

TNO report

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**Sustainability management beyond corporate
boundaries**

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Contents

	Executive Summary	4
	Acronyms	7
1	Introduction	10
1.1	Background and problem definition	10
1.2	Research objectives and research questions.....	12
1.3	Methodology	13
2	Literature review	16
2.1	Concepts and definitions	16
2.2	Drivers for a focal company to intergrade sustainability improvement in the supply chain	18
2.3	Strategies and instruments used by focal company to integrate sustainability improvement in the supply chain	22
3	Companies' internet review	33
3.1	Companies at Stage 2 (Compliance).....	33
3.2	Companies at Stage 3 (Beyond compliance)	35
3.3	Companies at Stage 4 (Integrated strategy)	38
4	Case studies of companies' good practice	44
4.1	Royal Philips Electronics (Electronic goods - Healthcare, Lifestyle and Lighting) ..	44
4.2	Inter IKEA Systems B.V. (Home Furnishing and Food Services)	49
4.3	Procter & Gamble (Beauty, Grooming and Household Care products)	54
4.4	Koninklijke Ahold N.V. (Retail/Consumer goods)	58
4.5	Unilever (Food, Personal Care and Home Care)	65
5	Conclusions and discussion	72
5.1	Focal company and its networks	72
5.2	Drivers	73
5.3	Strategies and Instruments.....	75
5.4	Success factors and barriers	78
6	Recommendations	80
6.1	For companies	80
6.2	For further TNO research	81
7	References	82
	Appendices	
	A Checklist for documents analysis of companies' websites and public documentation	
	B Interview topic list	
	C Matrix analysis case studies	
	D Interviews	
	E Internet review	

List of figures, tables and pictures

Figure 1: Relationships between a company and its surroundings.....	11
Figure 2: The connection between competitive advantages and environmental and social issues	20
Figure 3: Instruments for engaging with suppliers on sustainability.....	32

Executive Summary

There is a new playing field in which we recognise our responsibility in protecting our planet, and, hence, the rapidly increasing urgency for government, business and society to address the global sustainability challenges. Sustainable development can be seen as a framework on which companies and their management can transform their responsibility for environmental, economic and social behaviour into business practices within the legitimacy of our society (Koplin, Seuring, & Mesterharm, 2007). In the increasing economic globalisation, businesses increasingly rely on the outsourcing of parts of their activities and processes. Companies function and compete thus more and more on a supply chain level, in specific networks with their suppliers and service providers. Focus on supply chains is a step towards broader adoption and development of sustainability.

This study on sustainability in the supply chain is part of the TNO research programme on healthy, vital and safe work. The aim of this research was to understand the drivers, processes and instruments through which focal actors implement and improve sustainability within the supply chains, in order to use this knowledge to assist companies in improving their sustainability performance. To achieve this goal, first literature review was performed in order to define key topics for improving sustainability in the supply chain, and, then, the research followed a multiple case study design in order to increase the in-depth understanding and comparison of drivers, strategies and instruments, success factors and barriers for implementing sustainability in the supply chain of five frontrunners (focal companies) in the field of sustainability. A document analysis of the external public documents of twenty one companies was applied to gather data on practical information on sustainability in the supply chain, and to select companies with best practices to be included in the in-depth interviews for the case studies. The twenty one companies were classified according to their level of sustainability integration, using the Bob Willard scale described in this report (Hallstedt et al., 2010). Five companies with integrated sustainability strategy (i.e. at level 4 of the Willard scale) were chosen for the case studies. These companies are Philips, IKEA, Unilever, Procter & Gamble (P&G) and Ahold. This research will be used as scientific background for further TNO applied research and development of services, in order to assist business to addressing the global sustainability challenges.

The report consist of six chapters. The first chapter outlines the concept of sustainability in the supply chain, framing the supply chain networks and relationships between the different actors in these networks. Furthermore, it describes the aim, the research questions and the methodology of this research. In the second chapter, the literature findings are presented, first explaining the main concepts and definitions, such as sustainability, supply chain, (sustainable) supply chain management and focal company, and the relationships between the different actors in the supply chain, the factors that shape them and their role in promoting sustainability amongst the supply chain members. Then, the drivers for a focal company to seek implementation of sustainable practice in the suppliers and/or (sub-)contractors are explored and some of the strategies and instruments that exist for influencing the members of the supply chain are presented. In the third chapter, the results from the document analysis of external public documentation of twenty one companies are summarised, whereas, in chapter four, five of the reviewed companies are presented in the form of case studies as examples of best practice.

Chapter five presents the conclusions; it summarises the main findings and the most important messages in terms of implementation of sustainability practices in the supply chain. In the last chapter (chapter six), recommendations are given on how companies can improve sustainability practices in their supply chains, and the pathway for further TNO research with regards to sustainability in the supply chain is described.

In order to progress to a higher level of sustainability integration (Willard, 2005), the company should integrate sustainability policies starting from their own internal policy, operations and culture, and then extending it to the whole value chain of suppliers/contractors and clients. Suppliers' sustainability performance is central in achieving companies' sustainability targets. Far-reaching chain integration, however is, still, rather limited. Second-tier suppliers are included in the sustainability process by requiring and stimulating first-tier suppliers to work with their respective suppliers. In some cases (retailers), direct contact with second-tier suppliers (producers) is pursued.

Main drivers for integrating sustainability in supply chain encompass legal demands, customers' demands, response to stakeholders, competitive advantages, environmental and social pressure groups and reputational loss. Top management leadership and support is a key driver and success factor for organisational change and implementation of new programmes, and, therefore, a prerequisite for integrating sustainability in the supply chain of a focal company. Frontrunners in sustainability point external pressure from NGOs, media, society and governments as a trigger which was most relevant in the past, but not anymore. Nowadays, focal companies see sustainability improvements in their supply chains as a business case and a means to achieve their business goals and protect their brand image.

Companies have developed specific (individual or sector based) instruments and strategies, in order to integrate sustainability in their supply chain. There is a lack of research evidence on the effectiveness of the instruments and arrangements discussed in this paper, in order to check how successful these are. Nevertheless, the sustainability literature and practical examples indicate that the most successful initiatives comprise a combination of approaches (shaped by the type of industry or sector, and the type of the supply chain), with commitment strategies and consequent interventions that communicate clear rewards for engaging in environmental and social responsible behaviour. An effective policy and practice must be in place in order to influence suppliers to implement sustainability practices. In this respect, not only measures related to the education and training of purchasing staff, but also measures against suppliers play an important role (auditing and monitoring, sanctions and incentives). Social dialogue with stakeholders (including supply chain members) plays a central role in achieving integrated sustainability strategy within the supply chain. Last, but not least, building strategic partnerships with suppliers is one of the most successful approaches.

