainability throughout the company and, thus, overcome resistance to organisational change (Hedberg and von Malmborg, 2003).

It should be noted that the number of companies reporting is still small compared with the total number of businesses operating in the world today (Lozano, 2013b), the quality of the SR disclosures has yet to translate into meaningful and comprehensive reports (ACCA, 2004), and many of the reports fall short of the GRI/SR guidelines (Ball, Owen, and Gray, 2000; Hussey et al., 2001; Wilenius, 2005).

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<sup>1</sup> Although SR is mainly voluntary, various European countries, e.g. France and Spain, have introduced regulations for companies listed in stock markets to publish sustainability reports (Herzig and Schaltegger, 2006; KPMG, 2013).

In spite of the recognition of SR as an important catalyst for change towards sustainability (see Adams and McNicholas, 2007; Doppelt, 2003a), there has been limited research explicitly discussing the link between SR and OCMS. Some of the research available includes: Christofi et al. (2012), who highlighted that SR influenced internal management processes and the general corporate attitude towards sustainability; Lozano (2015), who explored the drivers of sustainability change, where SR has been one of the most important factors; Ioannou and Serafeim (2011), highlighting that company representatives acknowledge SR as a driver for organisational change, and SR has a positive impact on CS; and Adams and McNicholas (2007), who underscored that the process of implementing a system for SR results in improved sustainability performance due to the application of sustainability assessment tools, increased internal communication, and learning processes.

## 2.2. Organisational Change Management for Corporate Sustainability

CS changes need to go beyond ‘technocentric’ changes focused on raw materials, processes, and products (Doppelt, 2003a; Linnenluecke et al., 2009) and management efforts (Henriques and Richardson, 2005). They also require changes in ‘soft’ organisational issues, including values, visions, philosophies, policies, employee empowerment, and change management practices (Benn, Dunphy, and Griffit, 2014; Doppelt, 2003a), i.e. the Organisational systems of a company. Such organisational change aims to move from the current state to one more desirable (Ragsdell, 2000), ranging from minor to radical changes (Dawson, 1994). Change represents an opportunity if anticipated, prepared for, and managed (European Commission, 1998). Failure to change and to respond to new opportunities, processes or technologies can result in economic losses, thereby making economic benefits a primary justification for change in organisations (Cannon, 1994). Companies that refuse to change run the risk of being side-lined by external events (Collins and Porras, 2002), for example, changes in government regulations, technologies, products, workforce, and competition.

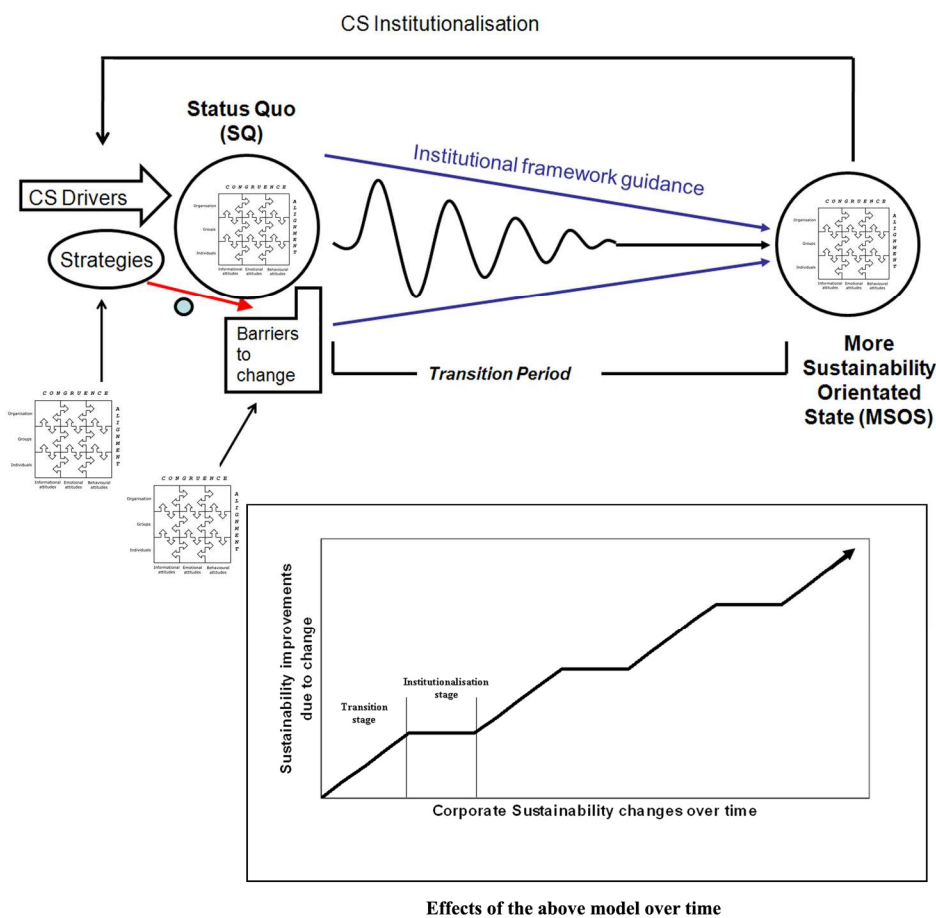
According to Freeman (1984) a company is changed by: 1) external stakeholders, such as customers, the general public, suppliers, Non Governmental Organisations (NGOs), public authorities, and competitors; and 2) internal stakeholders,. This is analogous to Burritt and Schaltegger’s (2010) “outside-in” and “inside-out” approaches to SR. Usually, organisations have a higher degree of control over internal changes, which allows them to be more proactive (Lozano, 2013a).

Two approaches that have been taken for internal organisational change for sustainability are: 1) through Top-down, emphasising management, measurement and control (Henriques and Richardson, 2005), and 2) Inside-out, stressing the importance of internal change and innovation (Doppelt, 2003a; Henriques and Richardson, 2005). While most of the efforts found in the literature follow the Top-down control route (e.g. DeSimone and Popoff, 2000; Harvard Business Review, 2000; Henriques and Richardson, 2005), only a few deal with internal change and innovation (e.g. Doppelt, 2003a; Dunphy et al., 2003; Linnenluecke et al., 2009).

Lozano (2012a, 2013a), based on the works of Bennis et al. (1969), Lewin (1947), Anderson and Ackerman Anderson (2001), and Luthans (2002), proposed an ‘Orchestrating Change for Corporate Sustainability’ model (see Figure 1) to help explain the dynamics of organisational changes for CS. The model posits that orchestrated planned change can disrupt the *status quo* (SQ) and help move towards a *more sustainability-orientated state* (MSOS), in a continuously iterative process (since change is seldom a once-for-all phenomenon). The



entire system and its elements need to be addressed. In this process, it is important to foster the drivers to change, and apply the appropriate strategies to overcome barriers to change. The institutional framework can help to maintain stability during the changes, and thus facilitate CS institutionalisation. During these changes, the system would pass through a transitional period before reaching the MSOS. Once the new structure and goals are set, the MSOS starts becoming the *status quo novo* (SQN). Because of the dynamism of sustainability, the process has to start again after stabilisation. Planning organisational changes, whilst engaging with the different organisational levels and their attitudes, could help companies to better overcome resistance to change and integrate their efforts for sustainability more holistically, including technological, managerial, and organisational changes, i.e. taking a more holistic perspective to contribute to sustainability. Resistance to CS change and how to overcome it are addressed by Lozano (2013a), and the CS drivers by Lozano (2015). The framework can help detect the role of SR and its relationship to OCMS.



**Figure 1 Framework for explaining the dynamics of Orchestrating Change for Corporate Sustainability**  
Source: (Lozano, 2013a)

The limited body of existing literature had assumed a positive relationship between SR and OCMS; however, this has not been demonstrated (*see* Adams and McNicholas, 2007; Doppelt, 2003a), three options are proposed, as shown in Figure 2: Option A, where there is a reciprocal relationship between SR and OCMS; Option B, where SR is dependent on OCMS; and Option C, where OCMS is dependent on SR.

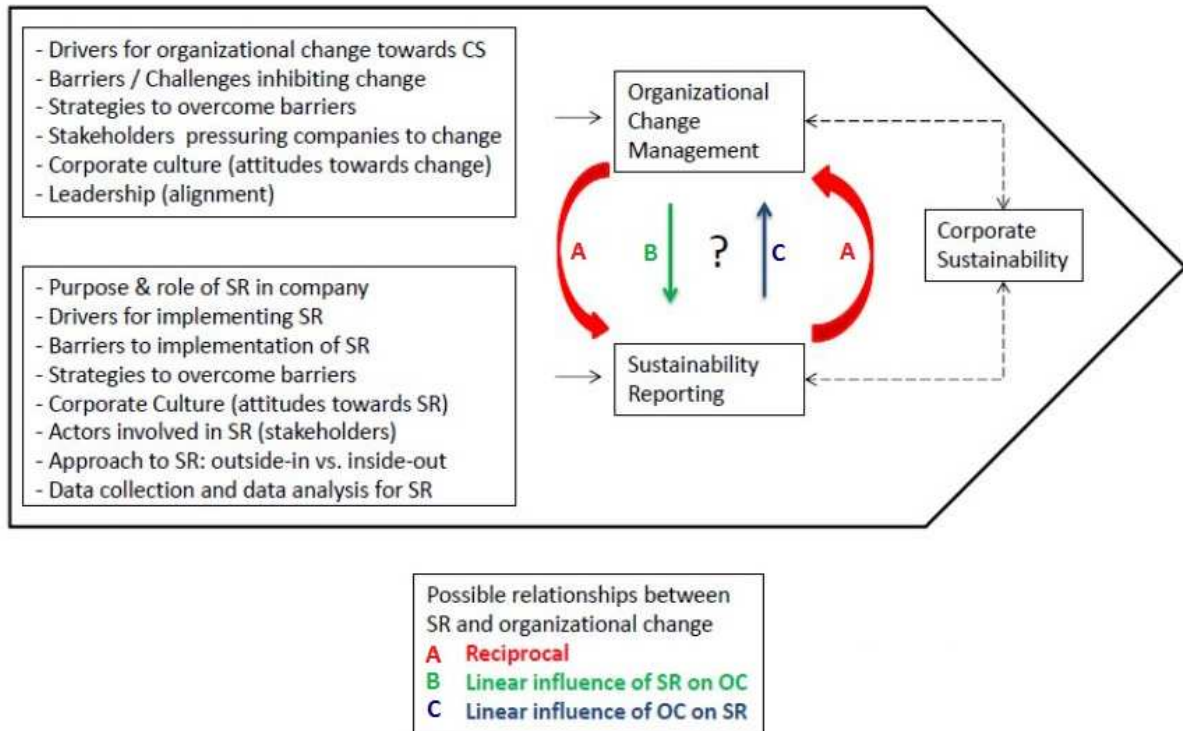


Figure 2 Potential relationships between the Sustainability Reporting and Organisational Change Management processes

