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## Master Thesis

# Evaluating and Enhancing Transparency and Reporting Performance of the Telecommunications Service Sector in the ICT Industry drawing on the Concept of Responsible Corporate Governance

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From:

**Duygu Kesten**

510 Sok. No:5  
35030 Bornova – Izmir  
Turkey  
duygukesten@yahoo.com

Supervisor:

Justus von Geibler  
Wuppertal Institut für Klima, Umwelt, Energie GmbH  
Döppersberg 19  
42103 Wuppertal  
Germany  
+49 202 2492 -168  
justus.geibler@wupperinst.org

# Table of Contents

<i>Abstract</i> .....	<i>1</i>
<b>1. Introduction</b> .....	<b>2</b>
<b>1.1 Research Aim and Research Questions</b> .....	<b>2</b>
<b>1.2 Background and Motivation</b> .....	<b>2</b>
<b>1.3 Scope</b> .....	<b>5</b>
1.3.1 Boundaries .....	5
1.3.2 Limitations .....	5
<b>1.4 Methodology</b> .....	<b>5</b>
<b>2. Theory on Responsible Corporate Governance (RCG) and sectoral governance</b> .....	<b>7</b>
<b>2.1 What is RCG? Definition of Four Elements of RCG</b> .....	<b>7</b>
2.1.1 Responsible Corporate Governance vs. Classical way of Corporate Governance in the sustainability context .....	7
2.1.2 Introduction to the Core Elements of RCG .....	8
2.1.2.1 Stakeholder Empowerment .....	8
2.1.2.2 Management and Performance Evaluation Systems .....	9
2.1.2.3 Transparency Enhancement.....	9
2.1.2.4 Accountability Verification .....	10
2.1.3 Enlarging the picture: Applicability of RCG elements on sectors.....	10
<b>3. The ICT Industry within the Sustainability Context</b> .....	<b>12</b>
<b>4. Developing Benchmarking Criteria for an Analysis of the Transparency Level</b> .....	<b>13</b>
<b>4.1 Review of Existing Benchmarking Methodologies and Scoring Systems on Sustainability</b> .....	<b>13</b>
<b>4.2 Developing Assessment Criteria for Transparency</b> .....	<b>15</b>
4.2.1 Transparency of the Reporting Boundaries .....	16
4.2.2 Coverage of Sustainability Dimensions .....	17
4.2.3 Coverage of Both Production and Consumption Aspects .....	18
4.2.4 Reporting Honesty and Quality .....	20
4.2.5 Stakeholder Engagement in Report Preparation.....	22
4.2.6 Verification of the Information Disclosed.....	22
<b>5. Analysis of the level of transparency of the ICT industry through the reported performance.</b> ..	<b>24</b>
<b>5.1 Introductory overview of the analysed reports</b> .....	<b>24</b>
<b>5.2 Initiatives at Company level</b> .....	<b>24</b>
5.2.1 Deutsche Telekom [Det04] .....	25
5.2.2 Vodafone [Vod04] .....	28
5.2.3 British Telecom [Bt*04].....	30
5.2.4 Telefonica [Tel04].....	34
<b>5.3 Initiatives at Sectoral Level</b> .....	<b>37</b>
5.3.1 ETNO [Etn02] .....	37
<b>5.4 Summary of the Main Findings and Discussion</b> .....	<b>39</b>
<b>6. Conclusions and Recommendations</b> .....	<b>42</b>
<b>Appendix A: Literature</b> .....	<b>45</b>

## Abstract

The thesis aims at finding out the status quo at the transparency level of the telecommunications service branch of the information and communication technologies (ICT) sector and the ways to improve it by analysing the sustainability/environmental reports of five selected organisations in the European telecommunications service sector.

After an introduction to the research aims of this thesis and an overview of the used methodology, a review of the theory on responsible corporate governance (RCG) and on industry wide initiatives based on RCG elements is given. RCG is based on 4 core elements: stakeholder empowerment, presence of management and performance evaluation systems, transparency enhancement and accountability verification.

The thesis focuses on the transparency element of RCG and analyses the status quo at the level of transparency of the telecommunications sector through the developed benchmarking criteria. These are developed based on reviewing the major benchmarking methodologies and scoring systems of major benchmarks such as sustainability indices and the SustainAbility UNEP Trust Us Survey of Sustainability Reporting. However, so far the importance laid out by these entities on the issue of transparency and corporate social responsibility (CSR) performance is not at a desirable level. Therefore, the seven benchmarking criteria, the thesis develops intend to fill in the gaps encountered in the present benchmarking systems and to help provide a fuller transparency profile of the organisation in question. The seven criteria developed are:

”Transparency of reporting boundaries”, “coverage of sustainability dimensions”,  
”coverage of both production and consumption aspects”, “reporting honesty”, “reporting quality”,  
”stakeholder engagement” and “verification of the disclosed information”.

These criteria are then applied on selected reports from the ICT sector. The five evaluated sustainability reports were published by the companies “Deutsche Telekom”, “Vodafone”, “British Telecom” and “Telefonica”, additionally a report from a sectoral initiative called ETNO is evaluated.

As a result of this analysis, the thesis finds out that there are still gaps at the level of transparency at the telecommunications sector. The shortcomings, which decrease the credibility of the reports, are identified. Finally an industry wide collective and harmonised approach is proposed, which should be realised by the governance of the ICT sector based on Responsible Corporate Governance (RCG) elements.

# 1. Introduction

## 1.1 Research Aim and Research Questions

The thesis aims at finding out the status quo at the transparency level of the telecommunications service branch of the information and communication technologies (ICT) sector and the ways to improve it. To do that the thesis evaluates five sustainability reporting initiatives and as a result argues that the governance of the sector based on Responsible Corporate Governance (RCG) elements can enhance the transparency and the reporting performance of the industry.

Answers to the following research questions will be looked for:

1. What kind of criteria can be used to analyse the reporting performance and the level of transparency of the corporations?
2. According to those criteria developed, how does the current transparency and reporting performance of the ICT sector look? Are there gaps to reach the most adequate transparency state and if yes, where are they?
3. How can an ICT sector governed on RCG principles enhance the transparency and reporting performance of the corporations ?

## 1.2 Background and Motivation

### Why studying ICT and the telecommunications industry?

The world is getting digital. Internet and mobile telephones are everywhere. Telecommunication services, namely internet and mobile communication, have greatly penetrated into our lives. Even the children have come to possess a mobile phone, while almost at every sector the core business cannot run without ICT services. The way we live, the way we work, the way we communicate has been changing in an unimaginably speedy way.

But where are we really heading to on the way to attain sustainable development with this speed of dissemination of the ICTs into our lives? As the president of Club of Rome states “[the transition into a networked knowledge society] is crucial in opening up new opportunities for education, social inclusion and more efficient use of resources. [ICTs] are the effective tools of this transition.” [COR03 p.3] Indeed the use of telecommunication services are bearing a great potential for dematerialisation and resource efficiency and for bringing the knowledge, the communication to the disadvantaged regions thus helping their development. However the sustainability implications might be even more complex than it seems.

We do not need to drive to shopping, we are able to buy almost whatever we need online. But does the transportation further increase overall since products from remote regions are accessible more easily as it looks that the freight transport in EU has grown faster than GDP throughout the 90s? [Sch03]

We do not need to buy a book or a CD, we can access information and download the music online, contributing to resource savings. However, would the information available on the networks really replace the books and the CDs remembering the fact that television did not replace the newspaper or did not save us from visiting the distant nice countries that we were enabled to see on it? [Sch03]

We do not need to drive work or go to a meeting at a distant place, we can telework or replace the meeting by a teleconference. However, would everybody in 10 years move to the nicer areas outside the city and commute 200 km once a week, instead of commuting 10 km every day? [Sch03] Or are we informed about the occupational illnesses associated with teleworking? [Gri03]

The mobile telephones have been becoming smaller and smaller, using less and less of resources. However do we contribute to the extinction of Grauer’s gorilla in Congo by extracting the metal tantalum for miniaturising the electronic equipment, [AAG03] or don’t we create huge electronic waste with innovation

cycles and use phase becoming shorter and shorter? Or do we even increase the likelihood of throwing the electronic equipment containing a lot of hazardous substances along with the normal waste when the products have become so small now [KGT03]?

We are breaking up the barriers to information flow and communication, contributing to economic development and social sustainability. However have we managed to bring these services to the developing countries, remembering that while % 41 of the global online population is in the United States & Canada, only 4% is in South America. [Ddn04] Or have we managed to overcome the illiteracy among the users regarding the use of these services? I.e. did we already bridge the digital divide, making the services accessible to everyone?

We are increasing our social contacts and making the existing ones stronger. However, are we ready to handle this much of communication or are we aware of possible adverse social effects of it or of health impacts of too much mobile use?

These ideas are all showing that although at first sight the telecommunication sector does not seem to emit SO<sub>2</sub> or wastewater, the real sustainability picture at macro level might be a lot more complex or unpredictable than ever thought. Thus, for the technology the right direction for development to be given by the industry itself as well as by the regulatory authorities in the sustainability context, there needs to be more research and study done on it.

### **Why studying transparency element and reporting performance?**

Transparency is one of the 4 core elements of RCG. [KTS04] It is all about disclosing the TBL performance of the company in an open, clear and complete way to the wide public. Therefore this element is important in the sense that it gives the stakeholders the possibility to scrutinise how the corporations are really acting toward societies and environments and sets up a possible communication way between the reporting organisation and its stakeholders for further accountability.

There is indeed a growing interest from the major stakeholders' side toward increased transparency and accountability of the corporations across all major activities, including all possible operations, functions and levels. Thus, this growing demand from major stakeholders call corporations not only to discuss basic impacts that they pose only within the factory borders, but also to discuss a wider and deeper range of sustainability issues related to their activities, products or services, which would for instance also include supplier and consumer related issues as well. This demand for greater accountability of corporations also came from the World Summit on Sustainable Development in Johannesburg. [HPS02]

However, often criticised is the fact that the organisations use the tools of transparency, such as reporting, as a PR strategy. That is that they focus their Corporate Social Responsibility (**CSR**) efforts on external communication rather than realistically advancing their internal CSR performance, although communication of these efforts should be an end state rather than a goal. [KTS04]

Therefore, the use of transparency tools and communication of activities to the public does not qualify an organisation as transparent. In the context of the sustainability reporting, transparency requires disclosing and interpreting both bad and good performance, both benefits and risks at the three pillars of sustainability in a clear and realistic manner as a result of engagement with stakeholders.

The thesis will use the telecommunication service sector as a case study and will assess the level of transparency at this sector through a number of benchmarking criteria developed.

As later chapters will outline there are shortcomings and gaps at the extent of transparency of the selected sector, thus recommendations will be given for transparency enhancement by the means of an innovative governance scheme, which is the governance of the telecommunications sector that draws on elements of RCG.

## **Why proposing a sectoral governance based on RCG elements?**

As will be outlined in the next chapters, the thesis assumes that the elements of RCG are applicable on the governance of sectors too, which ensures a stakeholder oriented, ethical governance of the sectors. Such a stakeholder oriented sectoral governance is thought to be the answer to several problems and shortcomings of the business that we today face toward sustainable development and “draw a sector specific picture toward sustainable development by providing the opportunity to link sustainability initiatives at a macro-economic level” [KGE03 p.1]

“Sustainable development depends on the involvement of everyone and their willingness to take responsibility for our collective future.” [Cor03 p.7] As being one of the most important actors in this game, the industrial sector should get engaged in voluntary action and show serious commitment to fulfil its own responsibilities as well. Although we witness efforts of individual companies at taking steps toward sustainable development, where the brand names or financially stronger ones take their place in the front lines, there is a lack of collective action. As Ott and Takeuchi are defining “so far a [gap] exists between individual companies’ (micro) sustainable development goals and the aggregate national (macro) or supranational (meso) goals for sustainable development.” [OtT00]

This arises due to two reasons. First there is a lack of collective as well as coordinated and harmonised action at industry sector which is maybe the most important condition to attain sustainable development. Second, companies are expected to take over some of the social responsibilities that used to belong to the governments due to their increasing power inside the framework of the global economies to exert great impacts on communities and environment. However, they find it difficult to develop tools, which could connect their own business practices to societal policies for sustainable development. [BHK03] As outlined later in the thesis, a stakeholder oriented ethically governed sector can address these kind of problems by having more resources to mobilise, which is necessary for solving complex sustainability problems.

The actions of the companies in the same sector can be coordinated toward sustainable development, setting meso level (i.e.sector level) objectives, harmonising the agendas and the means to put them into practice across companies, which would include issues regarding the transparency enhancement and reporting practices as well. Small and medium size companies would find assistance in understanding and managing their impacts, which so far did not have enough expertise and resources to mobilise for sustainable practices [KuT03] When practices/actions are coordinated, the uncertainty in getting involved in new initiatives would decrease and the often declared statement of the business of investing in sustainability would ruin our competition ability would also invalidate.

Furthermore, the effort of listening to stakeholders would enhance the ability of the sector to solve more complex sustainability related problems.

The involvement of stakeholders in determining the sustainability path of the industry would help the sector become capable enough to flexibly respond to requirements of sustainability. This would leave more space on the stage for its self regulation, causing the governments leave the regulatory stage a bit more. This way, if stakeholder oriented sectors participate in determining the rules of the games, knowing their own industry’s impacts much better than anyone else, this would be more responsive and flexible to the different needs and conditions of companies in the sector and hence individual firms would need shorter learning periods and adaptation times than when the rules are solely made by the authorities for firms to comply to. [BHK03]

Within this framework, the consequences of setting and harmonising sustainability policies and standards across the companies in the sector, and being initiators of sustainability practices rather than “simple compliers to it” would also prepare the basis for positive improvements toward transparency enhancement, and the reporting performance of the companies. The thesis in fact will show in the conclusion and recommendations section where improvements in transparency and reporting performance would be achieved through such a sectoral governance scheme drawn on Responsible Corporate Governance elements.

## 1.3 Scope

### 1.3.1 Boundaries

Content Boundaries: Within the ICT sector, the thesis focuses on the telecommunication service sector, which provides internet infrastructure and service as well as mobile communication services.