Communication within the supply chain is a paramount structure characteristic and main supporting factor, while monitoring, evaluation, reporting and sanctions are the ones more often quoted in the literature. Other supporting factors are management systems, training and education of purchasing employees and suppliers, and integration into the corporate policy. Increasing transparency and gaining a better understanding of the supply chain are other success factors. Top management commitment is a primary factor influencing the adoption of sustainability management. The main barriers for implementing sustainability improvements in the supply chain, according to the literature, are higher costs, coordination effort

and complexity, and insufficient or missing communication in the supply chain. However, joint efforts of all supply chain partners can help to control costs. The diversity of requirements that different clients request from suppliers is also a barrier to achieving supplier compliance with the company's sustainability standards.

TNO can contribute to the existing gap in the research literature by undertaking a systematic evaluation of the effectiveness of the instruments and arrangements discussed in this paper, in order to check how successful these are. TNO should communicate and stress the need for companies to involve the supply chain in their sustainability efforts, in order to make a step towards higher level of sustainability integration and to achieve their business and sustainability targets. Finally, TNO can develop tools and guidelines or/and tailor-made existing tools, in order to assist companies with the integration of sustainability in the supply chain. Among others, tools and guidelines for supply chain communication and integration, mapping of the supply chain, tools for supply chain, and stakeholder dialogue and collective learning are of great importance.

Acronyms

ASC	Aquaculture Stewardship Council
BOM	Bill of Material
BSI	British Standards Institution
BSCI	Business Social Compliance Initiative
BSR	Business for Social Responsibility
CEB	Corporate Executive Board
CEFIC	European Chemical Industry Council
CEO	Chief Executive Officer
CLP	Classification, Labelling & Packaging Regulation
COM	Commission of the European Communities; European Commission
CoP	Communities of Practice
CR	Corporate Responsibility
CSPO	Certified Sustainable Palm Oil
CSR	Corporate Social Responsibility
EBRD	European Bank for Reconstruction and Development
EFA	European Framework Agreement
EICC	Electronic Industry Citizenship Coalition
ELCM	Environmental Life Cycle Assessment
EMS	Environmental Management System
EMAS	Eco-Management and Audit Scheme
ETUC	European Trade Union Confederation
EU	European Union
EU-OSHA	European Agency for Occupational Safety and Health
FDI	Fédération dentaire internationale (World Dental Federation)
FSC	Forest Stewardship Council
GBP	Philips General Business Principles
GBSs	Global Business Services
GBUs	Global Business Units
GeSI	Global e-Sustainability Initiative
GFA	Global Framework Agreement
GFSI	Global Food Safety Initiative
GHG	Greenhouse Gas Emissions
GPS	Global Product Strategy

GRI	Global Reporting Initiative
GSCP	Global Social Compliance Programme
HAE	Hire Association Europe
HSE	Health, Safety and Environment
ICC	International Chamber of Commerce
ICT	Information and Communication Technology
IDH	Initiatief Duurzaam Handelen (Dutch Sustainable Trade Initiative)
IFA	International Framework Agreement
IIID	IKEA Industry Investment & Development
ILO	International Labour Organisation
ISO	International Organisation for Standardisation
LCA	Life Cycle Analysis
LCM	Life Cycle Management
LED	Light-emitting diode
MDOs	Market Development Organisations
MNE	Multinational Enterprise
MSC	Marine Stewardship Council
NGO	Non-Governmental Organisation
NSMT	Nokia Sustainability Management Team
NSR	Nokia Supplier Requirements
OECD	Organisation for Economic Co-operation and Development
OSH	Occupational Safety and Health
OHSAS	Occupational Health and Safety Assessment Series
PPPHW	Public-Private Partnership for Handwashing with Soap
PVC	Polyvinyl Chloride
R&D	Research and Development
REACH	Registration, Evaluation, Authorisation and restriction of Chemicals
RESPIRO	Responsibility in Procurement
RoHS	Restriction of Hazardous Substances
RSPO	Roundtable on Sustainable Palm Oil
RTBS	Round Table on Responsible Soy
SAI	Social Accountability International
SAQ	Self-Assessment Questionnaire
SCM	Supply Chain Management
SDS	Safety Data Sheet

SH	Stakeholders
SIEF	Substance Information Exchange Forum
SME	Small and Medium sized Enterprise
SLCM	Social Life Cycle Assessment
SP	Sustainable Procurement
SRP	Socially Responsible Procurement
SRPP	Socially Responsible Public Procurement
SSCM	Sustainable Supply Chain Management
UEAPME	European Association of Craft, Small and Medium-sized Enterprises
UN	United Nations
UNCCI	Uganda National Chamber of Commerce and Industry
UNICEF	United Nations Children's Fund
USDG	Unilever Sustainable Development Group
VBDO	Vereniging van Beleggers voor Duurzame Ontwikkeling (Dutch Association of Investors for Sustainable Development)
VOC	Volatile Organic Compounds
WB	World Bank
WBCSD	World Business Council for Sustainable Development
WEEE	Waste Electrical and Electronic Equipment
WHO	World Health Organisation
WNF	Wereld Natuur Fonds
WWF	World Wildlife Fund

1 Introduction

1.1 Background and problem definition

In today's global and national economies, businesses increasingly rely on the outsourcing of parts of their activities and processes. Companies function and compete, thus, more and more on a supply chain level, in specific networks with their suppliers and service providers.

Many environmental and social challenges require actions well beyond the boundaries of a single company. Such examples are the identification of substance uses and occupational and environmental exposure through the supply chain or the presence of substances from the Candidate List in products and articles as part of REACH. Another example is a construction or maintenance project involving a prime contractor who makes use of sub-contractors. These sub-contractors, in turn, can engage other sub-contractors resulting in a complex chain of companies and responsibilities in order to work safely. Additionally, companies can be held responsible for occupational health, social issues or environmental problems at their suppliers in developing countries. For example, the companies C&A and H&M, were held responsible for occupational health issues at their suppliers in India (Graafland, 2002; Volkskrant, 2010). Another example is Nokia which was criticised about the labour conditions in its factories in Asia (Wilde & Haan, 2006).