### 3. Research methods

A survey was developed for collecting data, with most of the questions based on a 1-5 Likert scale (where the choices were 'Strongly disagree, Disagree, Neither agree nor disagree, Agree, and Strongly Agree (see Saunders, et al., 2007)), and complemented with open-ended questions. The survey is presented in Appendix 1. The survey was applied using the online survey-tool Qualtrics. The data collection took place from February to April 2014. The survey consisted of six sections:

- 1) Company characteristics, including country of origin and size;
- 2) Role of respondent in the company;
- 3) Sustainability reporting, the variables used for the SR process are presented in Table 1;
- 4) Organisational change management for sustainability, the variables used for this process are presented in Table 2;
- 5) Stakeholders involved in the SR process, such as competitors, customers, employees, suppliers, market entrants, general public, ranking bodies, NGOs, academic institutions, public authorities, company leaders and managers, other companies, sector organisations, potential employees, and shareholders. The respondent were asked to rank these options; and
- 6) Details of SR, including data collection, data analysis, and costs of producing a report.

In 2014, the GRI database listed 6,284 organisations that have published a sustainability report at the time the research was conducted (GRI, 2014). Companies that published a report in 2013 were selected, with a total of 1,089 companies. The companies were contacted via email. From the list, 162 respondents started the survey, with 91 ultimately completing it, with a response rate of 8.9%.



**Table 1 Variables used for the Sustainability Reporting process part of the model used in this research**

| Variable   | Possible Values   |
|--|---|
| Department responsible for SR (grouped)  | Department  |
| Main reason for publishing a sustainability report   | <ul style="list-style-type: none"> <li>- Answer to external pressures to the company only</li> <li>- Only driven by internal motivations</li> <li>- External pressures important, but mainly driven internally</li> <li>- Internal motivations important but ultimately driven by external pressures</li> <li>- External pressures and internal motivations were considered as equally important</li> </ul> |
| Publication of subsequent reports  | 1 – Yes, 2 - No   |
| Main reason for publishing a subsequent sustainability report  | <ul style="list-style-type: none"> <li>- Answer to external pressures to the company only</li> <li>- Only driven by internal motivations</li> <li>- External pressures important, but mainly driven internally</li> <li>- Internal motivations important but ultimately driven by external pressures</li> <li>- External pressures and internal motivations were considered as equally important</li> </ul> |
| Major changes between first and subsequent report(s) (if there were any subsequent reports)  | <ul style="list-style-type: none"> <li>- Five point Likert scale</li> </ul>   |
| Assessment and communication of sustainability efforts in elements of the company system <ul style="list-style-type: none"> <li>- Institutional framework</li> <li>- Operations and production</li> <li>- Management and strategy</li> <li>- Organisational systems</li> <li>- Procurement and marketing</li> <li>- Collaboration with other companies</li> </ul>  | <ul style="list-style-type: none"> <li>- Five point Likert scale</li> </ul>   |
| The sustainability report should/has allowed to... <ul style="list-style-type: none"> <li>- Assess sustainability efforts</li> <li>- Foster organisational change</li> <li>- Improve company's sustainability performance</li> <li>- Increase transparency of sustainability performance</li> <li>- Benchmark against other companies</li> <li>- Improve sustainability reputation</li> <li>- Promote sustainability efforts</li> <li>- Improve company's ranking position</li> <li>- Foster a stakeholder dialogue</li> <li>- Become a societal leader</li> <li>- Facilitate external audits</li> <li>- Meet GRI criteria</li> <li>- Raise employee awareness about required measures to</li> </ul> | <ul style="list-style-type: none"> <li>- Five point Likert scale</li> </ul>   |

|   |  |
|---|--|
| improve company's performance<br>- Illustrate positions as a sustainability frontrunner |  |
|---|--|

**Table 2 Variables used for the Organisational Change Management for Sustainability process part of the model used in this research**

| Variable  | Possible Values   |
|---|---|
| SR has facilitated changes                      | <ul style="list-style-type: none"> <li>- Not facilitated any changes in the company</li> <li>- Facilitated some minor changes in some parts of the company</li> <li>- Facilitated major changes in some parts of the company</li> <li>- Facilitated minor changes in the company as a whole</li> <li>- Facilitated major changes in the company as a whole</li> </ul> |
| (Perceived) Economic impact of the company      | Very low – Low – Neither high nor low – High – Very high  |
| (Perceived) Environmental impact of the company | Very low – Low – Neither high nor low – High – Very high  |
| (Perceived) Social impact of the company        | Very low – Low – Neither high nor low – High – Very high  |
| Stakeholder sensitivity                         | Strongly disagree – Disagree – Neither agree nor disagree – Agree – Strongly agree  |
| SR influenced corporate culture                 | No influence – Minor influence – Major influence  |
| Employee behaviour                              | No influence – Minor influence – Major influence  |

### 3.1. Data analysis methods

The quantitative data was analysed using descriptive and inferential statistics. The statistical analysis software IBM SPSS Statistics 22 for Windows (2015) was used for this purpose.

Central tendencies, especially the arithmetical mean indicating the average value of a variable category across the complete data set, and measures of dispersion helped to describe the distribution of the respondents' answers (see Ho, 2006; Saunders et al., 2007).

Bivariate analyses were conducted to analyse two variables simultaneously to identify possible relationships between them.

Cross-tabulations were used to identify possible interdependencies between variables (see Saunders et al., 2007). These helped to analyse multiple variables at once, and detect patterns in the data indicating possible relationships between the variables. When a pattern was detected, a correlation coefficient was calculated to explore the relationship in more detail. The correlation coefficient was derived by calculating the value of Pearson's  $r$  for interval and ratio variables or Spearman's  $\rho$  for pairs of ordinal variables (also possible for one ordinal and one interval variable) (see Field, 2009). For the analysis, the level of statistical significance was set to  $p < 0.05$ . In the case where statistical significance was higher for a particular relationship this was explicitly reported.

The open-ended questions helped to provide in-depth explanations of the SR and OCMS inter-relations. This included data related to the process of SR, challenges inherent to SR, organisational learning processes resulting in strategies to overcome these challenges, the

influence of SR on organisational change or vice versa and examples of organisational changes fostered by SR. They were analysed using Grounded Theory (see Glaser and Strauss, 1999; Glaser, 2002).

### 3.2. Limitations of the methods used

The generalizability of this project's findings to all companies active in SR may be limited to the application of a non-random sampling procedure and the focus on companies listed in the GRI Disclosure Database, and by the relative low number of responses, which may not fully represent the relationships between SR and OCMS. Generalizability could be improved by a study based on a randomly selected sample drawn from the total number of companies active in SR regardless of the guidelines applied.

The validity of this research might have been limited by the survey design that might not have fully covered all the items in SR and OCMS and how they interrelate. The identification of causal relationships and the limited generalizability of the findings may have affected the survey's external validity. A non-response bias may be caused by companies from sectors which were contacted but refused to complete the survey (e.g. agriculture and railroad). The survey respondents might not have had complete knowledge of the SR and OCMS processes.

A number of caveat should be highlighted: 1) reporting sustainability may not fully portray the companies' sustainability activities; 2) some companies may report only positive stories; and 3) the number of companies in the world are still low compared to the total number of companies in the world. It should also be noted that surveying 'intended' and 'achieved objectives' in one single survey might provide biased results.

The qualitative analysis of the phenomenon was used only as a supplementary method in this project.

## 4. Research results, findings, and analyses

The results of the analyses are provided as percentages and as mean values (M) with corresponding standard deviations (StD) (see Jupp, 2006). Mean values are related to a scale from 1 (strongly disagree) to 5 (strongly agree) for each of the variables.

The majority of the respondents were from European<sup>2</sup> companies (62%). These were followed by North American companies (13%), Asian companies (16%), and Latin American companies (8%). There were considerably fewer reports and respondents from Oceania (3%), and Africa (1%).

The respondents included the following sectors: financial services (20% of the respondents), energy (10%); telecommunications and food and beverages (each with 7%) aviation, chemicals, and construction (each with 4%); forest and paper products, and mining (each with 3%); commercial services, and healthcare (each with 2%); transport, computers and technology hardware, and automotive (each with 1%); and other (30%).

Most of the responses came from companies with more than 5,000 employees (45%), followed by companies with 1,000 to 4,999 employees (24%), and 500 to 999 employees (11%). The remainder of the companies (17%) had 1 to 499 employees.

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<sup>2</sup> In this context, European companies refer to companies from Western and Central Europe.

The respondents indicated that the reports have been mainly developed by the corporate responsibility department (71%), see Figure 3. Other departments involved in developing the report included environmental affairs (24%), human resources (21%), public relations (20%), marketing (18%), compliance (18%), and management (board of directors) (18%). Twenty respondents (22%) stated that ‘other’ departments, which were primarily related to corporate communication entities, were involved in preparing SRs. These were primarily related to corporate communication entities. The large difference between the CS department and the other units involved in this process showed that in most companies the CS department operated either alone or was linked to other departments (Figure 3).