Geographical & Availability Boundaries: The thesis covers the sustainability reporting initiatives of only the European members of the Global e-Sustainability Initiative (GeSI) in the field of telecommunications services. [Gsi02] The thesis analysed only the downloadable reports, therefore “O2” although being a UK based mobile communications company also as a member of GeSI was not analysed.

### 1.3.2 Limitations

One limitation is that the thesis analysed only the printable sustainability related reports (CSR reports, environmental reports, sustainability reports etc.). Annual reports and different sections of the websites to which the reporting organisations were sometimes directing their readers in those printed reports to get further information on a certain topic, has not been included in the analysis mainly due to time constraints. This of course might have led to an underestimation of the transparency of the organisations.

Furthermore, not many studies in the literature have been done on the sectoral governance schemes yet. Therefore the proposals of the thesis regarding the governance systems’ influence on increasing the accountability of the sectors as a whole may not represent a comprehensive sustainability view on the sector yet, but may still act as a good starting point for further research on the topic.

## 1.4 Methodology

The main questions of the thesis have been developed and answered as a result of the following methodology during the thesis period:

### **Review of the Theory on Responsible Corporate Governance and Industry wide Initiatives based on RCG elements**

The thesis has been developed around the concept of **Responsible Corporate Governance (RCG)**. The author has started studying **governance** as a concept and the Responsible Corporate Governance model in detail. This is known to be a stakeholder- oriented corporate governance model, which as explained below is known to be a sustainability oriented governance system for corporates. Furthermore, the sectoral initiatives applying one or more elements of RCG elements were studied. These studies were based on reviewing the existing literature on the concepts. At the end of this literature study, the author has decided to focus on the **transparency enhancement** element, being one of the 4 core elements of RCG and to study the status quo at the transparency level at the telecommunications service sector, which was selected as a case sector to apply this investigation to.

### **Review of Theory on the ICT Sector**

To analyse the level of transparency at the telecommunications service sector, the ICT industry in general in the sustainability context has been studied extensively from the existing literature. This equipped the author with a detailed background about the pros and cons of the industry in the sustainability debate. This knowledge has later been applied both while explaining in which context the benchmarking criteria applied to ICT services’ impacts and while analysing the level of transparency of selected telecommunications companies through the published sustainability reports.

### **Developing the Benchmarking Criteria**

To analyse the status quo at the level of transparency of the telecommunications sector, the benchmarking criteria were developed based on reviewing the major benchmarking methodologies and scoring systems as well as on RCG elements. The thesis explains this stage as a separate chapter below.

### **Analysis**

The sustainability / environmental reports of 5 organisations in the telecommunications sector, which were involved in the GeSI initiative were then analysed and rated based on the developed criteria, which formed the measuring stage of a complete benchmark study.

### **Conclusions and Recommendations**

Based on the findings in the analysis stage and the literature review done on RCG, the author proposes the governance of the telecommunications industry based on RCG elements to fill in the transparency related gaps found in the previous stage and highlights the thesis as a starting stage of a benchmark study.

## **2. Theory on Responsible Corporate Governance (RCG) and sectoral governance**

This section presents the theory about the Responsible Corporate Governance model and assumes its applicability on sectoral governance. To this purpose, the section first explains why RCG is a more useful governance model in the sustainability context than the classical way of corporate governance and then highlights certain exemplary sectoral governance schemes applying one or more elements of RCG.

### **2.1 What is RCG? Definition of Four Elements of RCG**

#### **2.1.1 Responsible Corporate Governance vs. Classical way of Corporate Governance in the sustainability context**

##### **The classical way of Corporate Governance (CG)**

Milton Friedman's (1970) well-known argument illustrates his idea of governance: "There is one and only one social responsibility of business – to use its resources and engage in activities designed to increase profits so long as it stays within the rules of the game, which is to say, engages in open and free competition without deception or fraud". [Fri70 p. 141]

This view clearly illustrates two basic questions the traditional governance model is developed around: "Is this profitable?" and "Is this legal?" [Pos03 p.27] As long as through an action, money can be made and as long as this action does not violate the rules, the action is justified and taken. Hence there is no answer to an additional third question: "Is this ethical?" which would require the business to make thoughts about its environmental and social responsibility as well.

In this traditional CG, corporations would be "involved in societal activity given the condition that it stays fully voluntary and results in a positive contribution to profit. Only for this reason, directors are informed about environmental risks, liabilities and key environmental compliance issues facing the company." [KTS04 p.16]

Furthermore, the corporations do not consider themselves responsible toward almost any stakeholders on which they have an impact, other than shareholders. The stakeholders do not participate in management and business issues and their views are hardly considered in decision making. Ref. necessary?

Iskander and Chamlou define this classical way of corporate governance "as a set of arrangements internal to the corporation that define the relationships between managers and shareholders." [IsC00 p.16]

By the mainstream accounting and finance literature, corporate governance is defined similarly as "the range of control mechanisms that protect and enhance the interests of shareholders of business enterprises" [BO02, p.783]

##### **Limitations of the classical CG**

However this traditional way of corporate governance is gradually changing as the expectations of society on corporations are increasing. Today, especially with the effect of globalisation, the corporations are operating across countries on giant budgets. The fact that the sales of General Motors in 1997 exceeded the combined GNP of 9 developing countries, together home to one-tenth of the world's population illustrates very well, what kind of power Multi National Corporations have come to possess and how big their impacts could be on communities and environments around the globe. [EIT01] Therefore the expectations of all stakeholders of corporations to act responsible toward the environment and communities have increased. This in turn requires the corporations to adopt some of the social responsibilities that used to belong to governments before and act as responsible corporate citizens. [KGE03]

Nevertheless the responsibility and legitimacy of corporate governance is now widely acknowledged, which

resulted in the focus shifting on how to “accountably integrate corporate action with the actors of the society to which RCG appears as a novel corporate governance approach”. [BHK03, p.20]

## **RCG as a novel approach**

The „World Business Council for Sustainable Development (WBCSD) defines Corporate Social Responsibility as the continuing commitment by business to behave ethically and to contribute to economic development while improving the quality of life for the workforce and their families as well as the local community and society at large.” [HoW00 p.9]

For these responsibilities going beyond the economic solidarity to be fulfilled by the business in turn requires the business to set appropriate objectives, possess the methods for attaining those objectives and the measures for monitoring performance, which actually defines the structures referring to Responsible Corporate Governance. [BHK03]

Unlike the traditional CG models, Responsible Corporate Governance is a “stakeholder oriented policy approach and allocates responsibilities to societal actors.” These societal actors are in turn expected to “drive the corporate accountability” [KTS04 p.15] Corporate Accountability refers to corporations being answerable for their actions and the consequences that follow from them. [KTS04]

Accordingly, RCG has 4 core elements [KTS04]:

## **2.1.2 Introduction to the Core Elements of RCG**

### **2.1.2.1 Stakeholder Empowerment**

In RCG, all parties affected by the company actions must be able to participate in a fair way in decision making and to have their views considered.

The highest level of such involvement of stakeholders can be created by network governance structures, at which the management is decentralised through the establishment of the self governing units in a network. Turnbull argues that the "democratisation of the wealth" in these self regulating networks is achieved through the involvement of stakeholders which are to replace the shareholders as the only kind of stakeholder in the traditional governance structures.[Tur02, 49] One example to such a network governance structure could be Mondragon Cooperatives (MCC), which is governed by a network of over 1,000 boards or control centres inside and outside the firm, providing a rich and inclusive web of stakeholder participation. [KTS04]

The organisations also have a lot to benefit from the involvement of stakeholders in the sense that resources that they did not have or control are brought into their use because every stakeholder has different capabilities (resources) that the other ones do not possess. Therefore through stakeholder based governance, an increased expertise and a facilitated problem solving instead of a centralised top-down manner of governance can be achieved. Indeed, according to the research reported in Management Science, the ideas about new product developments did not come from inside the organisation such as from R&D departments or strategy managers, but from customers, who are at least today outside the organisation and do not have any connection to the company other than buying its products or using its services. Therefore harnessing the stakeholders' interests and the formal integration of stakeholders into the governance structures would therefore bring invaluable resources to the use of the companies and this way increase efficiency and minimise risk. [Tur02]

### **2.1.2.2 Management and Performance Evaluation Systems**

Stakeholder empowerment should be followed up by the set-up of management systems in order to integrate stakeholder demands to the daily business routines. Management and performance evaluation systems are required “to review the priority action areas, develop TBL goals, compile relevant tools or instruments to reach these goals, develop routines and action plans, assign responsibilities to business units, departments and personnel and finally review the performance of these systems.” [KTS04 p.24]

There are a variety of tools, among these management systems, to manage environmental aspects, while tools available for managing the social or ethical side are quite limited. Indeed, a CSR Management System Standard is not available yet. ISO's Committee on Consumer Policy is conducting a feasibility study on standards for corporate social responsibility. Thus, lack of standards for management, reporting and verification of nonfinancial performance is one big challenge facing the business to carry out their responsibilities.

Similarly, tools for evaluating TBL performance are not well developed compared to the environmental performance indicators. Tools for TBL performance evaluation need also to be outward looking. In this respect, sector level supplements of the Global Reporting Initiative (GRI) form good examples. (see the next chapter) Another example is the stakeholder oriented TBL indicator development for the European Aluminium Industry using the COMPASS measurement system developed by the the Wuppertal Institute”. [KTS04]

### **2.1.2.3 Transparency Enhancement**

Corporate governance should ensure the full, timely and detailed disclosure of information on its sustainability performance and sustainability efforts to the public to ensure the transparency, which is a prerequisite of corporate accountability [Mal03], [KTS04]

The disclosure of efforts is of benefit both for the business and its stakeholders. The business obtains the possibility to holistically assess its performance by being enabled to make comparisons over time and at sectoral and macro levels which in turn results in enhancement of its understanding of its overall sustainability impact and of areas to be improved. Therefore as Hugh Morgan says “[being transparent] is the stimulus of the company to achieve excellence in environmental management, which drives accountability not only as a discipline for management and staff, but also builds a company culture in which for instance environmental considerations achieve increased focus and a higher priority. [HPS02 p.33] In addition, the disclosure of performance ensures the trust of stakeholders in the corporation, which is important for continued support for its license to operate. [HPS02]

The transparency is also necessary for ensuring the transformation of stakeholders as a “voice” in corporate governance to real actors. [Tur02] Without transparency, the stakeholders’ engagement in corporate governance would not happen and the corporations would be deprived of the constructive feedback of stakeholders which would help them fulfil their Triple Bottom Line (TBL) responsibilities.

Transparency can be ensured through several channels of communication such as reporting of the performance, involving in public relations activities or getting involved with sustainability indexes. [KTS04]

Sustainable development reporting, which is currently to a large extent a voluntary exercise, is one major tool to communicate the sustainability related performance and activities of companies. The sustainability reporting is still at its infancy and thus an evolving field. There are many companies that are still to publish their first report, while others have been publishing environmental reports for years, which are just moving to the "more complex area" of sustainable development reporting. [HPS02, p.7] Therefore, many corporations are at the so called experimentation stage with sustainability reporting. Nevertheless, it is of great benefit for all related parties that the sustainability reporting practices also gradually start moving to standardisation and harmonisation. This especially would be useful for the readers to easily compare the reported sustainability performance of the corporations. Research is still going on to guide the companies on how to produce sustainability reports and to harmonise the reporting practices. The most well-known one among them is the Sustainability Reporting Guidelines of Global Reporting Initiative. The 2002 version of the guidelines

addresses a number of factors under the triple bottom line of sustainability, namely transparency, inclusiveness, audibility, completeness, relevance, sustainability context, accuracy, neutrality, comparability, clarity and timeliness [Gri02]

#### **2.1.2.4 Accountability Verification**

Credibility and accountability of a corporation is assured only after the progress and the information disclosed is audited by independent third parties. Audits can be conducted by multi-jurisdictional authorities (e.g. *AccountAbility*, *Social Accountability International*), financial auditing companies (e.g. *PricewaterhouseCoopers*, *Ernst&Young*, *KPMG*), sustainability indexes (e.g. *Dow Jones Sustainability Indexes*, *FTSE4 Good U.K. Corporate Responsibility Investment Index Series*, *Oekom*, *Domini Social Index*) or local stakeholders, such as NGOs, trade unions (e.g. *Social Observatory* in Brazil), which usually verify information disclosed in the corporate reports according to a predefined set of standards and information gathered from company managers.

For verification to promote credibility and accountability of corporations, the quality of the verification should however bear some features.

First, the verification should be deep and detailed enough, covering all relevant TBL aspects in sufficient depth. A commonly encountered shortcoming of verifications is the lack of sufficient questioning on the quality of sustainability related practice, but instead rather to look only for its presence. To ensure this, the stakeholders' participation in the verification process as much as possible would be of very much help since each stakeholder possesses different expertise on different TBL aspects. Also, otherwise the information gathered solely from the company managers would not be neutral enough all the time.