- These examples show that a single company could take proactive action, but would not be able “to solve” the environmental and social problem(s) on its own. Various relationships between a company and its surroundings can be distinguished (

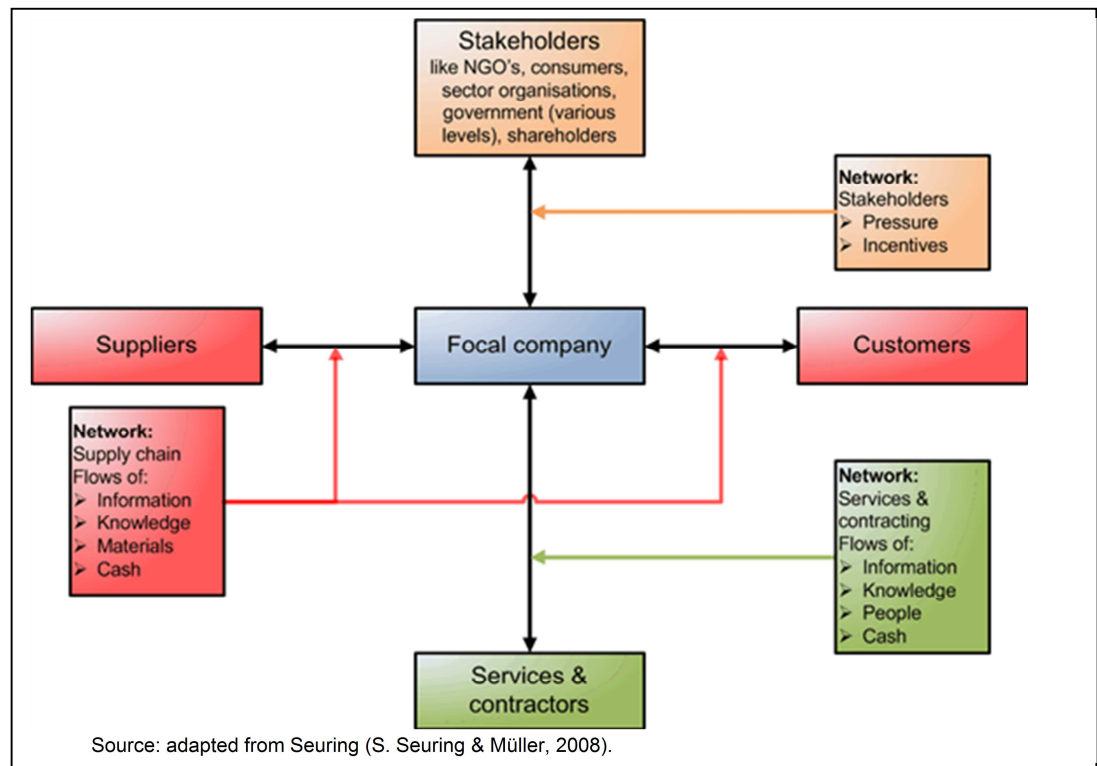
Figure 1), resulting in three main types of networks:

- **Suppliers' chain:** companies and their suppliers and customers. Within this network there is primarily a flow of goods and materials. Companies are linked together through information, knowledge, materials and capital flows. A chain suggests that companies are linked together in a steady straight line. This is often seen as a primary network of companies, in which production, distribution and sales of goods are taken care of (Hagdorn, 2007; Handfield & Ernest L.Nichols, 1999; S. Seuring & Müller, 2008). However, the supply chains (especially the global supply chains) can be quite complex, and there might be multiple tiers (for more definitions see 2.1.2). A supply chain is most often ruled or governed by one company or organisation, so called the 'focal' company (see 2.1.3).
- **Contractors' chain:** companies linked together by contracting bonds. This network comprises a flow of people (labour) and their services (i.e. contracting and sub-contracting). Companies are linked together through information, knowledge, people and capital flows. It is getting more and more common for construction work, maintenance projects and other work (ICT, cleaning, catering) to be performed by contractors. Most often this work is of a sporadic nature which implies that employees are only temporarily needed. Specialised companies and their employees are hired to perform the work better, faster and usually cheaper. Not only do employers hire contractors, but these contractors can hire sub-contractors, and, then, a chain of companies emerges. Within the contractors' chain, the focal company is

basically the host company or the client that outsources the task. The executed work takes place mostly at the premises of the focal company.

- **Stakeholders network:** national and international stakeholders. Focal companies are likely to come under pressure from stakeholders, e.g. government, non-governmental organisations (NGO's), sector organisations and consumers.

Figure 1: Relationships between a company and its surroundings



As part of these networks and as a response to pressures and incentives, more and more focal companies are moving to a strategic integrated sustainability policy, starting internally (internal policy, operations and culture) and extending externally into the networks of suppliers and customers, sub-contractors and stakeholders (Hallstedt, Ny, Robert, & Broman, 2010).

Five stages of sustainability integration within companies can be distinguished (Willard, 2005):

1. Pre-compliance: ignoring sustainability opposing related regulations.
2. Compliance: obeying laws and regulations on environment, health and safety.
3. Beyond compliance: recognising the opportunity to cut costs mainly through efficiency and reduction of waste, leading to both financial and ecological gains. Sustainability is still separated from core business development.
4. Integrated strategy: sustainability is integrated in the vision and strategy of the company.
5. Purpose and passion: companies aiming at 'saving the world'.

The Dow Jones Sustainability Index shows that more companies are moving towards level 4 of sustainability. It is expected that these companies will be the leading companies, and will set new standards on sustainable business practice. However, the source and management of environmental and social burdens is not the sole responsibility of one organisation. The whole supply chains and networks of supply chains must be involved.

This study gives an overview, analysis, conclusions and recommendations on sustainability in the supply chain in relation to the three networks presented in

Figure 1. Those networks are interconnected and are not separately analysed, however the relationships and roles of the actors in the networks are taken into account. Furthermore, the report examines and discusses the drivers and instruments for the so called 'focal companies' to implement sustainability practices in their supply and contracting chains.

The report consist of six chapters. Chapter 1 outlines the concept of sustainability in the supply chain, framing the supply chain networks and relationships between the different actors in those networks. Furthermore, it describes the aim, the research questions and the methodology of this research. In chapter 2, the literature findings are structured in three sub-chapters. The first one explains the main concepts and definitions, such as sustainability, supply chain, (sustainable) supply chain management and focal company, as well as the relationships between the different actors in the supply chain, the factors that shape them and their role in promoting sustainability amongst the supply chain members. In the second sub-chapter the drivers for a focal company to seek implementation of sustainable practice in suppliers and/or (sub-)contractors are explored. The role of the stakeholders is also investigated. The third sub-chapter presents some of the existing strategies and instruments for influencing the members of the supply chain. A comprehensive listing and assessment of the instruments is not intended. In chapter 3, the results from the document analysis of external public documentation of twenty one companies are summarised, and chapter 4 presents five of the reviewed companies that demonstrated best practice in the form of case studies. The conclusions are presented in chapter 5, which summarises the main findings and most important messages with regards to the implementation of sustainability practices in the supply chain. In the last chapter, chapter 6, recommendations are given on how companies' can improve sustainability practices in their supply chains, and the pathway for further research with regards to sustainability in the supply chain is described.