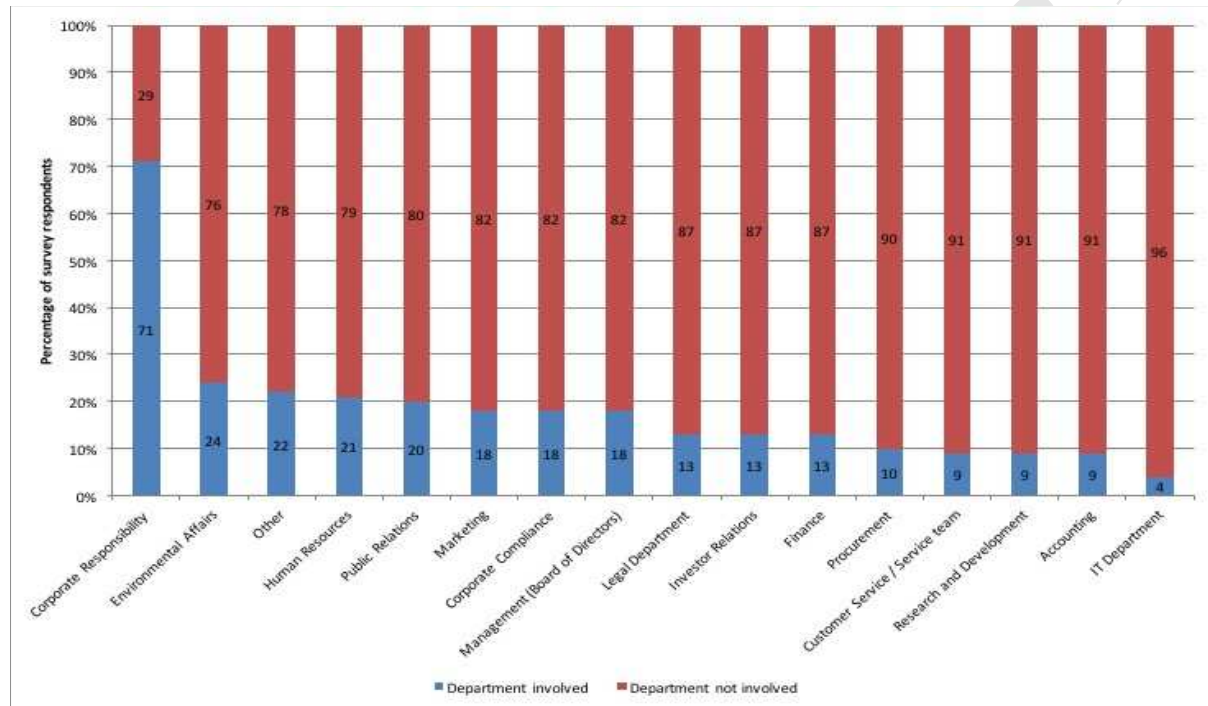
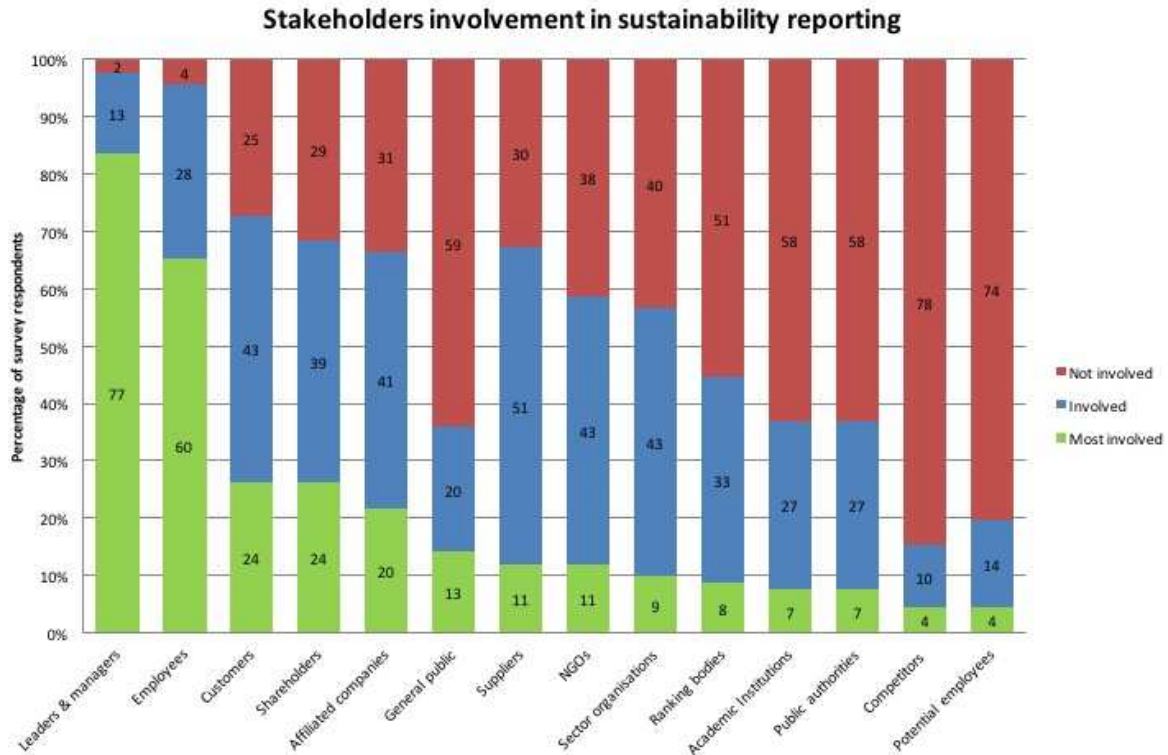


Figure 3 Survey results showing the departments responsible for developing the sustainability report



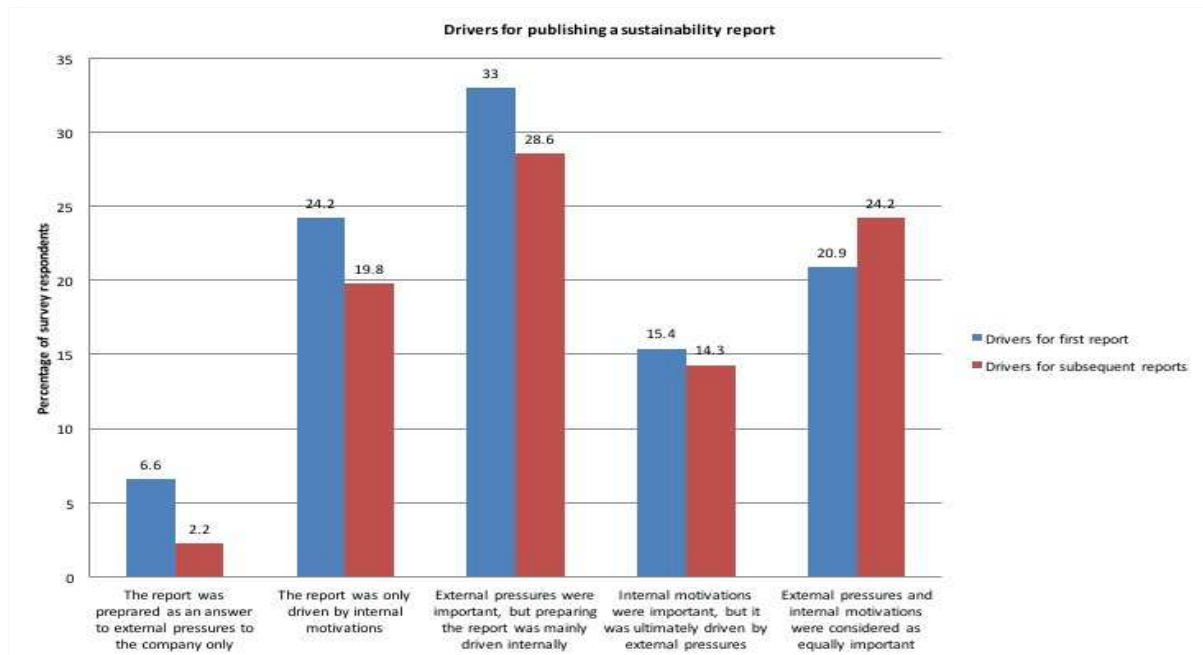
**Figure 4** Survey results showing stakeholders' involvement in sustainability reporting

Company leaders and managers were perceived the most involved and engaged with the SR process (see Figure 4). Additionally, external stakeholders, such as customers and shareholders, were also rated important, suppliers, while NGOs, or competitors from the same sector, gained importance when they were placed in the category 'involved' compared to their relevance when considered 'most involved'.

The survey asked the respondents if their respective reports assess and communicate the sustainability efforts taking place in the different elements of their company's system. The respondents indicated that the reports focus mainly on: Management and strategy element ( $M = 4.18$ ,  $StD = 0.625$ ); Operations and production ( $M = 4.14$ ,  $StD = 0.659$ ); Institutional framework (e.g. policies, strategies, etc.) ( $M = 4.07$ ,  $StD = 0.727$ ). The least covered were Procurement and marketing system ( $M = 3.88$ ,  $StD = 0.758$ ) and the Organisational system ( $M = 3.85$ ,  $StD = 0.759$ ).

#### 4.1. Motivations for publishing a report

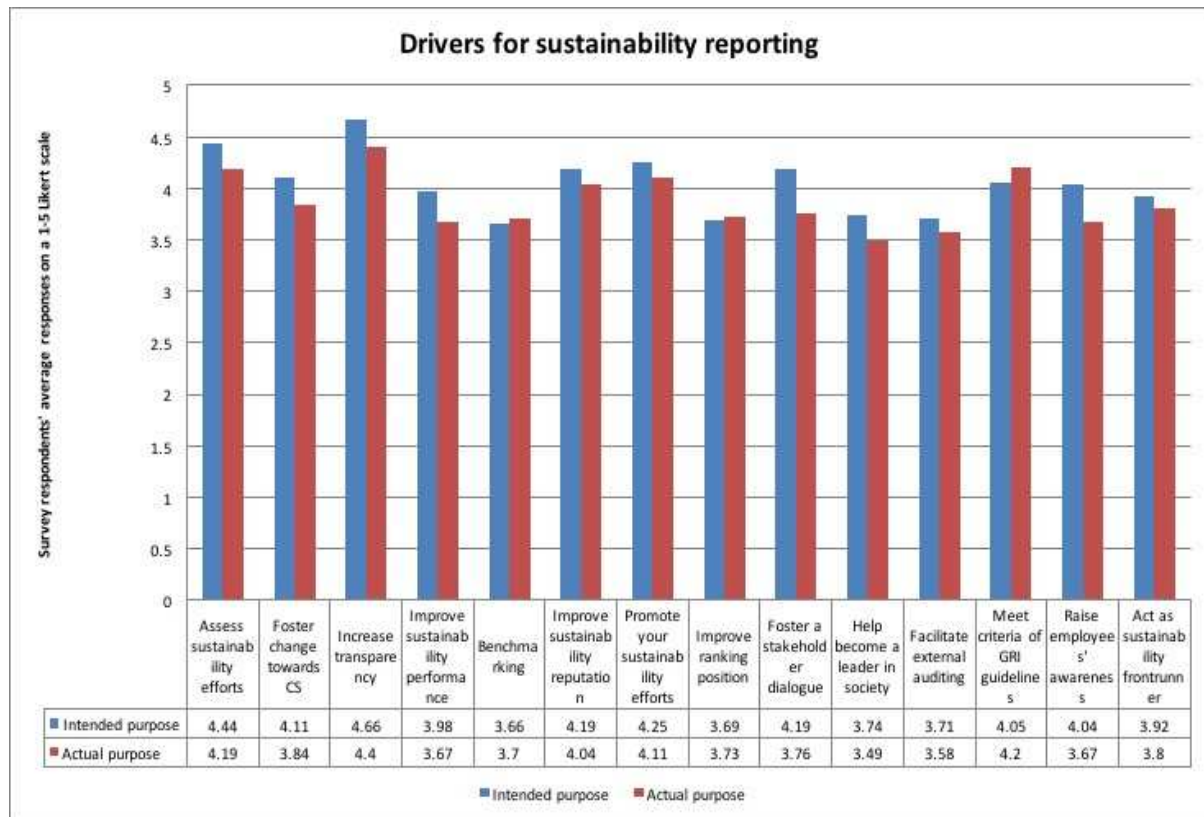
Figure 5 shows that the decision to publish a report was driven primarily by internal motivations (indicated by 57.20% of the respondents for the first report, and 48.40% for subsequent reports). This was followed by a combination of internal motivations and external stimuli (20.90% for the first report, and 24.20% for subsequent ones). External pressures had a lesser role in the decision to publish a report (22.00% for the first report, and 16.50% for subsequent ones). The results between the first report and subsequent ones indicate a move towards a more combined approach of internal motivations and external pressures.