Furthermore, the credibility of the verifier, although external to the company should be maintained by different strategies so that the interactions due to professional requirements do not lead to arising of partialities in time.[KTS04]

#### **2.1.3 Enlarging the picture: Applicability of RCG elements on sectors**

The thesis assumes that the elements of the RCG are applicable on the governance of sectors based on the fact that the sectors are basically organisations made up of corporations operating in the same industry. Such a governance scheme would refer to a novel initiative that includes all issues related to "sector specific sustainability".[KuT03 p.16] Components of such systems could be used as common tools for managing certain impact areas or for product development, sector-wide reporting or indicator sets; stakeholder collaborations for sustainability enhancement or verification and certifications. How such a governance scheme should be organised is out of the scope of this thesis. Nevertheless, a high level stakeholder participation in agenda setting and governance should be ensured. [KuT03]

There are already some industry wide initiatives applying one or more components of RCG at industry wide schemes:

Global e-Sustainability Initiative (GeSI) is an initiative of Information and Communications Technology (ICT) service providers and suppliers, with the support of the United Nations Environment Programme and International Telecommunication Union. Since its launch in 2000, GeSI has formed a platform open to all ICT companies, member companies to share their experience and knowledge in the sustainability debate of ICTs. As the collective voice of its members, GeSI aims to influence the sustainability debate, inform the public of its members' voluntary actions to improve their sustainability performance, and promote information and communicate technologies that foster sustainable development " as well as engage in research and benchmarking" and stimulate international and multi-stakeholder co-operation for the ICT sector.[Gsi02]

"Although GeSI as such does not specify any sustainability aspects they consider to be of particular importance for the sector, they initiated with UNEP and GRI the development of a telecommunications

sector supplement to the 2002 GRI reporting guidelines” [Tue03 p.3] This is an important step towards the formation of an industry wide understanding of the common impacts and developing common approaches and procedures to deal with them over time. Furthermore, another major initiative of GeSI has been to set up a supply chain working group, which aims “to consider how ICT companies can work together to establish a common approach to [the supply chain] matters.” In this respect the main objective of the Working Group is “to develop tools, management practices, processes and systems to deal with CSR supply chain issues, risks and opportunities while ensuring continuous improvement”. [Gsi04 p.2]

ETNO, the European Telecommunications Network Operators’ Association, established in May 1992, has become the principal policy group for European electronic communications network operators. The association comprises 41 companies in 31 European countries.[Tue] ETNO defines its primary objective as “to establish a constructive dialogue between its member companies and decision-makers and other actors involved in the development of the European Information Society to the benefit of users”. [Etn] In the sustainability context, the focus of ETNO has been on environmental issues as such. Every 2 years ETNO publishes a sector wide environmental report aimed to “reflect the trend of Signatories’ environmental performance.” ETNO has taken steps toward harmonisation of reporting practices among its member companies based on common sets of indicators, thus allowing benchmarking. In the last environmental report of the association Catherine Day, Director General Environment states :“25 signatories measure their performance against common indicators and thereby make a fuller contribution to the overall picture in the industry”. [Etn02, p.2]

Another example for an initiative aiming at sector specific guidance for reporting is that of Cement Industry Initiative (CSI) developed “under the auspices of World Business Council for Sustainable Development (WBCSD), which pulled together the industry to develop a common reporting framework. At present a total of 13 companies that account for one third of total global production, collectively operating nearly every country in the world, are reporting within a common framework. The initiative has identified a range of issues to be addressed including climate protection, fuels and raw materials, employee health and safety, emissions reduction, local impacts, internal business processes and engagement of other producers within the sector”. [KuT03]

Some other major sectoral initiatives applying one or more components of RCG schemes at the sectoral level have been the development of a sustainability Indicator set for the European Aluminium industry by the Wuppertal Institute based on stakeholder consultations, “the Responsible Care Initiative, which is an initiative of the global chemical industry; the Euro Retailer Produce Working Group (EUREP) of the food retailers and suppliers, which leads an agricultural certification system; the International Council on Mining and Metals (ICCM), which has passed along a “Sustainable Development Charter”, the Marine Stewardship Council, which works on certification of sustainable fisheries, and the Forest Stewardship Council, which sets target performance levels for forest products.” [KuT03 p.16]

These initiatives have nevertheless still faced criticism due to their voluntary and non-binding nature, especially insufficient stakeholder participation and level of transparency have been the major points as targets of critiques. [Tob97]

However it can be argued when all 4 core elements of the RCG are well integrated into and applied in the sectoral governance schemes, sector governance systems would be very effective in enhancing both sector wide static and dynamic capabilities by as well as informal institutions (A:TBL innov), resulting in outcomes of formal institutions to be enhanced.

### 3. The ICT Industry within the Sustainability Context

The researchers, when talking about the sustainability impacts of ICTs, they categorize them as first-order, second order, third order level impacts. In different studies, definition of first, second and third order impacts may vary. The thesis will use the definition made by the Wuppertal Institute. According to this, in the scope of the first order effects, the sustainability impacts generated at life-cycle stage (extraction, manufacturing, distribution, use, end of life) of the physical infrastructure [...] required for the provision of the service function.” Second order refers to the “impacts [created] in the society stemming from changes to the business as usual behaviour by provision of the function in an innovative way.” Third order is defined as “the impacts from creation of new life cycles, creation of new economic and democratic systems, when the newly developed business model by the corporation becomes a mainstream application” [KTL04 p.27,28]. Table 1 summarises these impacts.

Table 1: Selected sustainability effects of ICT

	First Order Level	Second Order Level	Third Order Level
<b>Environmental Impacts</b>	<ul style="list-style-type: none"> <li>-Impacts from energy use such as GHG emissions and land use</li> <li>-Other resource use impacts such as material and water consumption</li> <li>- Wastewater discharge, air emissions, solid waste discharge</li> <li>-Biodiversity impacts</li> <li>-Toxic release impacts (with respect to the aspect of design utilizing toxic components)</li> <li>- GHG emissions</li> </ul> <p>(All impacts applies to manufacturing, operation and disposal phases)</p>	<ul style="list-style-type: none"> <li>- Environmental impacts of increased or decreased transport</li> <li>-Environmental impacts of the product-service mix on other sector businesses</li> <li>-Environmental impacts from increased product life-times</li> </ul>	<ul style="list-style-type: none"> <li>-Possible energy use impacts such as carbon emissions stemming from aggregated ICT product-service mix use at the macro economic level</li> <li>-Possible environmental impacts on regions due to changing settlement patterns</li> <li>-Land-use impacts from aggregated ICT product-service mix use at the macro economic level</li> <li>-Environmental impacts of the rebound effects created by a change in consumer behaviour</li> </ul>
<b>Social Impacts</b>	<ul style="list-style-type: none"> <li>-Change in employment structure (quantity and quality)</li> <li>-Occupational and Customer Health and Safety Impacts</li> <li>-Intellectual property rights impacts</li> <li>-Customer privacy impacts (<i>can be also second order effect</i>)</li> </ul>	<ul style="list-style-type: none"> <li>- Social impacts from access to better services (such as access to health services, E-learning, government services, E-commerce, government information and telework)</li> <li>-Social impacts from barriers of access</li> <li>-Social impacts/risks from security challenges</li> <li>-Availability in emergency situations and disaster relief</li> </ul>	<ul style="list-style-type: none"> <li>-Cultural homogeneity</li> <li>-Cultural diversity</li> <li>-Enforcement of local communities</li> <li>-Enhancement of civic culture</li> <li>-Impacts from having new communities online</li> </ul>
<b>Economic Impacts</b>	<ul style="list-style-type: none"> <li>-Net Sales</li> <li>-Financial impacts to employees: Payroll and personnel benefits</li> <li>-Financial impacts to company: Liquidity impacts (such as debt, borrowings, dividends position), subsidies received, tax exemptions or decrease in tax received)</li> <li>-Financial impacts to society: Impacts on community, civil society and other groups in terms of donations, impacts on other geographic locations and low-income groups</li> </ul>	<ul style="list-style-type: none"> <li>-Economic impacts from application of the ICT product-service mix within other sector businesses</li> <li>-Enhancement on innovation and competitiveness</li> <li>-Establishment of new financial markets enabling growth and wider participation</li> <li>-Business market relationship</li> <li>- Growth of the ICT market</li> </ul>	<ul style="list-style-type: none"> <li>-Economic impacts from long-term and fundamental changes to the global economy: economic impact on patterns of wealth, provision of new solutions to ensure economic benefits to be shared</li> </ul>

Source: [KTL04 p.29]

## 4. Developing Benchmarking Criteria for an Analysis of the Transparency Level

“Benchmarking is a process of comparing and measuring an organisation’s business processes against best-in class operations to inspire improvement in organisation’s performance.” [Gem94 p.7]

Taking this definition as a base, the thesis does not conduct a full benchmarking survey since it aims only at measuring and evaluating the reporting performance of a limited number of companies but not at comparing them with respect to a set reference point. For this an additional study would be required which is outside the scope of this thesis.

Nevertheless the criteria used to evaluate the reporting performance and the scoring system used to rate the performance of the companies have been prepared reviewing the existing benchmarking methodologies and therefore form the initial stage of conducting a benchmarking survey. The examined benchmarking methodologies are highlighted below.

### 4.1 Review of Existing Benchmarking Methodologies and Scoring Systems on Sustainability

“The insights gained from benchmarking provide organisations with a foundation for building operational plans and to meet and surpass industry best practices and promote an overall awareness of [...] improvement opportunities.” [Gem94 p.7]

As almost any business activity or process is a candidate for benchmarking, so are the sustainable development related activities and performances of companies.

There are a lot of ways to benchmark the sustainability performance of companies. Although they all intend at the end to supply a company profile, to show where the company stands on the path to sustainability, the methodologies they use to do benchmarking, the specific areas they consider and the target group they eventually intend to give this message to all might vary. The table below shows some different benchmarking ways. These vary from questionnaires over sustainability indexes to benchmarking the sustainability reporting performance.

Table 2 – Different Benchmarking Entities

Name of the Benchmarking Entity	Examples	Target Group	Purpose of the tool
Sustainability Risk and Asset Management	Dow Jones Sustainability Indexes (DJSI), SERM Environmental Risk Ratings, Domini 400 Social Index	Mainly investors like socially responsible investment funds, but also other stakeholders	To benchmark the sustainability performances of the companies, specific sustainability performances can be focused.
Sustainability Benchmarking Surveys	Different GEMI (Global Environmental Management Initiative) Benchmarking Surveys on e.g EHS Metrics & Processes, Employee Environmental Awareness, Climate Change activities [Gem94]	All stakeholders	To benchmark the sustainability performances of companies on specific areas

Sustainability Reporting Surveys	Trust Us (The Global Reporters 2002 Survey of Corporate Sustainability Reporting)[Tru02]  Building Confidence (Corporate Sustainability Reporting in Canada) [Bui03]  KPMG Survey of Sustainability Reporting in South Africa [Kpm01]	All stakeholders	To benchmark the reporting performance or the performance disclosed in the reports of the companies
Private Benchmarking Surveys	PERFORM (produces benchmarking reports individually for each company and show only those indicators for which data has been provided by the firm.)	The corporations	to benchmark and improve sustainability performance of companies within the sector it operates.

Sustainability Risk and Asset Management is mostly using indices to show the assessed performance. Indices for sustainable investment focus on operational performance across the triple bottom line of social, environmental and economic impacts, which are based on information collected from a cross-section of sources including company interviews and are not focused on one singular measurement. Such indices bear a special importance due to their impact to affect the investment decisions of the capital providers of the companies, so they have comparatively big power to guide companies towards sustainability.

Although the market size for the socially investment funds is currently quite small, in Europe it comprises only about 0,4% of funds, they are in expansion. [KTS04]

A range of different assessment methods can be adapted by asset management companies and fund managers promoted by different screening companies. These include the analysis types of ‘negative screening’, where you focus on a companies past in the sustainability context to decide whether an investment in it is justified. ‘Positive Screening’ on the other hand tries to predict future sustainability potential, as can be seen in most part of the Dow Jones Sustainability Index. Furthermore analysis with a focus on ‘Environmental Risk Due Diligence’, ‘Ethical and Social Responsibility’, ‘Sustainable Strategy’ and ‘Corporate Governance’ can be conducted to guide investment decisions according to sustainability ideas and issues. [KTS04 p.37]

However, the criteria these sustainability indices apply to include the companies in the index or to benchmark their sustainability performance are criticised to not significantly encourage the corporations to improve their CSR performance. For instance, in the FTSE4Good a corporation can be accepted for inclusion just by adopting a code of ethics and by showing a commitment to equal opportunities in its website. So there exist no strict requirements for improving its management practices or verification of responsible practices. [KTS04] Furthermore, financial indices are not sector sensitive ,i.e. sector- specific sustainability issues can not be covered extensively; thus also in this sense the approach of benchmarking cannot be more than generic and hence cannot encourage considerably the improvements in CSR performance of companies which are all very different from each other

With performance in mind there is also **benchmarking of the reported performance.**

One major benchmark survey of corporate sustainability reports and reporting is that of SustainAbility and UNEP: *Global Reporters Series*, which is also the first international survey in his category. The last one of these series is *Trust Us*, it examines the Top 50 reports from companies around the world, where eight major sectors are covered. In the methodological framework of the Trust Us survey, reports were assessed on context and commitment to sustainable development in short and long term. Operational performance and impacts over the reporting period, likely future performance and impacts, ability to ensure the integrity of the reporting and disclosure process have been evaluated. [Sus03]

The approach is quite comprehensive intending to assess the sustainability profile of the organisation at a large range of issues. However, it still does not sufficiently focus on assessment of the performance at the consumption part, by for instance looking if there is a kind of focus at comparable level on consumption related aspects to that on production related aspects, although the quality of focus of the organisation on product and service impacts on its own is included in the benchmarking criteria. Furthermore, the assessment of risk presentation vs. benefit presentation throughout the reports benchmarked is also not sufficiently focused.

The range of the scores in “Trust Us” is from 0 to 4.

Score	Meaning
0	Nothing: No or not sufficiently significant information on the issue
1	Sketchy: No systematic coverage of the issue, although coverage suggests the company recognises the issue to some degree
2	Systematic: Coverage suggests the company takes the issue seriously and presents systematically but although systems and processes are robust, they have not been developed across all units, division or issues of the company
3	Extensive: Coverage is serious and systematic. There are no major gaps in coverage, presentation or interpretation
4	Integrated: Coverage is serious, systematic and extensive. In addition evidence is to be seen that illustrates how the reporting in this area has been integrated into core business practices or decision-making

## 4.2 Developing Assessment Criteria for Transparency

To assess the level of transparency and the reporting performance of the reporting organisations selected, seven criteria will be presented here. Considering the limitations of the benchmarking criteria of the existing schemes, those seven criteria intend to provide a fuller transparency profile of the organisation as well as reflect its ability to integrate the most important elements of Responsible Corporate Governance. These criteria are:

- Transparency of Reporting Boundaries
- Coverage of Sustainability Dimensions
- Coverage of Both Production and Consumption Aspects in the report
- Reporting Honesty
- Reporting Quality
- Stakeholder Engagement for issue identification and preparation of the report
- Verification of the Information disclosed.