1.2 Research objectives and research questions

In order to progress to a higher level of sustainability integration (Willard, 2005), the company should integrate the sustainability policy starting from their own internal policy, operations and culture, and then extending it to the whole value chain of suppliers/contractors and clients (Hallstedt et al., 2010).

The objective of this research is to understand the drivers, processes and instruments through which focal actors implement and improve sustainability within the supply chains, in order to use this knowledge to help companies improve their sustainability performance (or assist them in moving from stage 3 to stage 4 on the sustainability integration ladder).

In order to achieve this objective, the following main research questions will be answered:

1. Why is it important to include the supply chain in improving the sustainability of a company?
2. What are the drivers for focal companies to implement sustainability improvements in their supply chain?
3. Which strategies and instruments are used by focal companies to improve the sustainability of their supply chain?
4. What are the main barriers/successes in improving sustainability in the supply chain?

1.3 Methodology

To answer the research questions, four different qualitative methods have been used.

- A. Literature review
- B. Documents analysis
- C. In-depth Interviews
- D. Multiple case study

Literature review

The literature review has been performed to define key topics for improving sustainability in the supply chain. The literature search has been performed in the database Scopus (Scientific literature database from 15.000 journals). The search was limited to the English language and the period from 2000 until March 2011. The keywords have been inserted in the fields title/abstract/keyword. The * means that singular and plural keywords were selected, for example tool and tools.

Three topics have been selected for the literature search and each topic has different keywords that were used in the literature search:

1. Focal company and the supply chain, with the keywords used:
 - Sustainability, focal company, supply chain, sustainable supply chain.
 - Focal company, focal companies, supply chain.
 - Focal company, supply chain.

For the first topic, keywords used were combined with: tool*, good practice*, safety, health and safety, occupational safety, occupational health, occupational safety and health, OSH, health and safety at work.

2. Supply chain management
 - Sustainable supply chains.
 - Supply management 'or' chain management 'or' supply chain management 'and' sustainable (development) 'or' sustainability 'or' CSR 'or' sustainable leadership.
 - Supply chain management models 'and' sustainable (development) 'or' sustainability 'or' CSR 'or' sustainable leadership or 'Corporate social responsibility'.
 - Supply chain management strategy 'and' sustainable (development) 'or' sustainability 'or' CSR 'or' sustainable leadership.

- Integrated chain management.
- ISO 14001 'and' supply chain.

For the second topic keywords used were combined with: method*, tool*, strategy, strategies, approach*, management strategy, management strategies, management model*.

3. Stakeholders: Government, NGO's (including trade/branch associations) and customers.
 - Government, sustainable supply chains, sustainability, supply chain, incentives.
 - Customers, sustainable supply chains, sustainability, supply chain.
 - NGOs, sustainable supply chains, sustainability, supply chain.
 - Procurement and recognition schemes, sustainability, supply chain.
 - Sustainable development.

For the third topic, keywords used were combined with: Non-governmental organisations, Inter-organisational, governance, Corporate Governance, stakeholder*, Private sector, Public administration, Non-profit organisations.

The search strings of the literature search resulted in 297 references. Abstracts of those articles were review and the relevant papers have been included in the literature findings of this report. Additional reports available on the internet and suggested by experts were also included in the literature review.

Document Analysis

To increase the in-depth understanding and comparison of drivers, strategies and instruments, success factors and barriers for implementing sustainability in the supply chain, this research followed a multiple case study design. This allowed comparison between cases within a broad range of industries. The data generation method was based on two qualitative methods, document analysis and in-depth interviews with several frontrunners (focal companies) in the field. This means that data for the case studies are generated by using multiple data gathering methods and, therefore, improving internal validity of the data. The data sources for the document review were the companies' websites, annual and sustainability reports and other external company documents to ensure external validity of the data.

These case studies could be performed in a broad range of companies and countries around the world. To bring the selection scope to realistic proportions, practical selection criteria have been set up for companies to be included in the document analysis:

1. Need to be focal companies within the supply chain.
2. Have offices in the Netherlands.
3. Be a major company within the Netherlands.
4. There is a possible or easy access to these companies (Indirect or direct contacts with relevant employees of those companies).

Relevant experts within TNO were consulted to make up a list of companies. This resulted in 21 selected companies which were selected for the document review. To perform the actual document analysis, a list of topics was developed to gather information from the selected companies. This list was based on topics found in literature, added and reviewed by experts (see Annex 1). The purpose of the

document analysis was to gather data on practical information on sustainability in the supply chain and to select companies to be included in the in-depth interviews.

In-Depth interviews

Because the aim of this research is to learn from the frontrunners in the field of sustainability, the data from the selected companies for the document review were analysed in order to classify these companies based on their level of sustainability integration. The companies were categorised in the five stages of Willard's sustainability integration (Hallstedt et al., 2010). This classification did not aim to be precise and based on a thorough assessment, but to give an overview of the different levels of sustainability integration within the supply chain of the studied companies and to help in selecting frontrunners for the case studies. Companies studied were placed respectively at stage 2 (Compliance), stage 3 (Beyond compliance) and stage 4 (Integrated strategy). Five companies at level 4 were chosen for in-depth interviews. This meant a theory-based sampling method could be performed to select companies for the in-depth interviews, as well as a selection method based on minimum difference on integration level of sustainability.

To gather further in-depth information on sustainability in the supply chain, five in-depth interviews were included as the data generation method. The interviews were held with company managers responsible for the implementation of sustainability in the supply chain as the data sources (see Annex 4). The criteria for companies to be included in the in-depth interviews were:

1. Already selected and part of the document review (21 companies).
2. To be classified as a company at level 4 of sustainability integration within the Willard framework (13 Companies) (Hallstedt et al., 2010).
3. Willing to participate in the in-depth interviews (5 companies).

The developed topic list for the document review was used in order to formulate a semi-structured interview protocol (See Annex 2) to allow for thematic coding for the data analysis. Each interview lasted 1,5 hours. All interviews were recorded and noted. A report for each interview was written and checked by the interviewees.

Multiple case study analysis

To allow for comparison and triangulation of data resource, a matrix analysis has been performed (See Annex 3). The matrix allows for grouping of data according to cases, resource used (interviews, internal and external documents), as well as key topics for implementing sustainability in the supply chain.

2 Literature review

2.1 Concepts and definitions

2.1.1 *Sustainability*

There are various definitions of the term 'sustainability' (Montiel, 2008). The most well-known and often used definition is linked to the book 'Our Common Future', also known as the Brundtland Report, defining sustainability as "using resources to meet the needs of the present generation without compromising the ability of future generations to meet their own needs" (WCED, 1987). A less often cited fragment of the Brundtland Report is: "In essence, sustainable development is a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development and institutional change are in harmony and enhance both current and future potential to meet human needs and aspirations". The later introduced 'triple bottom line' of sustainability suggests a continuous search for the right balance between social, environmental and economic performance of companies. An extensive literature search (S. Seuring & Muller, 2008; S. Seuring & Müller, 2008) showed that from 191 papers on sustainability, 140 papers addressed the environmental dimension of sustainability, 20 papers the social dimension and 31 papers the integration of both dimensions. Additionally, within the social dimension of sustainability that until recently emphasised the issues of human health and safety, more cultural and ethical elements were added (S. Seuring, 2004).