**Figure 5 Drivers for publishing a sustainability report**

The survey asked about the intended and achieved purposes of SR. The purpose of this was to find out if there any differences between these two. As Figure 6 shows the companies are achieving most of their intended SR purposes. Figure 6 also shows that the main intended objectives to publish a report were to increase the transparency of the sustainability performance ( $M = 4.65$ ), assess sustainability ( $M = 4.45$ ), promote sustainability efforts ( $M = 4.26$ ), foster a stakeholder dialogue ( $M = 4.23$ ), and improve reputation for sustainability ( $M = 4.23$ ). The main results from the reporting process were: increasing the transparency of sustainability performance ( $M = 4.65$ ); assessing sustainability ( $M = 4.45$ ); meeting the GRI criteria ( $M = 4.18$ ); promoting sustainability efforts ( $M = 4.12$ ); improving sustainability reputation ( $M = 4.06$ ); and, fostering change ( $M = 3.84$ ). It should be noted that all of the objectives were higher than 3, i.e. the respondents mostly agreed with all the intended objectives that reporting should achieve and already does.





**Figure 6 Respondents' answers to the intended objectives of sustainability reporting and its objectives**

The majority of the respondents agreed (26%) or strongly agreed (34%) that there have been changes due to the development of a report. The respondents indicated that SR has been most likely to facilitate change in company departments (94.5%) (see Figure 7); 30.8% with minor changes, and 26.4% with major changes, changes affecting the whole company were induced by SR to a lesser extent; minor 20.4%, and major 16.5%.

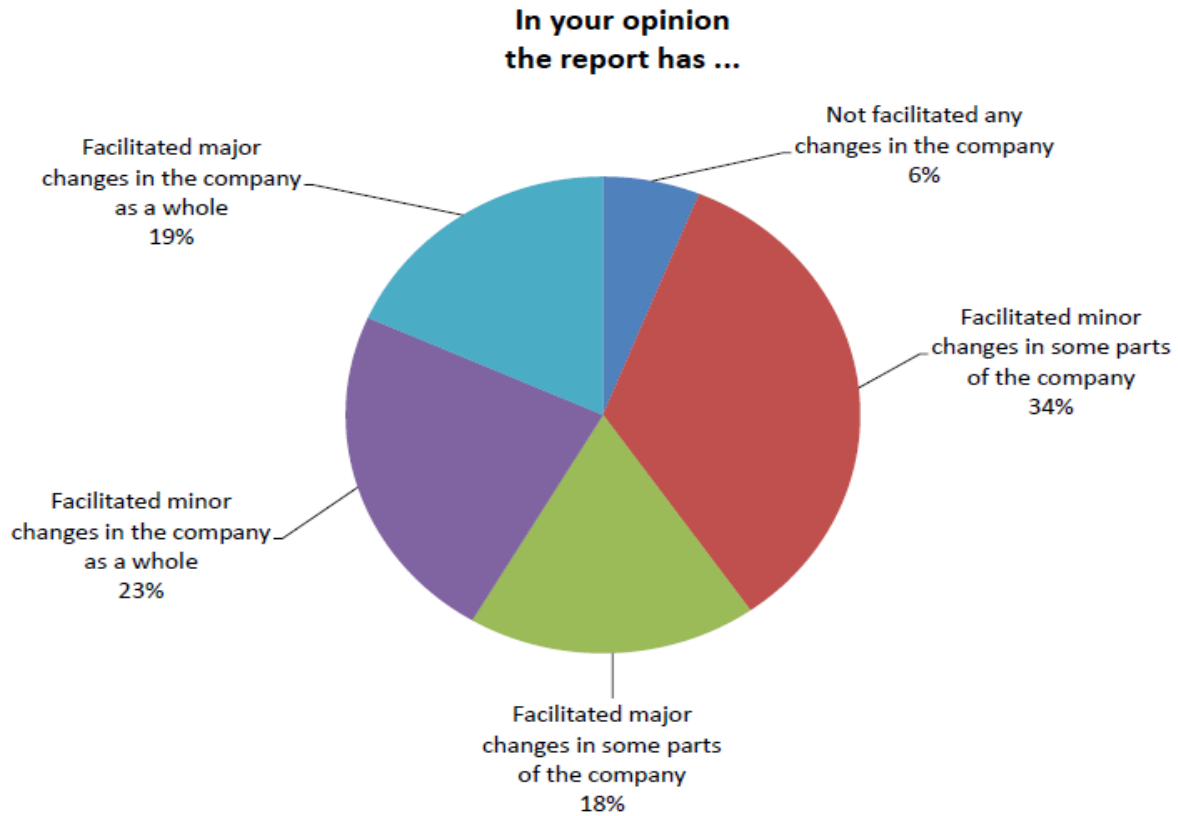


Figure 7 Change facilitation by Sustainability Reporting

#### 4.2. Findings from the open-ended questions

The major changes between the first report and subsequent ones, as indicated by the respondents, were:

- Data and indicators, including more effective data gathering, more detailed data, reporting on more indicators, more coverage and depth on sustainability topics, better compliance with the GRI guidelines, and an increase of GRI level;
- Strategy and organisational change, including a change from environmental to sustainability focus, inclusion of economic and environmental issues (the first report was mainly focused on social ones), change from reporting a collection of activities to a more strategic view of sustainability, more comprehensive report of issues (e.g. environmental ones), expansion to include more business operation, better collaboration between company functions, gradual change of employee attitudes and behaviours, continuous learning and improvement, and a change in culture to embrace sustainability practices;
- Reputation and validation, such as more and better transparency, an increase of disclosure, and better external assurance and validation; and
- Stakeholders, including an increase of communication, better dialogue, and more support from stakeholders.

The benefits that the respondents highlighted about sustainability reporting were:

- Staff: increased awareness and knowledge about sustainability, higher motivation, and better staff well-being;
- Collaboration: better partnerships with stakeholders;

- Reputation: more credibility by explaining what the company stands for; increase in brand protection and enhancement; more transparency (e.g. about the company goals); increase in reputation; presence in the global sustainability arena; and an increase of external profile;
- Stakeholders: better supply chain resilience; better customer understanding of the company's effects on society, the environment, and the economy; better engagement with stakeholders; and obtaining and maintain the 'licence to operate';
- Communication: summarising sustainability efforts, creating a platform for communication progress and outcomes; and demonstrate sustainability efforts to stakeholders (e.g. customers and partners);
- Leadership: become and demonstrate leadership in sustainability as a company; and improve in sustainability rankings;
- Outcomes: performance monitoring, and set targets;
- Collaboration: systematic approach to data collection and informing internal management; greater sense of unity as an international company; and collaboration with other companies;
- Strategy: set an agenda; provide a materiality analysis; and improve sustainability efforts by incorporating it into strategic planning; and
- Change: new project ideas on how to comply with the GRI guidelines; greater understanding of sustainability drivers and how they relate to corporate drivers; clearer understanding of operations' contributions to sustainability; better championing of sustainability efforts internally; better understanding of sustainability data gaps; greater 'buy-in' from management and decision-makers; providing a good start for the sustainability journey; driver for sustainability change; further improvements in sustainability reporting; and changes of employee behaviours.

A quote from one of the respondents provides a good summary of the benefits of sustainability reporting: *"I am not sure many people read our entire report, but the process of collecting and reporting makes much data visible for people with specific interests. I believe this level of transparency, as well as the performance we report, does help our reputation - it also fosters management discussion on many metrics that are not part of traditional financial reporting. This allows us to compare our performance to our policies and broad business objectives, which in turn we have integrated into management initiatives."*

Some respondents indicated that SR does not facilitate change because reports are voluntary, and in some cases (e.g. in the finance sector) the company has only indirect sustainability impacts.

The main challenges in developing and publishing sustainability reports were:

- Data, including collection, accessibility, quality, confidentiality of data, and key performance indicator's determination;
- Communication, including being consistent in the story, making the report interesting and readable, reporting everything but delivering one message, the connection between performance priorities and reporting, and reducing the potential multiple interpretations of the report's purpose;
- Collaboration between the different departments;
- Staff's lack of understanding;
- Resources, such as lack of them, cost of data gathering, and time and budget constraints;

- Validation and stakeholders, including passing the auditing process, and increasing external pressure from investors and regulators;
- Commitment, such as getting management to 'buy-in', having the CEO on board, obtaining people's interest, and building capacity of local champions; and
- GRI guidelines, because sometimes they do not have relevance to a particular industry or business model, and fulfilling the guidelines requirements.