The reasoning of the selection of each criterion is explained more in detail below, the criteria ‘Reporting Honesty’ and ‘Reporting Quality’ will be explained together in one chapter due to their close link. Each criterion will be presented with the question that motivated it, a short definition and a longer explanation on the meaning of this criterion in the ‘rationale of selection of this criterion’ part. Then at the end the range of the assessment ratings and the explanation of why a higher rating could not be given will be made.

The scoring criteria of Trust Us shown above provided the inspiration on how to construct the scoring criteria. The thesis used the scoring criteria of Trust Us as a basis to develop the scoring device of the criterion of „the reporting quality“, which is the fifth criterion of “Assessment Criteria”

## 4.2.1 Transparency of the Reporting Boundaries

### Question:

Is the rationale for choosing the aspects as well as the reporting boundaries explained with the presentation of shortcomings and limitations regarding for example data access, broadening the boundaries, etc.?

### Definition of the Criterion:

The way of communication of the reporting boundary and the reasoning for why the reporting boundaries are set this way are clear to the reader.

### Rationale of the Selection of this Criterion:

Organisations are different from each other in terms of their sustainability impacts and at which business lines, geographic areas and operational stages they pose those impacts. Therefore each reporting organisation normally has a different reporting boundary than the others in terms of for instance coverage of business lines, geographical areas, operational stages, etc., which should be clear to the reader throughout the report.

Normally an organisation is expected to report about all entities which it controls or over which it has a significant influence and about those aspects which are significant enough. [Gri04]

Therefore, in addition to the fact that what the reporting organisation reports about should be clear, it is equally important to communicate the reasoning of setting the reporting boundary the way it is set and the reasoning of selecting the aspects reported about, especially when the reporting boundary is limited in some ways. In this context, the rationale for negative selections should also be clearly explained to the reader. This means that the reason why the entities that caused the reporting boundary to be decreased, such as exclusion of operations at some geographic area or of impacts of some joint venture, should be explained adequately.

This is important for the reader to clearly follow the report, as well as to have a realistic company sustainability profile by assessing which of the activities/operations of the company in question are significant enough to be aware of. And it is important for the reporting organisation to have a holistic overview of its operations and units and to plan what it can achieve by which time.

### Subcriteria to evaluate the transparency of the reporting boundary:

**1- Operational boundary dimension:** The range of entities for which the organisation collects data, for example subsidiaries or joint ventures. This refers to the setting the boundary based on financial control, legal ownership, ability to exert an influence (such as in the case of suppliers), business relationships or other reasoning [Gri03].

**2- Scope dimension:** Selecting aspects to be reported (within the set operational boundaries) based on a rationale such as stakeholder consultation or following the GRI reporting framework and the rationale for excluding others.

### **3- Clear rationale explanation:**

Some examples are:

*Disclosure of the reasoning why the boundaries are set the way they were set (why fully owned entities were set as the boundary, but why not a larger range: eg: explanation could be that the organisation does not have a control or influence on other entities or on their sustainability impacts are not significant)*

*Explanation of decreasing the chosen boundaries where possible* For instance although the organisation might claim to report about wholly owned activities, it might have excluded those wholly owned in different geographical regions, for which the reason (e.g. data access problems) should be stated.

*Disclosure of the rationale of selecting aspects reported:* The reporting organisation should clearly state how it did the prioritisation and why it excluded other aspects not reported in the value chain of its products or services, if they are significant enough to report even if they do not fall into the set reporting boundary.

**4-Target setting for boundaries and scope for next reports:** Commitment to increase the reporting boundaries and the reporting scope in future reports.

Rating

Score	Meaning
0	None of the 4 above subcriteria is adequately fulfilled
1	1 of the above subcriteria is adequately fulfilled
2	2 of the above subcriteria are adequately fulfilled
3	3 of the above subcriteria are adequately fulfilled
4	4 of the above subcriteria are adequately fulfilled

## 4.2.2 Coverage of Sustainability Dimensions

Question: Is there a balance between the three pillars of sustainability- environmental, economic and social?

Definition of the Criterion: The reporting on all three pillars of sustainable development with a rather equal emphasis.

Rationale of the Selection of this Criterion:

In its 1987 Report on 'Our Common Future' the Brundtland Commission defines sustainable development as “[meeting] the needs of the present without compromising the ability of future generations to meet their own needs.” This refers in the EU policy agenda to the integration of economic, social and environmental policy objectives, as enshrined in the Treaty of Amsterdam and reaffirmed in the Presidency Conclusions of the Göteborg European Council, 2001.[Dsa00] This challenge requires the industry, as a key player, to balance the relationship between economic, social and environmental needs in a way that does not compromise future needs to contribute to maximum economic and social benefits to society while minimizing the environmental impacts [Gsi02]

Evaluation Criteria

To assess if there is a somewhat balanced approach in addressing all pillars, both hard and soft variables will be looked at, such as display area, number of aspects covered as hard and soft variable, i.e. at the level of quantitative and qualitative detail allocated to each pillar.

Rating

Score	Meaning
0	One or two pillars are completely missing (e.g.: reporting only on environmental impacts)
1	All pillars addressed, but emphasis is greatly on one pillar (e.g.: environmental aspects are emphasised, while limited number of social and economical performance indicators are presented)
2	All pillars addressed but emphasis is greatly on two pillars (e.g. environmental and social aspects are emphasised, while a limited number of economical performance indicators is presented)
3	All pillars addressed and equally balanced

### 4.2.3 Coverage of Both Production and Consumption Aspects

Question: Is there a balance between reported production and consumption related aspects?

Definition: This criterion assesses the level of attention paid to production and consumption related aspects.

*Production related aspects:* All aspects that have to do with the upper stages of the life cycle of products and services. This includes direct environmental, economic and social impacts at extraction, manufacturing and distribution stages of products and services.

*Consumption related aspects* cover all aspects that have to do with the usage and disposal stages of products and services, as well as with the application of the technology and systematic changes at environmental, economic and social pillars of sustainability due to this usage and application in the long run.

The table below categorises some of the most important aspects as production and consumption related. The aspects categorised intend to serve as an example.

*Table3 Example to show how the aspects are categorised as production or consumption related.*

	Production Related Aspects (at extraction, manufacturing, and distribution stages)	Consumption Related Aspects
Environmental	-Impacts from Material Use -Energy Use -Waste Formation	-Electronic waste handling(recycling, reuse) -Increased/decreased energy, material consumption, traffic and land use due to <ul style="list-style-type: none"> <li>• Applications such as e-business, e-commerce</li> <li>• “Changes in consumption patterns”, “side effects” [KGT03, p.32]</li> </ul>
Social	-Health & Safety at Work -Social Rights at Work - Diversity at Employment Force -Legal compliance -Stakeholder dialogue	-Access of Services (e.g. digital divide, public access of services, benefits due to access) -Security & Content Issues -Customer Guidance and Communication (E.g. on EMF, tariffs, env. preferable use and disposal channels, warnings about potential effects of the use of telecom products and services on social life and human health) -Customer Health & Safety -Impacts of changing communication behaviour on social life. [Gri03]
Economic	Direct Economic Impacts on -Customers(Net sales) -Employees(wages, pensions etc) -Company(debts, taxes etc) -Society (donations)[Gri02]	Impacts on -Society (for buying new products, services-youngsters with mobile phone debts) -Other sectors (efficiency, productivity increases. Innovation, competition enhancement etc) -Employment structure [Gri02]

### Rationale of the Selection of this Criterion:

The production related aspects, that is those aspects that an organisation imposes directly due to manufacturing and distribution stages or indirectly through promoting extraction of raw materials and their processing, are all important in terms of the significance of environmental, social and economic impacts they pose. This means that the organisations should report both the impacts at the manufacturing stage and at the upper stages of the life cycle of a product or a service. In the context of ICTs, the reporting of sustainability impacts of products or services at the upper stages of their life cycles is especially relevant, as the suppliers of the ICT sector in the developing countries have been known to have quite bad social and environmental records so far. [ZAB02]

However, the consumption part of the story needs a rather equal attention to be paid to.

In 2002, each person in EU consumed over 13.000 Euro worth of goods and services and produced 535 kg of waste. [AAG03] This figure clearly demonstrates that sustainable consumption needs at least as much care as sustainable production for sustainable development to become a reality.

This need is even more prominent when it comes to the development and dissemination of the ICT sector into daily life. Therefore, this criterion bears a special importance in the sustainability debate of ICTs. As we are moving from physical to virtual products and services, our priorities are changing likewise more and more toward the need to tackle with the sustainable consumption rather than with sustainable production as it was in the past. [AAG03]

For instance, if a virtual product such as digital info on the net will lead to dematerialisation, depends on the user behaviour: if the user reads the information online without printing it out ; or if he rematerialises the digitised information by printing it out and turns off the computer afterwards or both prints the information and keeps staying online afterwards. [AAG03]

To bring the maximum benefits for sustainable development in terms of dematerialisation potential of the use of ICTs, it is necessary that both policymakers as well as producers work on ways to direct the consumer behaviour towards a sustainable path.

The role the manufacturers can play to this end is to fit the technology to human behaviour to prevent rematerialisation and to guide the consumers to a sustainable usage of their products and services through appropriate information channels as well as through using their marketing power. [AAG03] If business believes in a free market where people have choices, companies must accept responsibility for informing consumers about the social and environmental effects of those choices. [HPS02]

Therefore if adequate efforts for performing an ethical business are made, it needs the disclosure of performance at targeting the promotion of sustainable consumption and showing an overall awareness of long term impacts of using the services on sustainability in general.

### Scoring Criteria:

*Emphasis on both categories:* There needs to be a somewhat balanced emphasis on both production as well as consumption related sustainability impacts.

### *Coverage of major aspects in both categories:*

The report should ensure an adequate level of coverage at the following aspects:

- **Life cycle assessment oriented** impact assessment and reporting (including upper stages and use phase).
- Adequate discussion of **suppliers' sustainability performance**
- **Guidance of the user behaviour** to a sustainable path
- Discussion of **also longer term sustainability impacts** of the use of the technology on individuals, societies, environments and economies as well as of attempts to guide the development of the technology to a sustainable path.

## Rating

Score	Meaning
0	The bias is clearly on one category, in terms of the number of aspects reported, the level of detail and the coverage allocated. Some major aspects in one or both categories are not taking enough coverage.
1	The bias is slightly on one category, in terms of the number of aspects reported, the level of detail and the coverage allocated. Some major aspects in one or both categories are not taking enough coverage.
2	There is more or less adequate focus on both categories, however there are some major aspects not covered or adequately covered in one or both categories.
3	There is more or less adequate focus on both categories, with major aspects in each category enjoying an adequate level of coverage.

### **4.2.4 Reporting Honesty and Quality**

Question: Is there a balanced **presentation** and **interpretation** of benefits / good performance vs risks / bad performance at the 3 pillars of sustainability?

Definition: The reporting organisation's ability to present and interpret its performance in a realistic and holistic manner.

#### Rationale of the Selection of this Criterion:

This is an important criterion to assess how transparent the company/sector is in disclosing and understanding the real impacts of its operations as such, because transparency is about reporting both good and bad news, both successes and challenges to be managed.

While presenting both kinds of information in a balanced way, the information disclosed should be also interpreted in a way that makes the real sustainability impact of the organisation apparent. Therefore the past performance should be displayed in order to show the trend for the future and the future targets. The performance should be compared to that of the whole industry, i.e. at meso level, to assess the relative sustainability performance and position of the organisation with respect to the whole sector. Furthermore, the impacts created or achievements made should be placed into bigger pictures, assessing them at macro levels, which would display the understanding of the reporting organisation, of the impacts and achievements it made.

In order to create a more accurate rating, the reporting honesty and quality of each pillar will be rated separately. The justification of the rate given for both reporting honesty and quality will be explained together, because most of the time, the quality of the presentation of data, for instance if some environmental impact has been interpreted at macro level, also might affect if an important risk is explained or not, so in some cases reporting honesty and quality are well interlinked.

#### Rating and Methodology

##### Reporting Honesty:

This question is answered by the following methodology: The reporting honesty at each pillar is analysed and rated according to the criteria below. The score shows the performance of the reporting organisation at fulfilling a balanced way of risk vs. benefit presentation. The meaning of the ratings is as follows:

## Rating

Score	Meaning
0	The bias is clearly on disclosing either benefits/good performance or risks/bad performance, in terms of number of aspects reported, the level of detail and coverage allocated. Some major aspects in one or both categories (categories as risks or benefits) are not taking enough coverage or any coverage at all.
1	The bias is slightly on either benefits/good performance or risks/bad performance in terms of number of aspects reported, the level of detail and coverage allocated. Some major aspects in one or both categories are not getting enough coverage.
2	There is more or less adequate focus on both benefits/good performance and risks/bad performance, however there are some major aspects not covered or adequately covered on one or both categories.
3	There is more or less adequate focus on both benefits/good performance and risks/bad performance, with major aspects in each category enjoying an adequate level of coverage.

## Reporting Quality

The criteria to assess each pillar of sustainability are as follows:

*Content:* inclusion of useful and relevant data.

*Coverage:* of whole business.

*Presentation:* distribution of information (e.g.: according to business units or regions).

*Interpretation:* company's performance discussion in terms of past performance (over time comparisons); industry performance (meso level comparisons) and at macro level.

*Implications:* discussion of what this means for company's future plans. [Sus03]

## Rating

Score	Meaning
0	Almost no information or really generic information on most aspects.
1	Patchy reporting with some limited indicators, but far away from drawing a complete picture of the performance at the pillar. Many aspects are generically covered without presenting any link to their own impact (positive or negative) on them. (E.g. superficial statements about the importance of minimising a risk like closing the digital divide, where neither positive nor a negative contribution of the reporting organisation to the digital divide is mentioned.) Furthermore the interpretation of performance at many aspects is not satisfying: over time comparisons and/or meso (sectoral) and macro level assessments are missing
2	Generally systematic reporting at the pillar, but there are still gaps in content, coverage, presentation, interpretation or implications of most aspects.
3	Most aspects at the pillar enjoy both systematic and extensive coverage in terms of content, coverage, presentation, interpretation or implications.
4	In addition: How the approach influences core business thinking is clearly explained for most aspects at the pillar.