In the literature various other constructs were related to sustainability, of which Corporate Social Responsibility (CSR) is most often cited. There are also different definitions of CSR. Dahlsrud analysed 37 definitions of CSR and came to the conclusion that the definitions are predominantly congruent (Dahlsrud, 2008). Looking at the definitions, it is apparent that the constructs of CSR have great similarity with the core elements of sustainability, i.e. economic, social, and environmental considerations (Montiel, 2008). Similar to sustainability, one of the key drivers for implementing CSR initiatives is the desire to avoid risks to corporate reputation (Cruz, 2009; Roberts, 2003). Within the Global Reporting Initiative (GRI), the overlapping of sustainability and CSR becomes even more evident. Due to the fact that the GRI is used by a majority of focal companies for sustainability reporting, this study sees both CSR and sustainability as inter-exchangeable (Montiel, 2008).

2.1.2 *Supply chain and Sustainable Supply Chain Management*

A supplier is a party that supplies goods or services. A supplier may be distinguished from a contractor or sub-contractors, that commonly add specialised input to deliverables. The terms 'supply chain' and 'supply chain management' have been defined by Handfield and Nichols as 'the supply chain encompasses all activities associated with the flow and transformation of goods from raw materials stage (extraction), through to the end user, as well as the associated information flows (Handfield & Ernest L.Nichols, 1999). Material and information flow both up and down the supply chain. Supply chain management (SCM) is the integration of

these activities through improved supply chain relationships to achieve a sustainable competitive advantage’.

Walters addresses the increased complexity of supply chains: ‘ the supply covers simple transactions between buyers and suppliers as well as complex arrangements in which there may be multiple links in supply chains’ (Walters, 2009). For example a paint supply chain consists of substances manufacturers, paint producers or formulators, and ultimately, application of the paint. These are the links of the supply chain. It is quite possible that this paint supply chain consists of more links, e.g. distributor of raw materials for paint industry. The relationships between the companies in the supply chain were presented in

Figure 1.

Sustainable Supply Chain Management (SSCM) is defined as the management of material and information flows, as well as cooperation among companies along the supply chain while taking goals from all three dimensions of sustainable development, i.e. economic, environmental and social, and stakeholder requirements into account (S. Seuring & Muller, 2008; S. Seuring & Müller, 2008). In this definition, sustainability has been broadened and has been applied to regions and countries, as well as individual organisations and partnerships including both short-term (months, years) and long-term (decades) dimensions. Carter and Easton (Carter & Easton, 2011; Easton, 2005) have discussed the evolution and future of SSCM and concluded that the broad concept of sustainability, and the key interfaces that sustainability has with supply chain management, strongly suggest that sustainability is a license to do business in the twenty-first century and that supply chain management is an integral component of this license.

SSCM is a relatively young research field (Carter & Easton, 2011; Gold, 2011; S. Seuring & Müller, 2008). A few studies have been conducted in order to structure the field of SSCM (Carter & Easton, 2011; Gold, 2011; S. Seuring & Muller, 2008; S. Seuring & Müller, 2008; S. Seuring, 2010) suggesting the following six categories for the description of SSCM:

1. Pressure: pressures and incentives leading to the implementation of SSCM.
2. Risk avoidance/management: it points to the management of risks regarding all three dimensions of sustainability.
3. Performance: addressing the performance in the three dimensions of sustainability, i.e. win-win (negative correlation between the performances in two or more dimensions), trade-off (negative correlation between the performances in two or more dimensions) or minimum (minimum criteria for each dimension).
4. Supplier evaluation: selection on sustainability performance, self-evaluation, auditing and monitoring, implementations of standards, supplier integration.
5. Supply chain management: intensity of communication and coordination, thinking in total lifecycle approach, sharing costs and/or profits, joint innovation aiming at innovative products and processes.
6. Third party involved: all third parties involved in auditing, certification and/or consulting.

A literature study analysing 70 cases (Gold, Seuring, & Beske, 2010) gave the following main insights on the six categories mentioned above. Firstly, pressures

from stakeholders are highly relevant triggers. Secondly, the social dimension is neglected. Thirdly, increased supplier performance (assuring minimum performance) is an important objective including long-term trustful partnership. Fourthly, trade-offs are often linked to social and business goals. Fifthly, communication is a paramount structure characteristic. Finally, far-reaching chain integration is still rather limited.

2.1.3 Focal company

Focal companies in the supply chains are those companies that usually (1) rule or govern the supply chain, (2) provide the direct contact to the consumer, and (3) design the product or service offered (S. Seuring & Müller, 2008). Focal companies might be held responsible for the environmental and social performance of their suppliers. This is especially the case for brand-owning companies, as they are likely to come under pressure from stakeholders, e.g., NGOs (Carter & Jennings, 2002). For example, focal companies as C&A and H&M were held responsible for occupational health issues at their suppliers in India (Graafland, 2002; Volkskrant, 2010), Nokia was criticised about the labour conditions in its factories in Asia (Wilde & Haan, 2006) and US electronics giant Apple was revealed labour and safety abuses at companies that supplied components for its products (BBC, 2011). Inhuman working conditions (Graafland, 2002; Preuss, 2001), contamination of the (local) environment (S. A. Seuring, 2001) or use of hazardous substances (Wilde & Haan, 2006) were frequently mentioned as problems. Therefore, focal companies are taking proactive actions to promote better environmental and social performance to their suppliers. It is expected that those companies will be leading and setting new standards on sustainable business practice. Therefore, main drivers and applied strategies and instruments for sustainable supply chain management by focal companies will be investigated in the next chapters.

2.2 Drivers for a focal company to intergrade sustainability improvement in the supply chain

In this chapter the drivers for a focal company to integrate sustainability improvements in the supply chain are identified and analysed. A great deal of literature discusses the drivers for sustainability in the supply chain. In general those drivers can be grouped under the main two categories: pressure and incentives from external groups, and organisational culture and top management leadership.