Some of the lessons highlighted by the respondents that could help other companies in their SR efforts included:

- First collect the data, then evaluate them to understand them, and then manage them and improve the outcome;
- Reach higher every year;
- GRI guidelines are a great help in starting the process;
- The report is a good starting point to raise sustainability awareness;
- Make sure that environmental and social issues are core elements of any decision in the company;
- Staff should have significant involvement in developing the report;
- Reviewing other reports can be a good start on how to prepare the report;
- Reporting is a journey, it should evolve as the organisation changes;
- There is no 'one size fits all';
- SR is an excellent tool to assess performance; and
- "Change is a small steps approach - go for small victories".

An indicative quote of the complexity of developing the report was: *"Writing a sustainability report means walking a fine line between what various stakeholders want to say. It is very important to maintain the integrity and spirit of the report: worst case scenario is producing a sales document with no substance."*

A quote from one of the respondents highlights the link between the SR and OCMS processes: *"For us sustainability reporting has been a journey of continuous improvement, always learning from new developments in reporting guidelines, benchmarking with local companies and learning from international best practicing corporates. This has helped us to re-look at our sustainability initiatives and make amendments where necessary which has helped us to improve our business performance as well as enhance our corporate image."*

The estimated costs to prepare and publish a sustainability report were 57,532 EUR (on average), with a standard deviation of 64,458 EUR. The highest cost for a report was 310,000 EUR, while the lowest was 3,300 EUR. This indicates that companies need to allocate significant resources to develop and publish a sustainability report.

#### **4.3. Inferential statistics to explore the relationship between Sustainability Reporting and Organisational Change Management for Sustainability**

The reasons for publishing a sustainability report varied to a little extent between subsequent reports that were published by a company ( $r = 0.653$ ,  $p < 0.001$ ). The findings indicated that the motivations to foster change with the help of SR was closely linked to desired improvements in the sustainability performance ( $r = 0.529$ ,  $p < 0.001$ ) and to improve the company's sustainability reputation ( $r = 0.441$ ,  $p < 0.001$ ).

The range in the correlations shows that SR-related change was primarily intended to enhance CS. Table 3 shows the most important correlations between SR-related change and other SR aims of the most important correlations between the variables (the complete table is shown in Appendix 1). As there was also a strong link between the aim to promote the company's sustainability efforts and desired reputational gains ( $r = 0.667$ ,  $p < 0.001$ ), companies may have used organisational change to improve their corporate image. This finding is supported by a strong correlation between reputation and the intention to improve a company's ranking position in sustainability assessments ( $r = 0.561$ ,  $p < 0.001$ ). By improving their ranking position, companies aimed at becoming a societal leader ( $r = 0.548$ ,  $p < 0.001$ ). Becoming a societal leader was closely linked to the intention to illustrate the company's position as a sustainability frontrunner ( $r = 0.535$ ,  $p < 0.001$ ), which shows that companies simultaneously pursued several goals by publishing sustainability reports, reaching from organisational change to improve the CS performance to improvements of the public corporate image.

**Table 3 Inferential statistics comparing the correlations between SR-related change and other SR aims of the most important correlations between the variables**

| Intended purpose of SR                                   | Improve the company's sust. performance | Improve the company's sust. reputation | Improve the company's ranking position | Help the company become a leader in society | Illustrate the company's position as a sust. frontrunner | Promote sustainability efforts |
|--|---|--|--|---|--|--------------------------------|
| Foster change towards sust. in the company               | $r = 0.529$<br>$p < 0.001$              | $r = 0.441$<br>$p < 0.001$             | $r = 0.342$<br>$p < 0.001$             | $r = 0.381$<br>$p < 0.001$                  | $r = 0.339$<br>$p < 0.001$                               | $r = 0.403$<br>$p < 0.001$     |
| Improve the company's sust. performance                  |   | $r = 0.345$<br>$p < 0.001$             | $r = 0.370$<br>$p < 0.001$             | $r = 0.351$<br>$p < 0.001$                  | $r = 0.276$<br>$p < 0.008$                               | $r = 0.328$<br>$p < 0.001$     |
| Improve the company's sust. reputation                   |   |  | $r = 0.561$<br>$p < 0.001$             | $r = 0.429$<br>$p < 0.001$                  | $r = 0.510$<br>$p < 0.001$                               | $r = 0.667$<br>$p < 0.001$     |
| Improve your company's ranking position                  |   |  |  | $r = 0.548$<br>$p < 0.001$                  | $r = 0.510$<br>$p < 0.001$                               | $r = 0.454$<br>$p < 0.001$     |
| Help the company become a leader in society              |   |  |  |   | $r = 0.535$<br>$p < 0.001$                               | $r = 0.311$<br>$p < 0.003$     |
| Illustrate the company's position as a sust. frontrunner |   |  |  |   |  | $r = 0.431$<br>$p < 0.001$     |

The companies expected strong effects from SR; however, the actual SR-induced changes could not entirely meet the ambitions, as showed by the imperfect relationships ( $r < 1$ ) between the variables describing the intentions underlying the disclosure of sustainability information and the actual role of SR in these companies, as shown in Table 4 (the complete table is shown in Appendix 2). In general, expectations about the capabilities of SR to serve a particular purpose were higher than the purpose SR was able to serve, which was shown by the correlation coefficients describing the relationship between the intended and actual role of SR. While reporting met the expectations concerning improvements in transparency ( $r = 0.546$ ,  $p < 0.001$ ), assessing the company's sustainability efforts ( $r = 0.469$ ,  $p < 0.001$ ), promoting sustainability efforts ( $r = 0.597$ ,  $p < 0.001$ ), improving the company's reputation ( $r$

= 0.545,  $p < 0.001$ ), and fostering change towards sustainability ( $r = 0.458$ ,  $p < 0.001$ ) to a great extent, the capability of SR to contribute to fostering a stakeholder dialogue about sustainability issues was comparatively limited ( $r = 0.345$ ,  $p < 0.001$ ). Interestingly, in only one case reality exceeded the company's expectations, i.e. the reports met the GRI criteria to a greater extent than expected, which is also shown in the moderate correlation of these items ( $r = 0.347$ ,  $p < 0.001$ ).

**Table 4 Inferential statistics showing the correlations between the actual role of SR and its intended purpose for the most important correlations**

| Intended purpose of SR               | Actual role of SR          |                               |                                |                                   |                                      |                             |                            |
|--------------------------------------|----------------------------|-------------------------------|--------------------------------|-----------------------------------|--------------------------------------|-----------------------------|----------------------------|
|                                      | Increase transparency      | Assess sustainability efforts | Promote sustainability efforts | Improve sustainability reputation | Foster change towards sustainability | Foster stakeholder dialogue | Meet GRI criteria          |
| Increase transparency                | $r = 0.546$<br>$p < 0.001$ | $r = 0.402$<br>$p < 0.001$    | $r = 0.234$<br>$p < 0.26$      | $r = 0.185$<br>$p < 0.79$         | $r = 0.181$<br>$p < 0.085$           | $r = 0.089$<br>$p < 0.402$  | $r = 0.303$<br>$p < 0.003$ |
| Assess sustainability efforts        |                            | $r = 0.469$<br>$p < 0.001$    | $r = 0.365$<br>$p < 0.001$     | $r = 0.321$<br>$p < 0.002$        | $r = 0.371$<br>$p < 0.001$           | $r = 0.139$<br>$p < 0.189$  | $r = 0.243$<br>$p < 0.2$   |
| Promote sustainability efforts       |                            |                               | $r = 0.597$<br>$p < 0.001$     | $r = 0.572$<br>$p < 0.001$        | $r = 0.440$<br>$p < 0.001$           | $r = 0.205$<br>$P < 0.052$  | $r = 0.178$<br>$p < 0.091$ |
| Improve sustainability reputation    |                            |                               |                                | $r = 0.545$<br>$p < 0.001$        | $r = 0.457$<br>$p < 0.001$           | $r = 0.144$<br>$P < 0.175$  | $r = 0.212$<br>$p < 0.044$ |
| Foster change towards sustainability |                            |                               |                                |                                   | $r = 0.458$<br>$p < 0.001$           | $r = 0.008$<br>$p < 0.939$  | $r = 0.096$<br>$p < 0.363$ |
| Foster stakeholder dialogue          |                            |                               |                                |                                   |                                      | $r = 0.345$<br>$p < 0.001$  | $r = 0.172$<br>$p < 0.103$ |
| Meet GRI criteria                    |                            |                               |                                |                                   |                                      |                             | $r = 0.347$<br>$p < 0.001$ |

The changes fostered by SR helped to induce improvements in the corporate sustainability performance ( $r = 0.73$ ,  $p < 0.001$ ). Hence, SR helped to enhance CS activities. Additionally, these fostered changes were used to promote sustainability efforts ( $r = 0.555$ ,  $p < 0.001$ ), to improve the companies' ranking positions ( $r = 0.541$ ,  $p < 0.001$ ) and to benchmark the sustainability performance against other companies ( $r = 0.505$ ,  $p < 0.001$ ). Thus, these changes were used to actively promote CS activities among stakeholders to improve the image of the company as a sustainable firm among stakeholders. Additionally, companies used their improved ranking positions to market sustainability and to use their improved competitiveness to push changes in other industries as well. The latter is reflected in the link between changes fostered by SR and the possibility to become a societal leader ( $r = 0.489$ ,  $p < 0.001$ ).



In general, if change by engaging in SR was intended by the companies, actual change was fostered in most of the companies under scrutiny ( $r = 0.458$ ,  $p < 0.001$ ) and SR was perceived a factor that facilitated these changes ( $r = 0.308$ ,  $p < 0.003$ ).

The more involved the department(s) responsible for SR were in corporate decision-making processes, the more change was facilitated by sustainability disclosures ( $r = 0.25$ ,  $p < 0.017$ ). Thus, with these departments involved, decisions for the enhancement of CS activities may be influenced more directly by insights and arguments gained from the SR process. Stakeholders sensitive to unsustainable behaviour also contributed to changes induced by such disclosures ( $r = 0.265$ ,  $p < 0.011$ ).

Additionally, the assessment and communication of sustainability efforts had effects on different elements of the company system. If sustainability efforts were assessed and communicated in the element of management and strategy ( $r = 0.448$ ,  $p < 0.001$ ) and the organisational system ( $r = 0.427$ ,  $p < 0.001$ ) SR fostered organisational change to a significant extent. These results indicate that the influence assessing and communicating sustainability efforts has on a particular company's elements is due to change fostered by SR. Additionally, assessment and communication of sustainability efforts in the institutional framework ( $r = 0.437$ ,  $p < 0.001$ ), and management and strategy ( $r = 0.541$ ,  $p < 0.001$ ), was positively correlated with improvements in the companies' sustainability performance.