## 4.2.5 Stakeholder Engagement in Report Preparation

Question: Are stakeholders engaged in preparing and enhancing the quality of the reports?

Definition: This criterion looks at the question whether the report has been prepared engaging with stakeholders and if yes, to what extent.

Rationale of the Selection of this Criterion:

Stakeholder engagement and transparency enhancement further reinforce each other's effects. When stakeholders participate in the preparation of the report, the end result becomes more transparent, and when the transparency of an organisation enhances, further means are created for stakeholders to assess the performance of the organisation and to engage for further improvements. There is a considerable value in engaging stakeholders in the process of writing such a report, rather than just asking for feedback on the end product. Making stakeholders aware of the questions asked and resulting information gathered at each stage of the process may help to raise their understanding as well as fulfil the reporter's transparency efforts. [HPS02]

Furthermore "when a wide range of actors accept the process of reporting, who are external to the corporation and when it is anchored in a generally accepted framework, the positive effect of informal institutions would increase. Hence high levels of transparency and comparability would be provided in the market." [KuT03 p.15]

The report should clearly display the ways of engagement of stakeholders and how their views were considered. It is also important to mention which specific stakeholders' views were considered. This would also help the attitude of the company toward its stakeholders to become transparent.

Rating

Score	Meaning
0	No engagement with stakeholders to this purpose or no mention of that.
1	It is only mentioned that stakeholders have been consulted for the preparation of the report, however which stakeholders were consulted through which type of engagement and how their views have been considered is not explained.
2	The level and type of interaction the reporting organisation had with which stakeholders is disclosed. However, what they recommended and if and how their recommendations were considered, is not mentioned.
3	The level and type of interaction the reporting organisation had with which stakeholders is disclosed. Their recommendations are generally mentioned. Furthermore, which parts of the report have been prepared in line with those stakeholder views are shown as in examples.

## 4.2.6 Verification of the Information Disclosed

Question: Is the reported information verified by independent 3rd parties?

Rationale of the Selection of this Criterion:

This is the last criterion to ensure the transparency of the information enclosed. The reporting organisations are only transparent when the information they disclose is true. And this can be assured by having the disclosed information verified by independent third parties.

Rating

Score	Meaning
0	No verification or no mention of it.
1	Partially verified.
2	Completely verified.
3	In addition, the feedback from the verification is reported, and so are the recommendations to improve the reliability of future reports.

## 5. Analysis of the level of transparency of the ICT industry through the reported performance.

### 5.1 Introductory overview of the analysed reports

Name of the Organisation	Name of the Initiative	Year Published	Years covered	No. of pages	Level of initiative	Target Group	Goals of Communication
<b>Deutsche Telekom</b> www.telekom.de	The 2003 Human Resources and Sustainability Report	2004	2003	93	Micro	all stakeholders	disclosure of company's sustainability performance
<b>Vodafone</b> www.vodafone.com	Vodafone Group CSR Report 2003-04	2004	2003-31.03.2004	28	Micro/Group Perform.	all stakeholders	disclosure of sustainability performance
<b>BT</b> www.bt.com	Social and Environmental Report	2004	2003-31.03.2004	122	Micro/Group Perform.	all stakeholders	disclosure of sustainability performance
<b>Telefonica</b> www.telefonica.com	CSR Annual Report 2003	2004	2003	144	Micro/Group Perform.	all stakeholders	disclosure of sustainability performance
<b>ETNO</b> (European Telecommunications Network Operators) www.etno.be	Environmental Report 2002	2002	2000-2001	34	Meso	ICT Companies, EU regul. agencies, other stakeholders	disclosure of sector's sustainability efforts, esp. In the environmental area

### 5.2 Initiatives at Company level

The initiatives are analysed one by one according to the performance at the selected 7 criteria. For the performance at each criterion, the reports are rated from 0 to 3, but for 2 criteria (Transparency of Reporting Boundaries and Reporting Quality) from 0 to 4 in order to make a clearer distinction between the reports. After the rating at each criterion, an explanation is given in order to justify why a higher score could not have been assigned to it.

## 5.2.1 Deutsche Telekom [Det04]

### Transparency of Reporting Boundaries

Rate: 2 over 4

*Only the operational boundary and plans to expand the reporting boundary are clear.*

For the operational Boundary of the report, they state that Deutsche Telekom had the intention to cover the entire Group, but that they couldn't achieve this in all areas due to the data access problems, but they explain throughout the report if some data applies to the whole group or to some specific locations, units etc [Det04 p.85]. Indeed the report mostly focuses on national activities within Germany, although DT operates in key markets round the world [Det04 p.74]. However, the reasoning of choosing the whole group as the reporting boundary, but not a wider range is not explained.

Furthermore, the intention to expand the boundaries toward the whole group is stated, but not toward a wider range of entities so as to cover for instance suppliers or contractors [Det04 p.85]. The scope of the report is generically explained to be set on the basis of sustainability ratings, as a feedback given to the Deutsche Telekom sustainability report 2001 and stakeholder surveys although they do not describe in detail the feedback they received, or which issues the stakeholders emphasised and what the Deutsche Telekom did include or exclude as a result in the report [Det04 p.86].

Also, throughout the report, there is no systematic disclosure of the rationale for positive selection of aspects. While the links to the importance of an aspect imply why some aspects are being reported, this is not done for many other aspects' selections. Accepting only that the report adequately fulfilled only 2 criteria of operational boundary dimension and target for next report, the report gets a score of 2 in this criterion.

### Coverage of Sustainability Dimensions

Rate: 2 over 3

Mostly environmental and social aspects have been highlighted. Although there is some limited review of financial performance of the company, there is hardly any mention of wider economic impacts or value created by environmental or social improvements. Due to this lack of focus on one of the three pillars, the report scores 2.

### Coverage of Both Production and Consumption Aspects

Rate: 2 over 3

*A somewhat balance exists between production and consumption related aspects reported at the environmental and the social pillar; however in all pillars several major aspects remain not seriously touched.*

There is a somewhat balance between 2 categories in terms of the number of aspects reported in each category, - excluding the economic pillar, no attention is given to the consumption part of sustainability (Production: 22, Consumption 18 aspects). Nevertheless, the focus of the report is on the sustainability impacts at the manufacturing part, neglecting the sustainability impacts of the products and services at the upper stages of their life cycle, as well as at use phase or due to user behaviour. Connected to this, sustainability performance of suppliers is covered only very generically. Neither the sustainability performance nor the monitoring schemes of Deutsche Telekom for suppliers' performance is described [Det04 p.55].

Furthermore, communication of the potential long term negative impacts of the use of telecommunications services on human health and social life of customers, and how Deutsche Telekom attempts to direct the users to behave more sustainably are not described at all. Although there is some focus on wider scale economic, environmental and social impacts of the use of ICT services, the coverage and discussion is

limited only to those impacts associated with energy and transport reduction opportunities at the second order level. Hence, how the trends for economic, social and environmental sustainability might look like in future due to the fast dissemination of the technology (third order level impacts) is not discussed at a satisfying level [Det04 p.48,73].

## **Reporting Honesty and Quality**

Environmental Pillar:

Reporting Honesty: Rate: 2

Reporting Quality: 3

*The tendency is to slightly emphasise the good performance and to disclose the benefits.*

*The quality of the reporting is generally extensive, but there are still gaps with respect to coverage and interpretation of past performance in the context of future trends and targets, and of performance at a sectoral and macro scale.*

Generally, the reporting organisation seems to have a good level of understanding of risks associated with their products and services. Nevertheless, those risks are not always explained to the reader clearly. The disclosure of the shortcomings, failures and dilemmas are almost missing.

For instance the risks associated with the huge energy consumption of their internet infrastructure, their total energy consumption as well as with the new generation mobile communications [Det04 p.52,53] are presented in detail with relevant macro scale comparisons most of the time. The risks associated with other applications or uses of telecommunication services such as video conferencing, teleworking or other services they provide is mentioned without much detail. At the latter aspects, the reader does not get any understanding what potential risks are and how they can arise. Only mentioned is that Deutsche Telekom is investigating the real sustainability potential of these services, i.e. [Det04 p.48,49] without making the reader aware of reasons, which requires them to undertake this research.

Another important aspect for which there are gaps in the presentation, is the environmental performance of the supply chain [Det04 p.55]. As they claim that the manufacturers agree to accept the returns, which shows that they have a moderate influence on their suppliers, a more detailed disclosure of the sustainability performance of their vendors is to be expected. Although the overall systematic efforts regarding the selection of their suppliers is presented, for example the fact that they screen their suppliers according to environmental and economic criteria and do their purchasing from OECD countries where civil rights are not known to be breached, there is no identification of their key suppliers, no presentation of what their minimal selection criteria are and no presentation of the sustainability performance of these suppliers through some indicators or even generically. They present the risk of contributing to the civil war in Congo through purchasing Coltan ore from there. However, no tangible measures against it are presented and no other risks persistent at their supply chains is mentioned. Furthermore, the fact that the impacts of only the operations in Germany are highlighted is another shortcoming considering the potential risks existing at the overseas operations.

The quality also varies from aspect to aspect, but *generally there are serious efforts to give extensive information* where major business units are covered and change of performance over time is given. Aspects where this tendency can be seen, is energy, waste and mobility management. Performance is also most of the time compared at macro level such as in the case of the interpretation of Deutsche Telekom's total energy consumption, where Deutsche Telekom's share in Germany's whole electricity consumption is shown and the distribution of energy sources Deutsche Telekom uses is compared with that of Germany [Det04 p.66]. However, the discussion of the performance with respect to that of the whole sector is done very scarcely, and there is the tendency to present the information in absolute figures, rather than in relative ones. For instance, it is mentioned that 1 million old mobile phones were collected at Telekom shops in one year. However, what scale of their annual sales that is is not clear [Det04 p.57].

Social Pillar:

Reporting Honesty: Rate: 2 over 3

Reporting Quality: 3 over 4

*The presentation of social risks is present, but not adequate; presentation of shortcomings and failures are almost completely missing.*

*The coverage and interpretation of most aspects is extensive, nevertheless for some controversial aspects the same tendency is not to be seen, especially for the international dimension of social risks.*

For instance, the digital divide, a major social issue in the debate of social sustainability of telecommunications, is greatly covered through reporting on their special programmes and projects to bridge it. These are mostly in Germany, like free internet supply for schools, online community for girls, internet courses for individuals and families with children, special designs and services for the disabled [Det04 p.47,63,77]. However the international dimension of the topic does not enjoy this much coverage. Although the risk of the digital divide in the international context is generically mentioned, whether the Deutsche Telekom has any tangible plans to address its international dimension is not clearly mentioned. Efforts of the group for the international recognition of the Kyoto Protocol are widely explained [Det04 p.74], but not efforts for engagement with local communities: The importance of agenda 21 and engaging with local communities is explained with generic words, serious community engagement plans are not reflected upon [Det04 p.76].

The same applies to the coverage of the dialog with the stakeholders to a large degree: important stakeholders are not clearly identified. Although there are some individual examples of dialogs with certain stakeholders such as shareholders, NGOs and some local authorities, the approach is not systematic. Their shortcomings or failures addressing the stakeholder expectations and how they consider or integrate stakeholder concerns or views in business operations and decision making is not there [Det04 p.82].

Similarly, risks with respect to social impacts of telecommunication services associated with their long term or extensive use is not adequately addressed. Just like in the case of the environmental pillar, they claim to do research on the social impacts of telecommunications services, but these risks are not clearly explained to the reader. This is especially relevant, remembering that Deutsche Telekom employs some number of teleworkers. Therefore, if they for instance have any measures for long term negative health or social impacts of teleworking would be of interest to the readers.

Nevertheless, most social aspects enjoy adequate coverage such as relations with employees, social principles they adhere to, health and safety at work, security and content measures, consumer protection, and health risks due to EMF etc.

Economic Pillar:

Reporting Honesty: 0 at a scale from 0 to 3

Reporting Quality: 0 at a scale from 0 to 4

As there is only limited presentation of financial performance, the honesty and quality of this pillar scores 0.

### **Stakeholder Engagement**

Rate: 1 at a scale from 0 to 3

Only mentioned is that stakeholders have been consulted for the preparation of the report, however which stakeholders were consulted through which type of engagement and how their views have been considered is not explained.

### **Verification of the Information Disclosed**

Rate: 1 at a scale from 0 to 3

A partial verification is present [Det04 p.86].

## 5.2.2 Vodafone [Vod04]

### Transparency of Reporting Boundaries

Rate: 2 over 4

*The operational boundary and scope dimension of the report are clear. Furthermore, the intention to expand the reporting across the business is highlighted, but a clear explanation of the rationale is not done.*

The operational boundary of the report is clear: 15 out of 16 operating companies is stated to be covered, the missing one is also stated to be covered in the next report as they started to collect data on that. The associates, investments, non-mobile telecommunications businesses etc. are stated to be not covered, but the reason why they are not and if they will be covered in the next reports is not explained [Vod04 p.0].

As for the scope dimension, the report is claimed to have focused on the issues that the stakeholders considered to be the most important. 5 main issues are highlighted as a result.

Although not in a single report, the expansion of the boundaries with respect to scope or entities is mentioned, the reporting practice across the group is intended to be expanded by encouraging more operating companies to publish their Corporate Social Responsibility (CSR) reports addressing the concerns of local stakeholders [Vod04 p.0].

Considering that the operational boundary, scope dimension and the intention to expand the reporting practices are clear, the report received a score of 3.

### Coverage of Sustainability Dimensions

Rate: 2 over 3

*Mostly environmental and social aspects have been highlighted, with the social pillar taking the greatest focus. The focus on the economic pillar is very limited.* The social pillar enjoys the most attention, whereas the environmental pillar receives a little less focus comparing the level of detail and number of aspects highlighted in the two pillars. For instance, only about 5 pages in the report are allocated to environmental issues, while almost the rest, about 15 pages, concern social issues. Although there are some general economic indicators regarding the company as well as externalities on other sectors through efficiency gains and employment creation, this is far from drawing a complete picture on the sustainability on economic pillar.