2.2.1 Pressure and incentives from external groups

Pressure and incentives for sustainability in supply chain encompasses **legal demands, customers' demands, response to stakeholders, competitive advantages, environmental and social pressure groups and reputational loss** (S. Seuring & Müller, 2008). The mentioned issues are interrelated and boundaries between them are often hard to ascertain. For example, pressure groups (such as NGOs) can be a 'central trigger', but at the same time companies might fear that customers will boycott their products, if social or environmental problems in their supply chain are reported. This will also lead to loss in reputation. Many companies see corporate reputation, brand image and trust as fundamental components of business success (Roberts, 2003). Consequently, stakeholders are increasingly

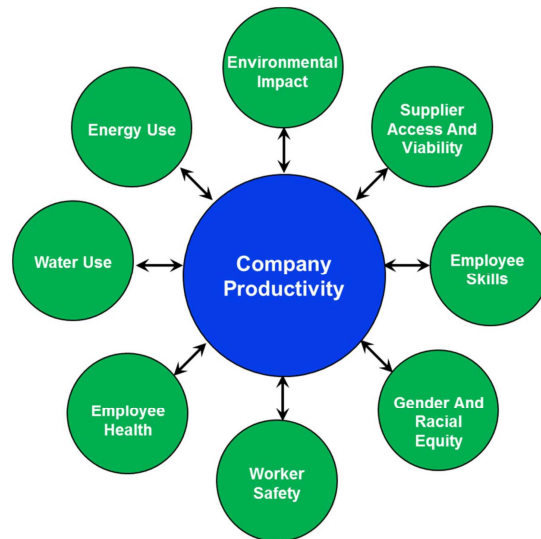
using corporate reputational and brand vulnerability for pressing environmental and social change within a focal company. Good reputation increases the length of time during which a firm earns above average financial returns. Reputation can add value to companies by (Roberts, 2003):

- Adding extra psychological value to products and service (e.g. trust), increasing the likelihood that customers will choose the product, it may enable premium prices to be charged.
- Encouraging interest from high quality recruits, increasing employee job satisfaction and loyalty.
- Increasing advertising and sales force effectiveness.
- Supporting new product introductions.
- Creating competitive barriers, acting as a powerful signal to competitors.
- Providing access to the best professional service providers.
- Reducing the risk of a crisis and providing a second chance in the event of a crisis.
- Making it easier to raise capital on the equity markets.
- Enhancing bargaining power in trade channels, negotiating lower prices.
- Acting as a performance bond in contracts with other organisations.

Customer demands are also related to the implementation of social (e.g. SA 8000 and OHSAS 18001) and environmental (e.g. ISO 14001) management systems and the recent sustainability standard ISO 26000 (see also 2.3.1.2). Focal companies are increasingly asking their suppliers to perform according to the guidelines set by those standards (Mueller, Gomos dos Santos, & Seuring, 2009; Muller, Vermeulen, & Glasbergen, 2009; S. Seuring & Müller, 2008).

Competitive advantages can be linked to Porter's theory on creating shared value. The concept of shared value can be defined as policies and operating practices that enhance the competitiveness of a company, while simultaneously advancing the economic and social conditions in the communities in which it operates (Porter & Kramer, 2011). Shared value creation focuses on identifying and expanding the connections between societal and economic progress and is based on the premise that both must be addressed using value principles. Porter (2011) defines value as benefits relative to costs, not just benefits alone. The same author suggests that there are numerous ways in which addressing social and environmental problems can provide productivity benefits to the company. For example, company investment in a wellness programme benefits society, as the employees and their families become healthier, and the company itself, as it minimises employee's absence and lost productivity. Figure 2 presents a number of similar connections.

Figure 2: The connection between competitive advantages and environmental and social issues



Source: Porter & Kramer (2011)

According to some literature, NGOs' pressure on focal companies is one of the major drivers for related supply chain actions (Sharfman, Shaft, & Anex Jr., 2009), whereas the findings of a Delphi study on the core issues in SSCM suggests that market forces are far more relevant (S. Seuring & Muller, 2008).

Legal demands are the most frequently mentioned triggers for sustainable supply chain management, and all modes of governmental control and policy recommendations, be it from local municipalities, national or multi-national governments, are of great relevance (S. Seuring & Müller, 2008). Legislation that addresses sustainability issues in the supply chains is adopted all over. For example, EU legislation on waste from electrical and electronic equipment restricts the use of hazardous substances in electrical and electronic equipment (Directive 2002/95/EC) and promotes collection and recycling of such equipment (Directive 2002/96/EC). The aforementioned legislation provides for the creation of collection schemes via which consumers return their used e-waste free of charge. The objective of these schemes is to increase recycling and/or re-use of such products. It also requires heavy metals, such as lead, mercury, cadmium, and hexavalent chromium, and flame retardants, such as polybrominated biphenyls (PBB) or polybrominated diphenyl ethers (PBDE), to be substituted by safer alternatives (European Commission, 2003). Another example is EU's REACH regulation, which serves as a trigger for a focal company to identify and mobilise its supply chain in order to collect and communicate information on the safe use of chemicals (European Commission, 2006). REACH specifies the obligations to exchange information about substances and mixtures, and their safe use, both upstream and downstream in the supply chain. Hazardous substances are supplied for use in many workplaces and the risks to health represented by their hazards can be minimised, if they are used appropriately. However, this requires effective risk communication in the supply chain between suppliers and users. Key factors for that is the dependency of one end of the supply chain on the other, and the unevenness of the market power wielded at each end. EU's REACH regulation based on the Walters and James's study is a market regulatory approach to influence conditions of work and labour standards within the supply chains (Walters

& James, 2009). The European Parliament considers the concept of sustainability crucial for the future of the EU, and, therefore, recommends current and future legislation to integrate sustainability into implementation orders (Linton, Klassen, & Jayaraman, 2007) (American chamber of commerce of Europe, 2004). The Organisation for Economic Co-operation and Development (OECD)¹ has recently published its updated Guidelines for Multinationals (OECD, 2011). These are recommendations addressed by governments to multinational enterprises (MNEs) operating in or from adhering countries. They provide non-binding principles and standards for responsible business conduct in a global context, consistent with applicable laws and internationally recognised standards. The updated Guidelines include new recommendations on human rights abuse and company responsibility for their supply chains, making them the first inter-governmental agreement in this area. The Guidelines establish that firms should respect human rights in every country in which they operate. For example, companies should also respect environmental and labour standards and have appropriate due diligence processes in place to ensure this happens. These include issues such as paying decent wages, combating bribe solicitation and extortion, and the promotion of sustainable consumption.

International platforms, partnerships with, or dependence on international organisations, such as the International Labour Organisation (ILO), the World Health Organisation (WHO), the European Bank for Reconstruction and Development (EBRD) and the World Bank (WB), can serve as incentive for companies for further implementation of sustainability in the supply chain. The case study regarding the partnership between the multinational car manufacturer Volkswagen AG, the ILO and the German aid agency GTZ provides evidence to the above (Frommann, 2008; Koplin et al., 2007; Kristjansdottir, 2007; Walters, 2009). There are as well broader initiatives by international governmental organisations and bodies, aimed to enforce businesses to adopt sustainable and socially responsible policies. Examples are the United Nations Global Compact (UNGC), the European Alliance for Corporate Social Responsibility and CSR Europe.