There was also a significant positive correlation between SR facilitating changes in the company, and SRs' influence on the corporate culture ( $r = 0.419$ ;  $p < 0.001$ ). The link between changes fostered by SR and the influence of SR on the corporate culture ( $r = 0.377$ ,  $p < 0.001$ ) showed that significant changes in the corporate culture require major systemic changes in the company.

## 5. Discussion

The results indicate that European companies have been at the forefront of sustainability reporting, as well as responding to research about it. This concurs with the findings of Kolk (2008) and Lozano (2013b). In contrast to the literature (see Alonso-Almeida et al., 2014; Frynas, 2010; Gamerschlag et al., 2011), the results showed that factors, such as company size, industry membership and perceived corporate impact (economic, environmental, social), played a minor role in a firm's decision to start publishing SRs.

The responses to the survey indicated that the objectives of reporting are mainly: (1) transparency of sustainability performance; (2) assessing sustainability; (3) promoting sustainability efforts; (4) fostering stakeholder dialogue; (5) improving sustainability reputation; and (6) fostering change. This concurs with the objectives of SR, as discussed by Adams and McNicholas (2007); Gelderman, Daub, and Hesse (2009); Lozano and Huisinck (2011); and Lozano (2013c). There was a slight difference between the intended objectives of SR and its actual outcomes.

The results and findings highlighted that SR has been mainly driven by internal motivations, the "inside-out" type of Burritt and Schaltegger (2010). This was followed by mainly internal motivations for the first report, but a combination of internal motivations and external stimuli for subsequent reports. The latter indicates a move towards a more combined approach of internal motivations and external pressures. External pressures ("outside-in") of Burritt and Schaltegger (2010) had a lesser role in the decision to publish a report. External stimuli

played a lesser role. However, the results show that companies were affected by both internal motivations and external pressures. Therefore, Burritt and Schaltegger's (2010) typology could be extended to be: (1) "Only inside motivations"; (2) "Mainly inside motivations"; (3) "Equal inside motivations and external pressures"; (4) "Mainly external pressures"; and (5) "Only external pressures".

The respondents indicated that the company leaders and managers were the most involved actors in developing the report. This indicates that companies follow top-down (see Doppelt, 2003a) managerial measures and control (see Henriques and Richardson, 2005) approaches. However, the respondents highlighted that the SR process is important in fostering change, which complements Henriques and Richardson (2005) perspective, by indicating that although the directions are set up from the top with some guidance, internal change and innovation is important. This is in line with the arguments of planned change by Bennis, et al. (1969) and its use in the CS context by Lozano (2013b).

As Schaltegger and Wagner (2006) indicated, responsibilities for developing a sustainability report have been spread across different company departments and that the efforts have been, usually, compartmentalised. The results support this, but provide more details on the different departments that have been involved in developing reports. The reports have been mainly developed by the Corporate Responsibility department, with some input from environmental affairs, human resources, public relations, marketing, compliance, and management (board of directors).

The SR process facilitated changes in certain departments of the company and in the company as a whole, i.e. mainly incremental changes (see Dawson, 1994; Doppelt, 2003a; Gill, 2003); and some major changes in the departments and the company as a whole, i.e. radical changes (see Burnes, 2009; Meyerson, 2001). Change has been facilitated in the company because of the motivation of the department responsible for developing the SR. This confirms the links and role of the SR and OCMS processes, as postulated by Ioannou and Serafeim (2011).

The limited body of existing literature had assumed a positive relationship between SR and OCMS. This research analyses provides a more in-depth explanation of the relationship between the SR and OCM processes. The results showed that SR started to catalyse organisational changes and help to diffuse sustainability through communication, reinforcing Hedberg and von Malmberg's (2003) discussion. The analyses show that the SR and OCM processes have a reciprocal reinforcing relationship. Thus, SR can be considered both the outcome of change and a catalyst for change itself. This confirms the holistic nature of CS discussed by Lozano (2011) and Linnenlücke et al. (2009).

From the previous discussion, it is possible to propose an explanatory model (based on Figure 1) that elucidates the relationship between the SR and OCMS processes (see Figure 8). The figure shows that the development and publication of a sustainability report drives sustainability changes in the company, leading to a transition period during the development of the next report. During this process changes take place in data and indicators, strategy, organisational change, reputation and validation, stakeholders, and the report itself, which results in a *More Sustainability Oriented State* (MSOS). The changes in SR and OCMS start being institutionalised. This process is repeated when the next report starts being developed. It is important to foster the drivers to change, and apply the appropriate strategies to change to overcome the barriers to change. The institutional framework can help to maintain stability

during the changes, and thus facilitate CS institutionalisation. Research into the roles that the drivers to change, barriers to change, strategies to overcome resistance to change, and the institutional framework play in the relationship between the SR and OCMS processes should be carried out, since it was not within the scope of this research.

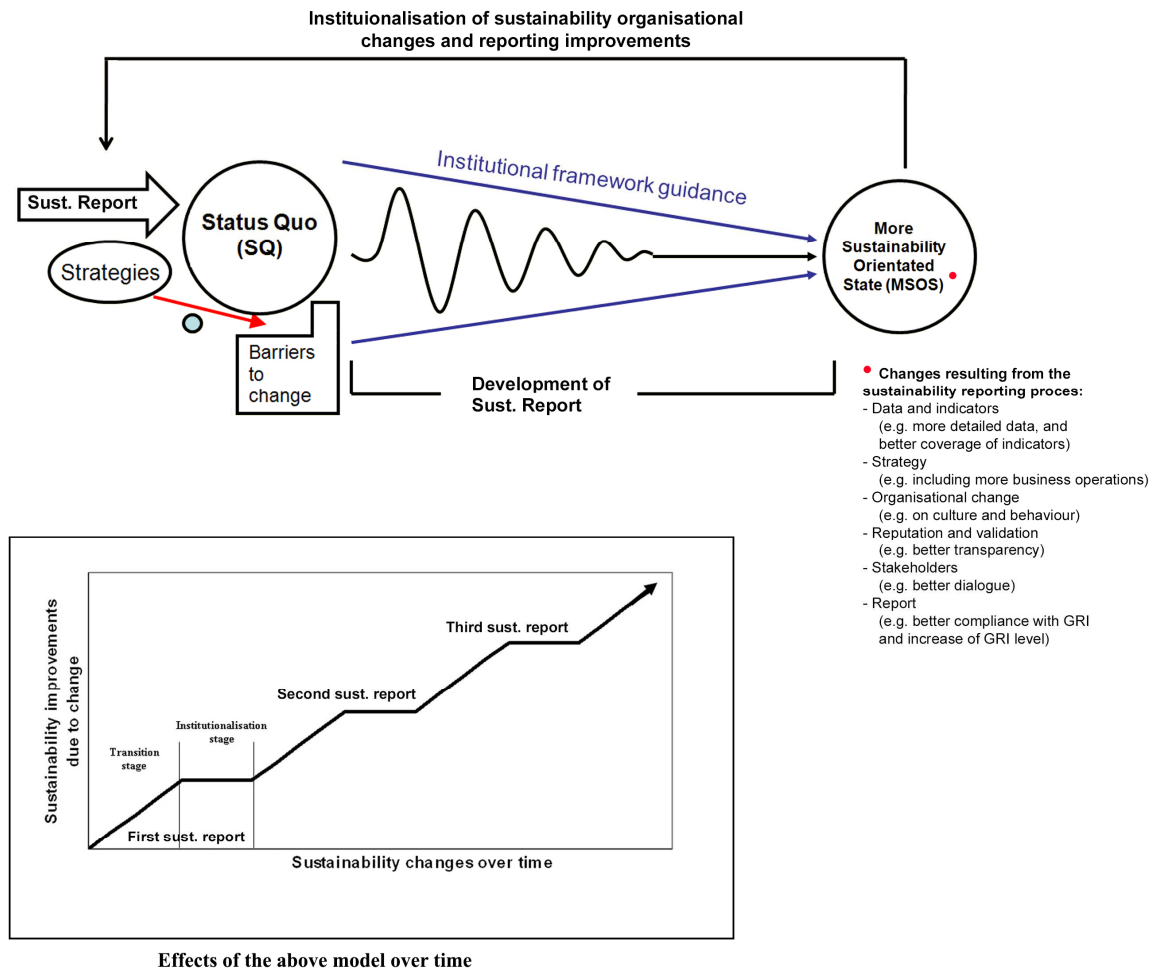


Figure 8 Framework depicting the intertwining stages between the Sustainability Reporting and Organisational Change Management for Sustainability processes in companies

## 6. Conclusions

SR has been considered an important catalyst for change towards sustainability and one of the main drivers of CS. However, there is limited research explicitly discussing the link between SR and OCMS. This paper was aimed at elucidating the inter-linkages between SR and OCMS.

The results showed that the decision to publish the first sustainability report has been primarily driven by company internal motivations, whilst for the following reports it has been due to a combination of internal motivations and external stimuli. The development and publication of a sustainability report drives sustainability changes in the company, leading to a transition period during the development of the next report. This leads to changes in data and indicators, strategy, organisational change, reputation and validation, stakeholders, and

the report itself. The changes become part of the organisation until the start of the following report.

The research shows that Sustainability Reporting and Organisational Change Management for Sustainability have reciprocal reinforcing relationships, where Sustainability Reporting provides a starting point for planning organisational change for sustainability and organisational change for sustainability improves the reporting process. This leads to an increase in CS performance, improved reputation, and enhancement of the company's CS awareness and behavioural change. Building upon Lozano's (2013b) premise that "...reporting does not stand alone within the company system...", and this research results, it can be postulated that "sustainability reporting and organisational change management for sustainability have a reciprocal reinforcing relationship, and these processes, in turn, are an integral part, and should reinforce, and be reinforced by, the sustainability efforts in the other elements of the company system (operations and production, strategy and management, and procurement and marketing) in the short-, long-, and longer-term".

To make companies more sustainability oriented, it is necessary to understand the holistic nature of CS and the synergies between the technical, managerial, and organisational processes over time. Understanding the links between the processes, such as Sustainability Reporting and Organisational Change Management for Sustainability, and promoting sustainability efforts across the system elements can help leaders better foster sustainability within their companies. In this journey, it is important to assess their sustainability efforts in a continuous manner, and use them to better plan organisational change management for sustainability.