### Coverage of Both Production and Consumption Aspects

Rate: 1 over 3

*The bias of reporting is slightly toward consumption related aspects.*

Generally looking at the three pillars overall, the consumption related aspects enjoy little more coverage. This is especially due to the level of detail allocated to the social impacts of mobile use. For instance, while social impacts of the use of mobile phones take almost 3 pages of coverage [Vod04 p4,5,8], production related environmental impacts due to energy consumption, waste management and use of CFCs [Vod04 p.16] altogether have less than 2 pages of coverage. Communication of risks -especially the most recent updates on EMF issues- to the customers are given more attention compared to most other reports [Vod04 p.10,11]. But other risks associated with the negative impacts of mobile use on social life to the customers are not disclosed.

Nevertheless, many aspects for both categories –mostly in production category though- remain untouched. For instance, life cycle oriented environmental impact assessment, adequate coverage of supplier's sustainability performance, Health & Safety and diversity at work place, impacts from material use and transport are some of those. The sustainability performance of suppliers is for instance only discussed for one of the vendors out of 3 major vendors of Vodafone, whose performance at implementing the Code of Ethical

Purchasing of Vodafone is mentioned [Vod04 p.12,13]. But the report distinguishes itself from the others with the approach to discuss and show how mobile communications can enhance quality of life in the developing countries [Vod04 p.8]. Nevertheless, the longer term environmental impacts of increased mobile use are not sufficiently discussed.

### **Reporting Honesty and Quality**

Generally, the reporting is based on the reflection of iterative problem solving and continuous improvement scheme of the group, which reflects how the group strives to attain sustainability in a stepwise manner. The targets set in the previous year are redefined, the performance of the group to achieve these targets this year is discussed, shortcomings are addressed and the targets for next year are clearly communicated. Furthermore, their search on how to extend the existing consideration of CSR issues to key business strategy points is mentioned [Vod04 p. 22]. Therefore one gets the feeling that the company has serious intentions to integrate sustainability issues into decision making. However, there are still some gaps in presentation of risks and in that of data as will be analysed pillarwise below.

Social Pillar:

Reporting Honesty: 3

Reporting Quality:3

*There is a balance between the risks and benefits, but shortcomings are addressed to a lesser extent due to the fact that how they deal with those risks is not always highlighted.*

Generally, most social risks associated with the mobile use are addressed.

Risks for social life created from mobile use such as “creation of personal space bubbles” or “invasion of personal space” are mentioned, so are risks regarding inappropriate content and spam. The growing electronic waste is highlighted to be due to frequent model changes: Although how to deal with this “frequent model changes” is not highlighted, it is important as a first step to show the recognition of the problem by the industry.

The approach on how to deal with those presented risks is promising, although still not always an intention to do so is shown.

The international dimension of digital divide is also highlighted extensively, which is also an additional feature of this report. How the telecommunication can be of use to the developing world is explained with several examples and the projects they have started or intend to start in those developing countries where they operate through their associate companies such as South African Vodacom`s Community Service Programme is explained. There over 5000 subsidised phone shops have been provided for the people [Vod04 p.5] and plans to transfer the recycling technology to certain developing countries are mentioned. Engagement ways with stakeholders, including communities are also highlighted with adequate detail.

Environmental Pillar:

Reporting Honesty: 2 over 3

Reporting Quality: 2 over 4

*The presentation of risks and shortcomings is not enough; the disclosure of the performance at this pillar as a whole is not extensive.*

The fact that at the environmental pillar some major aspects are not reported causes to the neglecting of both risks and benefits associated with those aspects, which the thesis considers a more risky situation than reporting the benefits only. Examples of such aspects ignored are given above at the assessment of the third criterion.

However, there are serious attempts to disclose risks and shortcomings as much as the benefits and good performance at least associated with the aspects reported.

For instance, the risks associated with the eventual fate of second hand mobile phones in the developing countries are reported, highlighting the lack of infrastructure to handle the electronic waste in those countries [Vod04 p.14], so are risks of increased energy consumption than before with the introduction of 3G base

stations [Vod04 p.16]. But also in this report we face the problem of risks and shortcomings at the supply chain [Vod04 p.12] not being disclosed extensively.

In the presentation and interpretation of data, there are also some gaps.

Generally, the data, such as that of energy consumption, is not distributed among units or sorted by type, such as by energy source. Although, there are some generic statements such as “we are increasing the amount of energy use from renewables”, which is supported through examples from the Vodafone in the Netherlands and Greece, the complete picture regarding the level of use of renewable energy cannot be deducted from there [Vod04 p.16].

The performance is interpreted at macro scale and in terms of past performance. But for some aspects it is discussed over the last 3 years (CO2 emissions from network operations [Vod04 p.17]), for some aspects over the last 2 years (number of phones collected [Vod04 p.14]), the reasoning of why doing so is not given clearly.

Economic Pillar

Reporting Honesty: 1 over 3

Reporting Quality: 1 over 4

The risks are not covered, but several important direct and indirect economic benefits of mobile use for wider economy are mentioned, although generically [Vod04 p.4]. These focus mainly on the positive impacts of telecommunication on other industrial sectors. However, the reporting quality is not extensive. Several indicators for financial performance overview of the company are given, but not distributed according to the units or regions and economic targets are not explained [Vod04 p.27].

### **Stakeholder Engagement**

Rate: 1 over 3

Only mentioned is that stakeholders have been consulted for the issue identification for the report. However which stakeholders were consulted through which type of engagement and how their views have been considered is not discussed [Vod04 p.0].

### **Verification of the Information Disclosed**

Rate: 3 over 3

The report has been independently assured and the statement of the assurance company is presented.

## **5.2.3 British Telecom [Bt\*04]**

The report consists of different distinct sections. Therefore the referencing will be done stating the name of the section where the info has been taken from.

### **Transparency of the Reporting Boundaries**

Rate: 3

*Operational and scope boundaries are clear, so are the targets to expand the boundary toward international operations, but the rationale of the selections is not.*

All wholly owned activities are stated to be covered wherever possible, thus the operational boundary of the report has been set clearly. The rationale of selecting this boundary and not reporting about the other entities such as overseas operations, joint ventures, subsidiaries or supply chain members has not been explained though. Throughout the report there are sometimes difficulties to understand if it is really complying to this border of wholly owned activities in sections, employees, customers, community, where they especially state to keep that border [Bta04 p.2,3].

Despite the boundary of wholly owned activities, international wholly owned activities are not covered regularly, the reason of which is explained to be data access problems. Nevertheless, commitment to cover wholly owned international activities in the future is stated.

As for the scope of the report, the report is stated to be prepared in line with the 2002 GRI reporting principles and the scope of the environmental pillar is stated to be in line with ISO 14001 certification. Furthermore, the selection of the 11 key non-financial indicators is stated to be a result of stakeholder consultation. However, the general findings of this consultation process are not disclosed [Bta04 p.3]. Generally, the rationale of doing the activities stated above is not explicit.

### **Coverage of Sustainability Dimensions**

**Rate: 3**

All pillars are addressed in a somewhat balanced manner. Although the coverage of the environmental and social pillars in terms of the level of detail and number of pages allocated is higher, the fact that besides the basic financial review of the company also the BT's indirect impacts are covered in this report as a separate short section unlike the most others analysed, led the author to the conclusion that all in all there is a balanced addressment of all pillars.

### **Balance between Production and Consumption**

**Rate: 2**

There is a balance in terms of number and detail allocated to production and consumption related aspects. However, one can say there are still some gaps in coverage of both categories. BT describes the relations and the tools to assess and promote sustainable performance of the suppliers more extensively than most analysed reports. But a common failure in this reports is also the lack of description of the sustainability performance of the key suppliers. On-site assessments for social sustainability is reported to be conducted by the BT for 9 randomly selected suppliers out of a total number of about 1000, the results of which is also disclosed. However, these suppliers are not the key ones and form a small number to build a picture about the social sustainability of suppliers. Aside from that, the environmental or economic performance of the suppliers is not discussed. However, the supply chain policy and relations with suppliers is well described [Btsp04 p.4].

A complete life cycle assessment based impact assessment is also not found in this report. Nevertheless there is an attempt to quantify the energy consumption of a certain product at the use phase [Bte04 p.10].

Furthermore, how the customers are warned of long term social risks of an excessive use of telecommunication services are not explained, nor are other means to direct the consumer behaviour into environmentally friendly way such as explanation of where they should return the devices or what the appropriate disposal channels of the products are.

As BT employs a large number of teleworkers [Bth04 p.23], the potential occupational illnesses due to teleworking and how the employees are warned of this could have been disclosed too.

This report shows a good attempt to highlight the discussion about the second order sustainability impacts of telecommunications services. Nevertheless, the focus is more oriented on BT's own performance, on the impacts of the application of the technology (e-billing, e-business,teleworking etc) on BT's environmental and economic performance and on BT's workers'social life. But the longer term perspective trends of material use and energy consumption are not discussed [Btss04].

### **Reporting Honesty and Quality**

#### **Environmental Pillar**

Reporting Honesty: 2

Reporting Quality: 3-4

*The tendency is to slightly emphasise the good performance and to disclose the benefits.*

*The quality of the reporting is extensive but there are still gaps with respect to coverage and interpretation of past performance in the context of future trends and targets and of performance at sectoral and macro scale.*

The report mentions most general risks, such as huge energy consumption levels, not all of their operations being ISO 14001 certified, environmental prosecutions and growing electronic waste levels, some third order impacts of the use of telecom services. Furthermore, the report seems to distinguish itself from the other reports in terms of coverage of some important risks associated with the fuel storage tanks, ozone depletion and refrigerants, increased energy levels with burying the wires to ensure a visual amenity and the way BT tries to minimise those risks [Bte04]. However, this approach has not been applied on some other important aspects. For instance although the growing levels of electronic waste is highlighted, the programmes for recycling and the reuse of the products are not sufficiently described. If there are programmes in place to collect the electronic waste from the users like in the case of Deutsche Telekom or what specific targets they have to increase their current recycling levels which is only about 26% (compared to that of 80% of Deutsche Telekom for instance) is not described in more detail than disclosing their intentions in generic words [Bte04 p.20]. Furthermore, risks of increased energy consumption of W-LAN are not mentioned.

They describe the policies that they have in their supply chain programmes especially regarding the type of materials or the environmental performance of their suppliers as well as the assistance they give to the suppliers to improve their performance. Still, the end result of these policies if they have been implemented to the desired extent (which is also not described), or if there are still some problems in implementation, are not sufficiently discussed, which means possible shortcomings are not highlighted.

Furthermore, the fact that the impacts of the operations only in the UK are highlighted is a big shortcoming considering the potential risks existing at the overseas operations.

However, the quality of the presentation of the data is generally good.

The content used is relevant and sorted according to the types and functions depending on the aspect, but not according to the business lines outside the UK as mentioned above. The trend of the performance for most aspects is given and future targets are explained. Although the standing of BT's performance with respect to performance on most aspects is not highlighted with respect to that of the whole industry, the size of some impacts at macro level is highlighted for a number of aspects such as energy consumption [Bte04 p.1] and the general electronic waste levels [Bte04p.8].

## **Social**

Reporting Honesty: 1-2

Reporting Quality: 3

*There is a balance between benefits and risks of some important issues, although the international dimension of risks as well as shortcomings and unfavourable performance takes relatively less attention. The coverage of important issues such as relations with employees, customers as well as the digital divide, internet content and security etc. are extensive, but not complete as data of international operations is not included.*

Beside the achievements they made with respect to targets set the previous years and benefits the service of BT supplies for people, the report covers a number of important risks and shortcomings such as the decreased share of women among their employees [Bth04 p.9], stress management programmes for employees [Bte04 p.10,11] and some negative effects of teleworking [Btss04 p.2]. Furthermore, there is also a serious discussion about off-shoring some operations of BT to India, to which independent opinions have also been added [Bte04 p.5,6].

A very extensive coverage of attempts and projects are displayed to ensure the availability of the telecommunications services such as broadband to the remotest villages in the UK, or to schools, universities or supply of special services for people with special needs are well described. Nevertheless, also in this report we cannot see any mention of projects to bridge the international digital divide [Btd04 p.9].

Compared to most other reports, a significant number of issues enjoy more discussion and coverage. However, there are still some minor problems with respect to coverage and presentation.

For instance the engagement ways with customers and employees are well described and proofs for integration of feedback from them into business operations are also disclosed. But for instance, how often these engagements take place, and the issues that stakeholders are not satisfied with, that means potential shortcomings, are not described.

Risks in the supply chain are not very well described, because the potential wide spread problems existing at the key suppliers is not discussed as highlighted at criterion 3. Only disclosed is the number of vendors where further action for sustainability is necessary BT states to send out self sustainability assessment questionnaires to its suppliers and as a result of the answers to categorise them as high, medium or low risk classes, but according to which criteria this classification has been done is not explained either. The shortcomings with the questionnaires being of self assessment type and the on-site assessments not being conducted independently is not discussed. [Btsp04].

### **Economic**

Reporting Honesty:0

Reporting Quality:2

There is a clear presentation of benefits and good performance rather than risks and shortcomings. The presentation of data is good. The report presents both direct impacts of the organisation on customers, suppliers, employees, shareholders and governments and indirect impacts on economies, regional development etc. The direct impacts of the organisation is presented with relevant data and distribution according to units, geographical areas. However only useful effects of telecommunication on broader economies such as income and employment creation, growth and productivity increases, regional development and creation of knowledge economy is disclosed, potential broader scale negative impacts of globalisation, which is accelerated in parallel with the developments in and widespread application of telecommunications technologies, is not discussed, nor is the reverse potential of telecommunications to further promote the development of centres rather than peripheral areas shown [Btec04].