The UNGC is an international initiative, launched by the United Nations (UN) in 2000. It is both a policy platform and a practical framework for companies that are committed to sustainability and responsible business practices. As a multi-stakeholder leadership initiative, it seeks to align business operations and strategies with ten universally accepted principles in the areas of human rights, labour, environment and anti-corruption, and to catalyse actions in support of broader UN

¹ OECD is a forum where governments work together to address the economic, social and environmental challenges of globalisation. OECD is also at the forefront of efforts to understand and to help governments respond to new developments and concerns, such as corporate governance, the information economy and the challenges of an ageing population. The Organisation provides a setting where governments can compare policy experiences, seek answers to common problems, identify good practice and work to co-ordinate domestic and international policies. The OECD member countries are: Australia, Austria, Belgium, Canada, Chile, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, the Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. The EU takes part in the work of OECD.

goals. With more than 8,000 signatories in more than 135 countries, it is the world's largest voluntary corporate responsibility initiative (Sisco, Chorn, & Pruzan-Jorgensen, 2010).

The European Alliance for CSR is an open partnership for enterprises to promote and encourage corporate social responsibility. The Alliance was launched in 2006 as a joint initiative of the European Commission and the business community. The European Commission has chosen three organisations to coordinate and facilitate the Alliance, namely Business Europe (the Confederation of European Business), UEAPME (the European Association of Craft, Small and Medium-sized Enterprises), and CSR Europe. The latter is the leading European business network for CSR with around 70 multinational corporations and 29 national partner organisations as members (CRS Europe, 2011).

A particular initiative of the above organisations that supports implementation of sustainability in the supply chain is the launching of the Sustainable Supply Chains website in 2010 (United Nations). The website presents information about initiatives (programmes, codes, standards, networks) that companies can engage in to improve their supply chain sustainability, resources and tools to assist in the implementation of sustainable supply chain programmes, and case examples on how companies have developed sustainable supply chain programmes. This UNGC website was built on the existing 'Portal for Responsible Supply Chain Management' (CRS Europe, 2011), which was created by CSR Europe, the Business Social Compliance Initiative (BSCI) and the Hellenic Network for CSR. The Portal, supported by Hewlett-Packard, L'Oreal, Titan and Volkswagen, was the result of a two-year European CSR 'Laboratory for Responsible Supply Chain Management', in support to the European Alliance for CSR.

2.2.2 Organisational culture and top management leadership.

Next to government regulations and customer pressure, Salam recognises the importance of organisational culture, top management leadership, and individual values and initiatives of purchasing employees for implementation of social responsibility in purchasing (PSR) (Salam, 2009). According to the author, a people-oriented organisational culture, which embraces values such as fairness and the desire to be good corporate citizen, leads to significantly greater levels of PSR. Top management leadership and support is the key driver and a success factor for organisational change and the implementation of new programmes (Carter & Jennings, 2002), and does have a direct effect on whether purchasing managers implement PSR (Metasit & Watchaneeporn, 2011; Salam, 2009) found that corporate image and top management leadership are the primary factors influencing the adoption of sustainability management in wine production. Faughnan and Harris see leadership and vision as one of the key principles involved in the best practice for generating value in the supply chain (Faughnan & Harris, 2009).

2.3 Strategies and instruments used by focal company to integrate sustainability improvement in the supply chain

Companies apply a variety of instruments in order to influence the members of their supply chains to apply sustainability practices and standards. Two main strategies for focal companies were identified (Holt, 2003; Holt, 2003; S. Seuring & Müller,

2008). The first one is labelled as supplier management for risks and performance. A major fear of companies following such a strategy is a loss of reputation in case related problems are raised. Therefore, additional environmental and social criteria are taken up to complement economically based supplier evaluation. Environmental and social standards play a central role in enabling this. Improving supplier performance or, at least, assuring minimum performance standards can be generally regarded as important objectives of supply chain strategies (Gold et al., 2010). The second strategy is called supply chain management for sustainable products. Those are product related initiatives undertaken by individual companies or trade/industry bodies. Within this strategy, usually, lifecycle based standards for the environmental and social performance of products are defined and implemented throughout the supply chain. These two strategies should primarily be seen as a way of starting SSCM, and they become in many cases interrelated and can make use of the same instruments (S. Seuring & Müller, 2008).

2.3.1 *Suppliers' management for preventing risks and assuring performance*

Based on an extensive literature review, Seuring and Muller summarised the most frequently mentioned barriers and supporting factors for implementing sustainable supply chains (S. Seuring & Müller, 2008). These barriers are: higher costs, coordination effort and complexity, and insufficient or missing communication in the supply chain. The main supporting factor, clearly related to this, is communication, while monitoring, evaluation, reporting and sanctions are the ones more often quoted. Other supporting factors mentioned in the literature are management systems, training education of purchasing employees and suppliers and integration into the corporate policy. According to Seuring and Muller, this implies higher costs, although joint efforts of all supply chain partners can help to control costs, (S. Seuring & Müller, 2008). The application of different instruments within a strategy aimed at preventing risks and assuring performance is discussed further.

2.3.1.1 *Purchaser-procurement systems*

In the sustainability and SCM literature, procurement strategies are mentioned in terms of extending goals for purchasing staff to environmental and social criteria and training of purchasers (S. Seuring & Müller, 2008). The purchasing or sourcing functions inside focal companies are the key actor to search for, evaluate and monitor suppliers. In this regard, environmental and social standards provide a means for efficient supplier evaluation within the supply chain. However, Meehan and Bryde performed a survey on sustainable procurement (SP) practices in 44 English-based UK Housing Associations (HAs) that are responsible for provision of social housing (Meehan & Bryde, 2011). They concluded that, despite the fact that organisations surveyed had sustainability-related issues in their missions, and external and internal pressures to embed sustainability, yet this was not translated into widespread establishment of SP. Therefore, an effective policy and practice must be in place in order to influence suppliers to implement sustainability practices. In this respect, not only measures related to educating and training of the purchasing staff, but also measures against suppliers play an important role. Such measures include placing requirements (management system, code of conduct), signing declarations for compliance with the company standards, self-assessment by the suppliers, inspections, auditing, monitoring, and training and collaboration with suppliers. Based on a literature review, Seuring and Muller suggest that company-overlapping communication and training of purchasing staff and supplier

staff are more proactive measures which should allow improvement in the supply relations, as well as performance on both sides (S. Seuring & Müller, 2008). Another conclusion that the same authors make is that extending goals for purchasing staff to environmental and social issues are valid measures.