Although the research was designed to address all possible variables for both SR and OCMS processes, there might have been some that were not covered. The findings may not be valid for all types of industry sector or all company size. However, the research provides an in-depth elucidation of the relationships between the SR and OCMS processes.

Further research should be conducted to demonstrate the inter-linkages between SR and OCMS. For example, a multi-case study based on interviews conducted with company representatives could provide more insights into the linkages. A long-term study of companies that intend to implement SR, as a sustainability management tool, would allow gaining of insights into the role of SR, based on a quasi-experiment. A two-stage research approach would, in the first step, allow for an assessment of sustainability awareness and CS performance in a company before SR is implemented. In a second step, this assessment would be repeated after SR has been implemented and a (or multiple) report has been published. This would enable the analysis of changes induced by SR and facilitate the evaluation of its effects isolated from other factors influencing OCMS processes. Thereby, either non-spuriousness of the link could be established, or moderating and/or intervening variables identified. Possible interrelations between the report's content and its influence on the degree and direction of change could be assessed. The role that drivers to change, barriers to change, strategies to overcome resistance to change, and the institutional framework play in the relationship between the SR and OCMS processes should also be investigated.

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## Appendix 1. Survey

Country of headquarters

*This question included a dropdown-list of countries to indicate the company's country of origin. For reasons of readability of this appendix, this list has been excluded from this document.*

Industry sector: Please choose one of the following answers from the list below.

- |   |   |
|---|---|
| <input type="radio"/> Agriculture                       | <input type="radio"/> Food and Beverages        |
| <input type="radio"/> Automotive                        | <input type="radio"/> Forest and Paper Products |
| <input type="radio"/> Aviation                          | <input type="radio"/> Healthcare                |
| <input type="radio"/> Chemicals                         | <input type="radio"/> Mining                    |
| <input type="radio"/> Commercial Services               | <input type="radio"/> Public Agency             |
| <input type="radio"/> Computers and Technology Hardware | <input type="radio"/> Railroad                  |
| <input type="radio"/> Construction                      | <input type="radio"/> Telecommunications        |
| <input type="radio"/> Energy                            | <input type="radio"/> Transport                 |
| <input type="radio"/> Financial Services                | <input type="radio"/> Other _____               |

Company size (employees)

- ☐ 1 - 49
- ☐ 50 - 249
- ☐ 250 - 499
- ☐ 500 - 999
- ☐ 1000 - 4999
- ☐ > 5000

Which company department(s) is (are) responsible for developing the sustainability report?  
Multiple answers are possible.

- |  |  |
|--|--|
| <input type="checkbox"/> Accounting                                | <input type="checkbox"/> IT Department                         |
| <input type="checkbox"/> Corporate Responsibility / Sustainability | <input type="checkbox"/> Legal Department                      |
| <input type="checkbox"/> Corporate Compliance                      | <input type="checkbox"/> Management (Board of Directors / CEO) |
| <input type="checkbox"/> Customer Service / Service team           | <input type="checkbox"/> Marketing                             |
| <input type="checkbox"/> Environmental Affairs                     | <input type="checkbox"/> Procurement                           |
| <input type="checkbox"/> Finance                                   | <input type="checkbox"/> Public Relations                      |
| <input type="checkbox"/> Human Resources                           | <input type="checkbox"/> Research and Development              |
| <input type="checkbox"/> Investor Relations                        | <input type="checkbox"/> Other _____                           |

The department(s) working on the report is (are) involved in internal decision-making processes.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

How many years have you been involved with sustainability reporting in your company?

Please choose one of the following answers from the drop-down menu.

- |                         |                            |
|-------------------------|----------------------------|
| <input type="radio"/> 1 | <input type="radio"/> 7    |
| <input type="radio"/> 2 | <input type="radio"/> 8    |
| <input type="radio"/> 3 | <input type="radio"/> 9    |
| <input type="radio"/> 4 | <input type="radio"/> 10   |
| <input type="radio"/> 5 | <input type="radio"/> > 10 |
| <input type="radio"/> 6 |                            |

What is your role in sustainability reporting at your company? Multiple answers are possible.

- ☐ You made the decision to prepare the report  
☐ You prepared the report  
☐ You oversaw the preparation of the report  
☐ You collected the data for the report  
☐ You supplied information for the report  
☐ Other(s) (please specify) \_\_\_\_\_

Who is in charge of the data collection for your company's sustainability report? Please provide title and contact details if it does not breach any confidentiality issues.

What do you consider to be ...

|   | Very low              | Low                   | Neither high nor low  | High                  | Very high             |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| ... the economic impact of your company?      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| ... the environmental impact of your company? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| ... the social impact of your company?        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

From the following list of five statements, please select the one that most represents your opinion about the main reason for publishing your first sustainability report.

- ☐ The report was/were prepared as an answer to external pressures to the company only  
☐ The report was/were only driven by internal motivations  
☐ External pressures were important, but preparing and publishing the report was mainly driven internally  
☐ Internal motivations were important, but it was ultimately driven by external pressures  
☐ External pressures and internal motivations were considered as equally important when preparing and publishing the report

Has your company published more than one sustainability report?

- ☐ Yes  
☐ No

What were the main reasons for publishing (a) subsequent report(s)?

- ☐ The report(s) was/were prepared as an answer to external pressures to the company only
- ☐ The report(s) was/were only driven by internal motivations
- ☐ External pressures were important, but preparing and publishing the report(s) was mainly driven internally
- ☐ Internal motivations were important, but it was ultimately driven by external pressures
- ☐ External pressures and internal motivations were considered as equally important when preparing and publishing the report(s)

To what extent do you agree with the following statement?

There have been major changes between the first and (the) subsequent report(s).

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither agree nor disagree
- ☐ Agree
- ☐ Strongly agree

What major changes could you point out between the first and subsequent reports?

Is your company currently still publishing sustainability reports?

- ☐ Yes
- ☐ No

What are the main reasons why your company stopped publishing sustainability reports?

To what extent do you agree with the following statements?

In your opinion, the sustainability report should:

|   | Strongly Disagree     | Disagree              | Neither Agree nor Disagree | Agree                 | Strongly Agree        |
|---|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|
| Assess your company's sustainability efforts  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Foster change towards sustainability in the company                                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Improve the company's sustainability performance                                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Increase the transparency of your company's sustainability performance                | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Benchmark own performance against other companies                                     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Improve your company's sustainability reputation                                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Promote your sustainability efforts   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Improve your company's ranking position   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Foster a stakeholder dialogue about corporate sustainability                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Help your company become a leader in society  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Facilitate external auditing of your company's sustainability efforts                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Meet the criteria defined in the GRI reporting guidelines                             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Raise employee awareness about required measures to improve the company's performance | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Illustrate your company's position as a sustainability frontrunner                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |



To what extent do you agree with the following statements?

In your opinion, the sustainability report has allowed your company to:

|   | Strongly Disagree     | Disagree              | Neither Agree nor Disagree | Agree                 | Strongly Agree        |
|---|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|
| Assess your company's sustainability efforts  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Foster change towards sustainability in the company                                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Improve the company's sustainability performance                                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Increase the transparency of sustainability performance                               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Benchmark own performance against other companies                                     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Improve your company's sustainability reputation                                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Promote your sustainability efforts   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Improve your company's ranking position   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Foster a stakeholder dialogue about corporate sustainability                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Help your company become a leader in society  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Facilitate external auditing of your company's sustainability efforts                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Meet the criteria defined in the GRI reporting guidelines                             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Raise employee awareness about required measures to improve the company's performance | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Illustrate your company's position as a sustainability frontrunner                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |

What do you think have been the benefits to your company from sustainability reporting?

To what extent do you agree with the following statements?

In your opinion, the report assesses and communicates the sustainability efforts taking place in:

|   | Strongly Disagree     | Disagree              | Neither Agree nor Disagree | Agree                 | Strongly Agree        |
|---|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|
| The institutional framework (including policies, strategies, etc.)  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Operations and production (technology, materials, energy sources, etc.)                                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Management and strategy (investment, business values and attitudes, vision, stakeholder engagement, etc.) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Organisational systems (culture, leadership style, problem-solving, innovation)                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Procurement and marketing (supply chain, customers, etc.)   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |
| Collaboration with other companies  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> |

In your opinion the report has ...

- ☐ Not facilitated any changes in the company
- ☐ Facilitated some minor changes in some parts of the company
- ☐ Facilitated major changes in some parts of the company
- ☐ Facilitated minor changes in the company as a whole
- ☐ Facilitated major changes in the company as a whole

What would you consider the reasons for not facilitating any changes?

In your opinion the report has ...

- ☐ No potential to drive changes in the company
- ☐ The potential to drive minor changes in some parts of the company
- ☐ The potential to drive major changes in some parts of the company
- ☐ The potential to drive minor changes in the company as a whole
- ☐ The potential to drive major changes in the company as a whole

Could you please provide some examples of changes due to sustainability reporting? Please comment on how they took place.

In your opinion, the sustainability report has ...

|  | ... no influence      | ... minor influence   | ... major influence   |
|--|-----------------------|-----------------------|-----------------------|
|  | ...                   | ...                   | ...                   |
| on the corporate culture                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| on the employees to act more sustainably | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Do you think the report could influence the corporate culture? If so, could you explain how?  
Could you please provide some examples of changes in the corporate culture and how they took place?

Do you think the report could influence the employees to act more sustainably? If so, could you explain how?

Could you please provide some examples of employees acting more sustainably and how these changes took place?

What do you think have been the main challenges in developing and publishing your sustainability report(s)?

How have you/do you plan to overcome the challenges in developing and publishing your report(s)?

What are three lessons you have learned from undertaking sustainability reporting at your company?

Lesson 1:

Lesson 2:

Lesson 3:

What could other companies learn from your experiences in sustainability reporting?

To what extent do you agree with the following statement?

The company's stakeholders are sensitive towards negative impacts of unsustainable operations and processes.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Neither agree nor disagree
- ☐ Agree
- ☐ Strongly agree

Which stakeholders (if any) were involved in preparing and publishing your sustainability report?

Please drag and drop each stakeholder into one of the boxes on the right hand side. In each box, you can reorder and rank the stakeholders in order of your preference (most preferred stakeholder at the top of the box).