### **Stakeholder Engagement**

Rate: 2

Key stakeholders are identified with the description of engagement ways with them. The issues the stakeholders considered the most important for the report are highlighted. Nevertheless the level and type of interaction with stakeholders for issue identification for the report is not presented, nor are the findings coming out of these interactions with stakeholders and their perceptions well discussed [Btst04].

### **Verification**

Rate: 3

Although the report is completely verified, the recommendations of the assurance company are not presented [Bth04 p.4].

## 5.2.4 Telefonica [Tel04]

### Transparency of the Reporting Boundaries

Rate: 1

*Only the scope dimension is somewhat clear.*

The operational boundaries of the report are not clear. Even though it is stated that the report refers to the activities and operations of the whole group, throughout the report there is no consistent compliance to that border. Sometimes, reporting is only about some business lines, sometimes about others. And there is no explanation for not complying to that border.

The scope of the report is declared to be in line with the GRI 2002 and GRI Telecommunications Sector Supplement. No reasoning is disclosed for excluding other potentially significant aspects such as the use of ozone depleting substances or human rights record at the supply chain to name a few. Furthermore, the intention to expand the boundaries of the next reports is not well described: There is only a generic statement that progressively data will be included without declaring by which time what units or what aspects it will be included [Tel04 p.138].

### Coverage of Sustainability Dimensions

Rate: 3

*All pillars are addressed in a somewhat balanced manner.*

### Coverage of Both Production and Consumption Aspects

Rate: 1

There is a bias on reporting production related aspects. Furthermore none of the issues identified to be important (see explanation of criterion III) are adequately addressed. For the consumption category, there is only very patchy reporting on extended producer responsibility especially with respect to the functioning of take-back schemes [Tel04 p.118]. The communication of potential unfavourable impacts of telecommunication services on social life and environment is not reported, nor are ways on how to guide the users toward sustainable behaviour. Moreover there is no adequate discussion of long term impacts of widespread use of services on sustainability pillars.

LCA oriented environmental impact assessment or clear disclosure of key suppliers' sustainability performance is also missing.

### Reporting Honesty and Quality

Environmental Pillar:

Reporting Honesty: 0

Reporting Quality: 1

*Risk and, shortcomings are almost ignored. The reporting is patchy.*

The addressing of risks is problematic due to 3 reasons:

First, the focus of reporting is clearly on Spain: basically only the environmental policy of Telefonica Moviles Spain is described [Tel04 p.110], data for instance regarding "reduction of impact of infrastructures on environment", water consumption, emissions into the atmosphere, change in the number of vehicles in the fleet over the years cover almost only Spanish business lines. The situation, the potential problems in other business lines, especially in Latin America or Morocco is not discussed adequately [Tel04 p.114-119].

Second, several immediate risks are not mentioned: for instance while the benefit of 2G, 3G technologies is mentioned, the risk of increased energy consumption due to them are not mentioned [Tel04 p.87]. Similarly,

while it is stated that services such as teleworking, e-commerce and so on have a positive impact on the environment, their potential risks due to rebound effects are not covered at all [Tel04 p.87, 120].

Other major issues known to form a risk for environment are not addressed at all such as growing electronic waste levels, CFCs.

The quality of reporting is also relatively low. The relevant data on some aspects is not systematically disclosed. For instance, under the heading of “reduction of the impact of infrastructures on environment” the focus is almost only on efforts they made on the reduction of the visual impact of that infrastructure, but other relevant data such as impacts on biodiversity is not discussed at all [Tel04 p. 114]. Similarly, at the waste management issue, recycling percentages of different waste sorts is not disclosed, but only some individual activities which do not draw a holistic picture [Tel04 p.118]. At the electricity consumption issue, relevant data such as sorting out of energy sources as renewable or non-renewable and energy consumption improvements of major units are not disclosed generally, but only the values of Brazil [Tel04 p.113].

The coverage and presentation of data is also as found to be focusing mainly on Spain, not covering the whole business. The interpretation is also not satisfying as on quite a number of aspects such as water consumption, GHG emissions, waste amounts, electricity consumption, absolute figures are given only for the last year, which basically means nothing as the trend of performance over time as well as the implications at macro level cannot be deducted. Furthermore, targets for the future are also given for a limited number of aspects only.

### Social Pillar

Reporting Honesty: 0

Reporting Quality: 1

*The tendency is clearly toward reporting about good news. The quality of the reporting is also not systematic.*

Although for instance several major projects aiming at the supply of services for schools, public places etc. are presented, the real risks with respect to digital divide are not well disclosed.

For instance, although the figures for availability of broadband service in certain Latin American countries is given, which are at a relatively high level, the actual rate of use of services, such as internet in rural communities of Latin America, are not presented, which are on the contrary known to be quite low [Ddn04]. Also similarly, on page 88, it is stated that 100% of people in the first 3 social classes of the population are able to pay the basic fee for fixed line telephony, where these classes are shown separately. However, the next 2 lowest classes are shown together, which psychologically leads to the underestimation of the size of these last 2 classes, where the percentage of people able to pay this basic fee varies from 1% in Peru to 63% in Brasil. Furthermore, the absolute number of people in those classes is not disclosed, which could have reflected the real situation better, remembering that only a low ratio of the population is in the high classes, while the majority are in the lower classes in most Latin American countries.

Also for instance while it is mentioned that awareness campaigns are initiated on the overtime abuse in Peru, the present situation in different countries (including that in Peru) regarding that potential problem is not presented [Tel04 p.72]. Similarly, while it is claimed that Telefonica has good records on issues such as child labour, human rights etc., potential risks in their supply chain for those issues are not discussed at all. Also support for the Spanish language is claimed to be given, but not for indigenous languages of Latin America [Tel04 p.100].

Another important shortcoming in the eyes of the author is the lack of a discussion on the huge difference in the number of rural telephones between Spain (200,000) and the whole Latin America (74,000), considering the reverse difference in the rural population and the need for public telephones in rural communities of Latin America [Tel04 p.113].

Furthermore, communication with stakeholders seems to be only on business as usual topics, but not for seeking to increase RCG practices or for the discussion of relevant CSR performance. For instance, communication with customers seems to target at issues such as billing or service related problems, not questioning to what extent Telefonica implements its CSR in the eyes of customers, which Vodafone for instance does [Tel04 p.44,45] [Vod04 p.21].

Again, for some aspects the reporting is focusing on activities in Spain, which results in interpretation that shortcomings are not addressed realistically. Such aspects are for instance services that add value for civil society, adding value for services of SMEs, combating gender violence [Tel04 p.90,91,98].

The quality of reporting here is also not satisfying.

There are obvious gaps with respect to coverage, presentation, interpretation, implications. Again as stated above there is no systematic disclosure of data with respect to business lines. The tendency to focus on Spanish performance is also to be seen for a significant number of aspects. For instance, although generically the results of an employee surveys done in Spain is discussed, but not of other countries. A similar tendency can also be seen on issues such as work-family balance, services that add a value, SMEs etc. [Tel04 p.74,90,91,83].

Most of the time absolute figures are given, which make the interpretation of performance highly difficult. For instance, 42000 employees are reported to be a member of the trade unions, but what percentage of the total employees these form is missing [Tel04 p.72]. Furthermore, figures of previous years on the same areas are missing due to which the trend of performance change cannot be deducted. And the standing of the company in the sector with respect to performance at some major issues (meso level comparisons) is also missing.

Other problems at the interpretation of the performance arises also due to not systematic discussion of data presented at graphs, which is encountered more when there is a decrease in performance such as in the case of customer satisfaction or press coverage given to Telefonica, which can be also interpreted as shortcomings being not well addressed [Tel04 p.132,49].

Targets are also not set systematically here.

All in all, the honesty and the quality of this pillar are rated only 0 and 1 respectively.

### Economic Pillar

Reporting Honesty: 0

Reporting Quality: 2

The presentation of financial information seems to have a satisfying level of detail. But neither risks and shortcomings nor benefits of the telecommunication sector for economies in the long run due to externalities are addressed.

### **Stakeholder Engagement**

Rate: 0

Whether stakeholders have been consulted specifically for the preparation of the report has not been described explicitly.

### **Verification of the Information Disclosed**

Rate:0

If the report has been verified is not mentioned.

## 5.3 Initiatives at Sectoral Level

### 5.3.1 ETNO [Etn02]

#### Transparency of Reporting Boundaries

Rate: 2

*Only the operational boundary and the target for expanding the future report is clear enough.*

The operational dimension of the report is limited to the member companies' performance which provided data.

The scope dimension of the report is implied by mentioning that ETNO's reports are "the tool for promoting and marketing the efforts of ETNO signatories on developing EMS, improving reporting of environmental performance to stakeholders, assigning high priority on waste and natural resource management and striving to optimise energy consumption patterns." [Etn02 p.4] This can be considered as the framework of the report as well, nevertheless there is no full compliance to that border. For example the waste management issue is not reported, although the aspect is declared to be important and the reason for its exclusion is not explained. Furthermore, the intention to expand the operational boundary of the report is highlighted but not that of the scope of this intended expansion. Considering that only the operational boundary and the target for expanding the future report is clear enough, the report is rated 2.

#### Coverage of Sustainability Dimensions

Rate: 0

*There is no balance between the 3 pillars of sustainability.*

The report is entitled ETNO 2002 Environmental Report. Therefore the main focus is on environmental performance of the companies in the sector. However, social aspects are also given some limited coverage. The economic performance of the sector and its impacts on economies at micro and macro scales are almost missing. There are only some sketchy indicators to show cost savings some companies achieved through investing in infrastructures for environmental protection.

#### Coverage of Both Production and Consumption Aspects

Rate: 0

*There is a great tendency to report on production related aspects both in terms of number of aspects reported and the detail allocated.*

Use phase or user behaviour related impacts are not discussed at all. Furthermore many environmental aspects in both categories, leaving social and economic concerns aside, remain untouched or are not adequately touched. These can be considered environmental performance of suppliers, waste management and recycling issues, changes in consumption patterns in the long run.

#### Reporting Honesty and Quality

As the report is already quite short and the social and economic pillars are almost completely missing, the evaluation for the reporting honesty and quality will be made for the whole report.

##### Reporting Honesty:

Environmental Pillar: 2

Social Pillar: 1

Economic Pillar: 0

##### Reporting Quality

Environmental Pillar: 1

Social Pillar: 0

Economic Pillar: 0

*Superficial, with a slight tendency to emphasise the good news*

The report can be considered quite general and not comprehensive enough to reflect the sustainability performance of the sector clearly. This is due to two reasons:

First, the social and the economic pillar of sustainability are not reported through appropriate indicators or deep enough discussions, and there is even the problem in the presentation of the environmental performance as absolute rather than relative figures. The impacts at macro scale is hardly interpreted as well.

Second, although indicators have been used to report on different aspects, what is mainly looked for is the presence of some measure or company response to a problem. Therefore the content and the quality of those responses and measures are not discussed and questioned. For instance, although the percentage of the ETNO members showing environmental awareness or supplier programmes is reported, the quality and the content of the programmes are not questioned [Etn02 p.12,14].

Furthermore there is a slight tendency to emphasise “the good news”, that is the favourable performance of companies. This can be attributed to the inadequate level of detail of the report.

Due to this, several important issues in the sustainability debate of ICTs, such as industry policies or activities on growing electronic waste, recycling, reuse or company policies aiming at improving consumer behaviour, are not covered.

Furthermore the long term sustainability risks associated with the use and application of the technology as well as the sustainability risks of globalisation is not mentioned at all, but only the environmental benefits of the telecommunication applications and of globalisation [Etn02 p.5,6].

The connection of aspects to industry activities is also missing sometimes: for instance, although the industry’s potential to bridge the digital divide is mentioned, there is no mention of how the industry is planning to tackle with this, no reporting about the projects the industry has initiated or planning to initiate in the disadvantaged regions and countries to spread those social benefits mentioned before in the report [Etn02 p.26-27]. This is especially important as the industry as a whole has a great potential to address the international dimensions of debated topics such as that of the digital divide.

Nevertheless, the initiative honestly mentions the shortcomings of the industry with respect to some environmental issues that need more attention and asserts under which regulatory conditions the industry can contribute to sustainable development, highlighting the risks that otherwise would arise for the environment [Etn02 p.26].

### **Stakeholder Engagement**

Rate: 0

Whether stakeholders have been involved in the report preparation has not been mentioned.

### **Verification of the Information Disclosed**

Rate:0

It is not mentioned if the individual companies have the information they supplied as a contribution to this industry initiative verified or not.

## 5.4 Summary of the Main Findings and Discussion

Assessment Criteria		Deutsche Telekom	BT	Vodafone	Telefonica	ETNO
Reporting Boundaries (0-4)		2	3	2	1	2
Sustainability Dimensions (0-3)		2	3	2	3	0
Production vs Consumption (0-3)		2	2	1	1	0
Reporting Honesty (0-3)	<i>Environmental</i>	2	2	2	0	2
	<i>Social</i>	2	2	3	0	1
	<i>Economic</i>	0	0	1	0	0
Reporting Quality (0-4)	<i>Environmental</i>	3	3	2	1	1
	<i>Social</i>	2	3	3	1	0
	<i>Economic</i>	0	2	1	2	0
Stakeholder Engagement (0-3)		1	2	1	0	0
Verification(0-3)		1	3	3	0	0

### Discussion of findings from the analysis

Above the thesis analysed the sustainability reporting performance and the level of transparency existing at 4 corporate and 1 sector level sustainability reports based on 7 criteria. Below there is a summary and discussion of the findings from this analysis.

There was generally little comparability between the reports. As a financial analyst points out “he and his colleagues can find the basic information they need from the financial pages of an annual report within 30 seconds. It can take much longer for them to find what they are looking for in a sustainable development report.”[HPS02 p.20] The comparability problem they identified was also observed during the analysis of the reports in this thesis. Reports have different reporting formats, information looked for was dispersed over different sections in some reports, while in others there was already a specific chapter for it. Therefore it took quite some time to analyse the reports. The reports had also differing scopes: While for example BT extends the workplace diversity to ethnic minorities, this issue was limited in the rest to the gender structure of the workforce.

Comparability further decreased also because sometimes different indicators were used to report on the same subject such as energy consumption. While for instance Deutsche Telekom showed its total energy consumption in percentage, setting a specific year as the benchmark, BT showed it in absolute GWh over years, ETNO as average electricity management efficiency through such an indicator as mWh/1000e over years, Telefonica as total electric power consumption in kWh for the last 2 years and Vodafone as total energy consumption in GWh of only the last year.

The fact that reporting practices still have a long way to go and need an eventual harmonisation became also apparent in some company reports. BT, for instance talks extensively about the difficulties of finding appropriate indicators for such issues as measuring the non-financial performance or for reflecting the intricacies [Bta p.3]. They mention their individual efforts to come up with sound indicators for such intricacies and their eventual failures. It becomes clear that there is a need to standardise these individual efforts on a sectoral, industry wide basis as will be elaborated in the next chapter.

Other observations made as a result of application of the criteria were as follows:

The **practice of reporting** is gradually moving from environmental reports to more comprehensive reports, covering all the 3 pillars of sustainability. However, most reports analysed focused on social and environmental pillars of sustainability (the ETNO report even only on the environmental pillar). The economic pillar of sustainability is neglected as the discussions hardly went beyond disclosing the financial performance toward presenting the wider economic impacts of the business.

**The reporting boundaries** of most reports are somewhat clear, it has been made clear to the readers what the reports cover. Most reports declare to have chosen a boundary based on fully owned activities, and to have excluded the performance of all other entities such as subsidiaries, joint ventures or suppliers. Nevertheless, it is often observed that there were trade-offs made at the compliance to the chosen boundary as most reports did not adequately disclose their sustainability performance at the international wholly owned entities, but focused on those in the main country. Here the question arises if these boundaries chosen, both operational but also that for scope, are serving to make the reporting organisation transparent enough? The stakeholders' desire to know more about all activities, national or international, that the reporting organisation affects or promotes might be a legitimate interest, which requires the reporting organisations to choose a wider boundary so as to even cover the suppliers' or contractors' performance adequately on major and relevant sustainability topics. However, the reporting boundaries are to a large extent relatively narrow and nationally focused for the moment.

Talking about **suppliers**, a relevant concern arises about the level of transparency regarding the relations with suppliers reported in most reports. A common failure often observed (in 3 out of 5 reports) was the lack of the disclosure of the relative power relation with their key suppliers. Although it is claimed in almost all reports that they consider the sustainability performance of their suppliers when doing their purchasing, it is important to show to the readers how far they could go in the supply chain to comply to this claim and what percentage of their purchasing has been indeed done from such vendors with good sustainability records. The criteria to assess these suppliers also should have been disclosed. The telecommunication companies analysed in the thesis are all quite multinational and have thousands of suppliers. They nevertheless vary to some extent from each other in certain core business activities that they rely on. Therefore it is important for the readers to understand to which vendors this claim applies. Does it also for instance apply to such big brands such as Motorola or HP whose products some of the companies analysed such as Deutsche Telecom or Vodafone sell or even to the suppliers of their suppliers remembering that the sustainability record of the supply chain of the ICT manufacturing industry still has a bad sustainability record. The difficulty of course arises to ask how far a reporting organisation can or must go in reporting its supply chain, which is complicated enough. But this question needs to be answered by the stakeholders, provided the relative power relations with suppliers is disclosed in the reports through some clues such as what percentage of the sales of the supplier identified as a key one makes up in the purchasing volume of the reporting organisation. Nevertheless, there is no such adequate level transparency regarding these points highlighted exists in any of the analysed reports, which decreases the transparency in the supply chain of the reporting organisations.

Just like the upstream impacts not being adequately disclosed, disclosure of **downstream impacts**, may it be social, environmental or economical, and of the way to deal with them has been found to be not satisfying in most reports either. At the consumption related impacts' disclosure, the field where the highest transparency level has been reached in most reports analysed is recycling & reuse issues of the electronic waste. Nevertheless, there is no adequate addressing of impacts at the *use phase* as well as due to *user behaviour* (only BT disclosed the results of some relevant study on user behaviour related impacts). From the environmental point of view, LCA oriented environmental impact assessment is missing in most reports.

As for the user behaviour related impacts, as discussed, if ICTs have to make a positive contribution to sustainable development, this also depends largely on how the users use the service as well as their level of awareness of the consequences of the practices they perform. As the business is expected to take over some of the social responsibilities that used to belong to governments, it is also necessary **to guide the consumers** to behave so as to decrease their impacts on sustainable development. How and if the business is doing or intending to do so, using which communication channels or which other tools such as creating incentives, is not disclosed in any report analysed at all. All in all the focus is rather on disclosure of the impacts of activities or performance achieved, occurring within the factories owned by the reporting organisations, i.e. at manufacturing stage, where the industry has made very promising improvements. But this also leads to the conclusion that **good news was more disclosed** than the bad news in most reports.

Connected to this is the disclosure of **wider scale impacts** of the dissemination and use of the ICTs **on economies, environments, societies or individuals**. A realistic discussion on the topic if under the present conditions the technology is heading the human being on the right way to sustainable development or on the contrary, is not done in any report, so a longer term perspective is lacking in the reports.

Besides, the lack of discussion of such risks of the technology, **the international dimension of risks and developing country issues** are lacking. Among the reporting organisations there seems to be a promising understanding of certain risks such as that of the digital divide. Most reporting organisations describe their efforts very well, for instance to bridge the national digital divides through different means, which is of course very important and the most doable practice for the business. However, what is seriously concerning about this issue is the international dimension of the problem. Although, through GeSI the international dimensions of such problems have been identified, the level of their deployment matters, for which there has been no relevant addressing in most reports. Although Telefonica, but especially Vodafone, discloses some individual projects or efforts to address this problem, these are limited to those developing countries where they operate and the approach might not be a result of a holistic company policy. So there needs to be an industry wide continuous response to this problem and to developing countries' issues as discussed in the next section.

Another common point to most reports was the failure to present clearly how they integrated the **views of stakeholders** for issue identification for and preparation of the report, which would contribute to the transparency of the end product. Most reports stated generically that stakeholders were consulted prior to the preparation of the report, but they hardly discussed the results of this consultation process or showed how and where the views of which stakeholders were considered. Different stakeholders have different interests in a sustainability report, some are basically interested in quality issues, but some in how the organisation manages its supply chain. To show how the reporting organisation reconciles different stakeholder interests is also important to make the approach of the reporting organisation toward different stakeholders transparent.

**Verification** of the information disclosed in the reports is becoming a common practice. Most reports analysed had at least a partial verification done.

It was interesting to see that 3 reports out of 5 had considerably increased sizes compared to that of the previous years, which is actually a general trend observed in the sustainability reports of last years. But whether the reports indeed managed to disclose more vital information by increasing their sizes was uncertain as highlighted in this summary of findings from the analysis.

## 6. Conclusions and Recommendations

Generally speaking the ICT sector has great potential to accelerate the pace towards a sustainable world. It creates great opportunities for growth, employment, social cohesion and the environment, for example through the enhanced possibilities of teleworking. Still, not the technology as such is sustainable, but rather its design, use and regulation. To realise the potential of the technology for sustainability, an understanding is needed about the impacts of the technology itself so that risks can be minimised and benefits can be enhanced. To this end, every actor in society has responsibilities to fulfil, so have the corporations in the ICT sector. Today, the business sector is expected to act as a global citizen more than ever. Being transparent and willing to share the performance, activities in all 3 pillars of sustainability is one confirmation of being a responsible citizen and a requisite of corporate accountability.

The thesis in that respect aimed at finding out to what extent the telecommunications service sector fulfilling its responsibility of being transparent and accountable by analysing 5 sustainability reporting initiatives. To conduct the evaluation, the thesis developed 7 benchmarking criteria reviewing the existing benchmarking methodologies, especially those of financial indices and Global Reporters Benchmark Survey of Corporate Sustainability Reporting. Realising their shortcomings to promote the transparency and accountability of the corporations to the desirable level, the benchmarking criteria developed intend to provide a fuller profile of the transparency level of the organisations and to further encourage them toward CSR practices.

Each of the seven developed criteria reflects one aspect regarding the transparency. The sum of these criteria provides a good idea of the overall transparency issue, though of course it cannot claim to be exhaustive yet. For example the criterion to assess the transparency of reporting boundaries didn't consider expanding the boundaries by publishing additional reports for the entities of the company. However, seeing that the reports reach already considerable sizes now, to include also all other entities that they have not included by now might create huge reports. Vodafone for example encourages its members to publish their individual reports, which might be possibly more extensive than a single comprehensive one. Therefore the evaluation of this criterion might also require to include the additional reporting sources of the company as another way of showing commitment to expand the reporting boundary, but unfortunately this was not feasible in the scope of this work.

Five organisations of the telecommunications sector are all members of the GeSI initiative, which can be considered an initiative, that is multi-stakeholder based and that brings a solid approach to the debate of ICTs in the sustainability context. Therefore, it can be argued that the organisations in the European telecommunications sector analysed are supposed to be in the front lines of sustainability practices and it is thus quite likely that the level of transparency at the whole European sector is not any better than what has been concluded from these 5 major European telecommunications organisations.

Problems, which are decreasing the credibility of the reports and the transparency of the organisations, are identified at the end of the analysis. The problems are ranging from low focus on supplier, consumer issues to lack of addressing international dimensions of sustainability problems, which require an industry wide **harmonised and collective** approach to tackle with. The author argues that this approach can be achieved within a sectoral governance scheme that draws on the elements of the RCG, i.e. a governance of the ICT industry that ensures a high level of stakeholder participation that has developed its sector wide applied management and monitoring standards, that is transparent and that has its performance verified. How such a governance scheme need to be organised is nevertheless outside the scope of this thesis.

To compare the performance of the analysed reporting organisations were quite time consuming and difficult. The lack of common reporting frameworks and standards is one reason for that. "[...] standardization of reporting formats [...] could improve the comparability of reporting and the rating process in terms of quality, transparency and consistency. This would also ensure a higher degree of acceptance of the results by companies, investors and the public at large. [HPS02 p.22]

In this respect, harmonisation of reporting practices is especially necessary to enable the readers to make sound judgements about the sustainability performance of different companies. The GRI guidelines and sector supplements` use as a common reference point is one way is to adopt more harmonized reporting and rating practices. The telecommunications sector supplement is also a major step toward harmonisation of reporting practices across the telecom sector. Some companies are adopting these approaches to some extent. [HPS02] Indeed 2 out of 5 organisations analysed claim to have applied GRI guidelines as framework of reports. Furthermore, ETNO argues that its 25 signatories measure their performance against common indicators. These initiatives should be further developed across the sector. The development of guidelines regarding how to for instance set the reporting boundaries, which topics of common concern to include in reports, how to report about suppliers and consumers by this sectoral organisation would especially be relevant. This is also because the GRI and its supplements do not yet pay a large focus to more specific questions about social and environmental issues, integration of sustainability into core management systems and governance. [HPS02]

Nevertheless, for the standardisation of reporting practices a learning period is necessary so that, the harmonised approach or standardisation developed be sustainable itself. At this initial experimentation stage the sectoral organisation should collect and consider different reporting experiences different companies had and collaborate with a wide range of stakeholder groups to have the ultimate framework to be accepted by a large circle, just like it was the case when the indicator set for the European Aluminium industry was developed with a multistakeholder process.

Furthermore if this harmonisation can be spread to sector wide management systems, the lobbying power of the sector overall would increase, which is not at a desirable level yet as highlighted at a speech of by Ms. Beyonce, Head of Corporate Affairs of Fujitsu , who pointed out ICT firms “unprepared” for new EU regulations for greater sustainability. [unt04]

If rules are harmonised with respect to areas to monitor and minimum standards the vendors are expected to have; this ´d form a very big pressure up the value chain considering the purchasing volume of the whole industry for sustainability performance improvement. Also this stakeholder oriented sectoral governance scheme would ensure these minimum standards to be set for the vendors to comply to, more sustainability oriented.

From the point of view of suppliers, the different requirements of multiple buyers, each of which has its own set of conditions make the life especially for small size suppliers tough. Sector specific standardisation of requirements could make the adherence of smaller suppliers to standards easier as they could spend more resources on complying to one standard instead of spreading their efforts over the differing requirements of differing buying companies.

With the appearance of common frameworks for sustainability reporting or management of impacts through such an sector wide scheme, those companies that have not done much on the path for sustainability yet would start acting, and their adaptation period would significantly decrease as they would find assistance (from this sector organisation); and the existence of common standards/ guidelines would save a lot of resources to them rather than starting at 0 point.

Furthermore, several major issues such as international digital divide, which were not adequately addressed in the reports, require an industry wide approach and commitment: i.e. collective action. Individual companies might have limited power to influence the course of development of the technology or address the international dimension of problems. Especially considering that the ICT is a very fast developing sector with great sustainability impacts, it is of uttermost importance that the approach to deal with potential risks and to enhance the potential benefits is an industry wide adapted and applied one so that the course of the development of the technology would be toward positive outcomes for sustainability. Hence, collective action is especially relevant for addressing the developing country issues and especially for closing the international digital divide, where sectoral policy making and commitment can help within its scope.

Last but not least, although the thesis developed the benchmarking criteria reviewing existing similar methodologies, the thesis did not conduct a whole benchmark study as such, as the thesis only measures and evaluates the reporting performance of a limited number of companies but does not set a reference point against which to compare the performance of the companies. Furthermore, more companies, reports should have been evaluated to build up a valid basis for a benchmarking system.

But some neutral player within this sectoral governance scheme can develop such a benchmarking system, which would be more sensitive to sector specific impacts and sustainability performance than the extent for instance the sustainability indices, as the most common commonly applied sustainability benchmarks, can do. This way continuous improvement at the CSR performance across the sector would be more effectively promoted.

Sectoral governance schemes is a field about which there is little study done in the literature, especially in the sustainability context. This thesis work can contribute to a start of studies in this direction. For example One question that can be addressed in future studies is the testing of the assumption of this thesis, the question if and how the elements of RCG should be applied on sectoral governance schemes.

## Appendix A: Literature

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