Note: all of the stakeholders have to be moved into one of the boxes.

| Items   |               |
|---|---------------|
| Company leaders & managers                                    | Most involved |
| Competitors (from the same sector)                            |               |
| Shareholders  |               |
| Customers   | Involved      |
| Employees   |               |
| Suppliers   |               |
| Market entrants   | Not involved  |
| Other companies (e.g. partners, parent company, subsidiaries) |               |
| General public  |               |
| Non-governmental organisations                                |               |
| Sector organisations  |               |
| Academic Institutions   |               |
| Public authorities  |               |
| Potential employees   |               |
| Ranking bodies  |               |

Please answer the following questions if they do not breach confidentiality issues.

Could you please describe the process of data collection for the sustainability report?

Could you please describe the process used to analyze and aggregate the data collected?

Could you please provide an estimate of how much it costs your company per year to prepare and publish the sustainability report?

What future developments do you expect for sustainability reporting in companies?

**Appendix 2. Inferential statistics comparing the correlations between SR-related change and other SR aims**

|   | Assess your company's sust. efforts | Foster change towards sust. in the company | Improve the company's sust. performance | Increase the transparency of the company's sust. performance | Benchmark own performance against other companies | Improve the company's sust. reputation | Promote sust. efforts | Improve the company's ranking position | Foster a stakeholder dialogue about corporate sust. | Help the company become a leader in society | Facilitate external auditing of the company's sust. efforts | Meet the criteria defined in the GRI reporting guidelines | Raise employee awareness about required measures to improve company performance | Illustrate the company's position as a sust. frontrunner |
|---|-------------------------------------|--|---|--|---|--|-----------------------|--|---|---|---|---|---|--|
| Assess your company's sust. efforts   | 1.000                               | 0.297**                                    | 0.225*                                  | 0.278**  | 0.052   | 0.392**                                | 0.366**               | 0.255*                                 | 0.218*  | 0.234*                                      | 0.128   | -0.005  | 0.390**   | 0.342**  |
| Foster change towards sust. in the company                                      |                                     | 1.000                                      | 0.529**                                 | 0.186  | 0.181   | 0.441**                                | 0.403**               | 0.342**                                | 0.326**   | 0.381**                                     | 0.204   | 0.124   | 0.378**   | 0.339**  |
| Improve the company's sust. performance   |                                     |  | 1.000                                   | 0.243*   | 0.443**   | 0.345**                                | 0.328**               | 0.370**                                | 0.270**   | 0.351**                                     | 0.109   | -0.061  | 0.349**   | 0.276**  |
| Increase the transparency of your company's sust. performance                   |                                     |  |   | 1.000  | 0.237*  | 0.204                                  | 0.250*                | 0.174                                  | 0.415**   | 0.065                                       | 0.168   | 0.167   | 0.301**   | 0.226*   |
| Benchmark own performance against other companies                               |                                     |  |   |  | 1.000   | 0.276**                                | 0.241*                | 0.300**                                | 0.046   | 0.199                                       | 0.103   | -0.086  | 0.237*  | 0.214*   |
| Improve the company's sust. reputation  |                                     |  |   |  |   | 1.000                                  | 0.677**               | 0.561**                                | 0.307**   | 0.429**                                     | 0.080   | 0.239*  | 0.385**   | 0.510**  |
| Promote sust. efforts   |                                     |  |   |  |   |  | 1.000                 | 0.454**                                | 0.246*  | 0.311**                                     | 0.167   | 0.247*  | 0.447**   | 0.431**  |
| Improve the company's ranking position  |                                     |  |   |  |   |  |                       | 1.000                                  | 0.357**   | 0.548**                                     | 0.179   | 0.239*  | 0.331**   | 0.535**  |
| Foster a stakeholder dialogue about corporate sust.                             |                                     |  |   |  |   |  |                       |  | 1.000   | 0.210*                                      | 0.178   | 0.101   | 0.321**   | 0.249*   |
| Help the company become a leader in society                                     |                                     |  |   |  |   |  |                       |  |   | 1.000                                       | 0.228*  | 0.096   | 0.307**   | 0.559**  |
| Facilitate external auditing of the company's sust. efforts                     |                                     |  |   |  |   |  |                       |  |   |   | 1.000   | 0.251*  | 0.292**   | 0.295**  |
| Meet the criteria defined in the GRI reporting guidelines                       |                                     |  |   |  |   |  |                       |  |   |   |   | 1.000   | 0.136   | 0.254*   |
| Raise employee awareness about required measures to improve company performance |                                     |  |   |  |   |  |                       |  |   |   |   |   | 1.000   | 0.433**  |
| Illustrate the company's position as a sust. frontrunner                        |                                     |  |   |  |   |  |                       |  |   |   |   |   |   | 1.000  |
| ** . Correlation is significant at the 0.01 level (2-tailed).                   |                                     |  |   |  |   |  |                       |  |   |   |   |   |   |  |
| * . Correlation is significant at the 0.05                                      |                                     |  |   |  |   |  |                       |  |   |   |   |   |   |  |

|                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| level (2-tailed). |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| p < 0.001         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

### Appendix 3 Inferential statistics showing the correlations between the actual role of SR and its intended purpose for the most important variables

| Intended purpose  | Actual purpose                      |  |   |   |   |   |                            |   |   |  |  |   |   |   |
|---|-------------------------------------|--|---|---|---|---|----------------------------|---|---|--|--|---|---|---|
|   | Assess your company's sust. efforts | Foster change towards sust. in the company | Improve the company's sust. performance | Increase the transparency of your company's sust. performance | Benchmark own performance against other companies | Improve your company's sust. reputation | Promote your sust. efforts | Improve your company's ranking position | Foster a stakeholder dialogue about corporate sust. | Help your company become a leader in society | Facilitate external auditing of your company's sust. efforts | Meet the criteria defined in the GRI reporting guidelines | Raise employee awareness about required measures to improve company performance | Illustrate your company's position as a sust. frontrunner |
| Assess your company's sust. efforts                           | 0.469**                             | 0.260*                                     | 0.258*                                  | 0.194   | 0.088   | 0.288**                                 | 0.358**                    | 0.480**                                 | 0.128   | 0.294**                                      | 0.271**  | 0.068   | 0.311**   | 0.422**   |
| Foster change towards sust. in the company                    | 0.371**                             | 0.458**                                    | 0.455**                                 | 0.181   | 0.243*  | 0.457**                                 | 0.440**                    | 0.429**                                 | 0.268*  | 0.417**                                      | 0.226*   | 0.205   | 0.418**   | 0.292**   |
| Improve the company's sust. performance                       | 0.246*                              | 0.310**                                    | 0.475**                                 | 0.163   | 0.295**   | 0.293**                                 | 0.311**                    | 0.320**                                 | 0.127   | 0.218*                                       | 0.268*   | 0.147   | 0.298**   | 0.256*  |
| Increase the transparency of your company's sust. performance | 0.402**                             | 0.268*                                     | 0.272**                                 | 0.546**   | 0.281**   | 0.384**                                 | 0.398**                    | 0.314**                                 | 0.334**   | 0.240*                                       | 0.247*   | 0.105   | 0.431**   | 0.192   |
| Benchmark own performance against other companies             | 0.268*                              | 0.132                                      | 0.289**                                 | 0.147   | 0.447**   | 0.396**                                 | 0.325**                    | 0.276**                                 | 0.224*  | 0.090  | 0.228*   | 0.035   | 0.366**   | 0.187   |
| Improve your company's sust. reputation                       | 0.321**                             | 0.320**                                    | 0.299**                                 | 0.185   | 0.101   | 0.545**                                 | 0.572**                    | 0.376**                                 | 0.225*  | 0.337**                                      | 0.277**  | 0.229*  | 0.508**   | 0.395**   |
| Promote your sust. efforts                                    | 0.365**                             | 0.339**                                    | 0.333**                                 | 0.234*  | 0.128   | 0.423**                                 | 0.597**                    | 0.328**                                 | 0.268*  | 0.298**                                      | 0.241*   | 0.100   | 0.518**   | 0.342**   |
| Improve your company's ranking position                       | 0.322**                             | 0.252*                                     | 0.187                                   | 0.122   | 0.189   | 0.508**                                 | 0.363**                    | 0.623**                                 | 0.189   | 0.385**                                      | 0.327**  | 0.153   | 0.267*  | 0.514**   |
| Foster a stakeholder dialogue about corporate sust.           | 0.139                               | 0.008                                      | 0.087                                   | 0.089   | 0.021   | 0.144                                   | 0.205                      | 0.270**                                 | 0.345**   | 0.250*                                       | 0.149  | 0.121   | 0.249*  | 0.210*  |
| Help your company become a leader in society                  | 0.255*                              | 0.217*                                     | 0.297**                                 | 0.072   | 0.312**   | 0.372**                                 | 0.303**                    | 0.532**                                 | 0.062   | 0.629**                                      | 0.306**  | 0.165   | 0.319**   | 0.504**   |
| Facilitate external auditing of your company's sust. efforts  | 0.199                               | 0.150                                      | 0.014                                   | 0.059   | -0.010  | -0.014                                  | 0.010                      | -0.044                                  | 0.200   | 0.093  | 0.759**  | 0.179   | 0.238*  | 0.085   |
| Meet the criteria defined in the GRI                          | 0.243*                              | 0.096                                      | -0.041                                  | 0.303**   | 0.084   | 0.212*                                  | 0.178                      | 0.147                                   | 0.172   | 0.118  | 0.289**  | 0.347**   | 0.249*  | 0.364**   |



|   |         |        |        |       |        |         |         |         |       |         |         |         |         |         |
|---|---------|--------|--------|-------|--------|---------|---------|---------|-------|---------|---------|---------|---------|---------|
| reporting guidelines  |         |        |        |       |        |         |         |         |       |         |         |         |         |         |
| Raise employee awareness about required measures to improve company performance | 0.091   | 0.092  | 0.202  | 0.153 | 0.121  | 0.190   | 0.373** | 0.220*  | 0.155 | 0.084   | 0.314** | 0.129   | 0.512** | 0.206*  |
| Illustrate your company's position as a sust. frontrunner                       | 0.273** | 0.252* | 0.227* | 0.063 | 0.239* | 0.338** | 0.362** | 0.467** | 0.094 | 0.403** | 0.286** | 0.290** | 0.458** | 0.568** |

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

p < 0.001