An example of sustainable purchasing structure (compared with SSMC for Volkswagen) is given by Koplin et al. (Koplin et al., 2007):

- Normative requirements: it is necessary to have a clear understanding of what sustainable development means for the company (mission statement). Furthermore, the company must comply with all environmental and social standards before passing them on to its suppliers. These standards can be put in a code of conduct for suppliers.
- Early detection of supply-related risks: this allows provident identification of environmental and social risks and weak points at suppliers, which can be seen as a radar function. Instruments are: (1) internet inquiries; (2) expert panels; (3) media and specialised journalism screening; (4) contact with watchdog organisations; (5) noting legal drafts; and (6) regular dialogues with NGOs.
- Operational implementation of supply processes: this is done normally addressing the product, and not the production process of suppliers. The most important step is to account for sustainability aspects when placing contracts with suppliers. The process covers three main steps: (1) environmental and social information is sampled in terms of information from business partners; (2) this information is the basis for evaluating suppliers with regards to the degree to which they comply with a company's code of conduct; (3) supported by plausibility checks from the quality assurance department, the supplier statements are analysed to ensure their validity. These criteria might have a prohibitive impact on the sourcing decision, meaning that a supplier that does not fulfil required environmental and social standards will not be awarded a sourcing contract.
- Supplier monitoring and development: along with the plausibility check, it is important for a company to create control mechanisms for inspections. Examples include supporting suppliers with information using an online supplier platform, technical support and training for suppliers in the form of workshops and seminars. This assists in spreading sustainability and deepens the co-operation between a company and its business partners.

2.3.1.2 *Standards and management systems*

Management systems can be related to the minimum performance required and can play an important role in the suppliers' evaluation. Examples of management systems are: ISO 14001 and the EU Eco-Management and Audit Scheme (EMAS) for environment, Social Accountability 8000 (SA 8000) for working conditions and human rights², Occupational Health and Safety Assessment Series (OHSAS) 18001 for health and safety and ISO 26000 for social responsibility. The standards

² The SA 8000 standard defines eight principles in relation to working conditions and human rights: child labour, forced labour, health and safety, freedom of association and the right to collective bargaining, discrimination, disciplinary practices, working hours, and compensation. A ninth issue covers the establishment of a social management system (Ciliberti, de Groot, de Haan, & Pontrandolfo, 2009). For more information, see Social Accountability International (SAI), <http://www.sa-intl.org/>.

are voluntary, and compliance is granted by certification by an independent third party. The certification requires a public description of behaviour and management systems. Once certified, firms are monitored to ensure that they operate up to the stated norms. Only the latter (ISO 26000) is not a traditional management system standard. It is not intended or appropriate for certification purposes or regulatory or contractual use. ISO 26000 addresses seven core subjects of social responsibility defined in the standard. One of the potential benefits of ISO 26000 is improved relationships with stakeholders, customers and suppliers who view the organisation more positively as a result of its dedication to behave in a socially responsible manner.³ Seuring and Muller pointed out that existing literature on sustainable supply chain management mainly focuses on environmental management systems, namely ISO 14001 (S. Seuring & Müller, 2008).

Some research addresses the advantages of 'third party certification' within the supply chain, for both suppliers and purchasers (Zwetsloot, Hale, & Zwanikken, 2011). When suppliers are audited and certified by an independent certification body, they do not have to be audited separately by each of their customers, reducing the number of inspections and related costs. A certificate also expresses 'justified confidence' by the certification body in the supplier, and is in this regard commercially/marketing-wise important. Customers on their side can, by purchasing certified products or services, demonstrate they fulfil 'their duties of care', protecting themselves against possible liability in case of incidents or accidents (Zwetsloot et al., 2011).

Based on four case studies on European SMEs (three Italian and one Dutch company) which have relationships with suppliers located in developing countries and apply SA 8000 certification, Zwetsloot et al. demonstrate that SA 8000 can reduce transaction costs (i.e. searching, negotiating and monitoring become simpler when companies deal with certified partners) and facilitate communication and coordination between immediate partners in a supply chain, particularly when the most powerful one imposes SA 8000 certification (Zwetsloot et al., 2011). However, indirect coordination further up- and downstream of the supply chain (i.e. with second- or third-tier partners) appeared to be less easily influenced. The authors conclude that, apart from the ethical aspects, managerial and economic benefits can be gained from a CSR approach (e.g. by means of an instrument like SA 8000).

There are also some British Standards applicable to supply chains, such as BS 8903 and BS 110004 (British Standards Institution., 2010a; British Standards Institution., 2010b). Principle and Framework for Procuring Sustainably is a 'daughter' standard of BS 8900 (Guidance for managing sustainable development) and provides guidance and practical information on how to adopt and implement SP principles across an organisation and its supply chains (Berry, 2011). The BS 11000 (British Standards Institution., 2010a) standard on collaborative business relationships provides a strategic framework for dealing with external relationships and managing them in an effective way. The standard covers issues like partner selection, working together, value creation and relationship maturity.

³ For more information, see ISO,
http://www.iso.org/iso/iso_catalogue/management_and_leadership_standards/social_responsibility/sr_discovering_iso26000.htm

⁴ For more information, see British Standards Institution (BSI):
<http://www.bsigroup.com/>.

Business for Social Responsibility (BSR), an organisation that assists businesses in contributing more fully to sustainable development, identifies the components that an effective sustainability management system must apply to each topic area, including ethics and governance, stakeholder engagement, labour, health and safety and environment (British Standards Institution., 2010a):

- A commitment from senior leadership at the supplier.
- Clearly stated policies.
- Performance monitoring that measures change over time and provides data for the improvement process.
- Clear documentation of program implementation and operational practices.
- Appropriate communication (internal and external) for employees at the managerial, supervisory, and workforce levels of the supplier as well as relevant external stakeholders.
- A systems review process which assesses overall system function and refines goals and objectives.
- Appropriately skilled and qualified people tasked with implementing the system and engaged in on-going professional education.

2.3.1.3 *Codes of conduct*

To address sustainability issues companies adopt codes of conduct. The codes of conduct are voluntary instruments that offer guidelines, goals and objectives. Codes of conduct are critical to establishing and managing expectations for both customers and suppliers. They create a shared foundation for sustainability and CSR issues, on which supply management professionals, suppliers and other actors can act accordingly.

Codes of conduct are voluntary instruments that offer guidelines, goals and objectives. The codes are not legally binding and often have neither enforcement mechanisms nor recognised bodies that control, mediate and/or evaluate fulfilment of the objectives (European Foundation for the Improvement of Living and Working Conditions., 2008). However, other sources, such as the World Bank Report 'Company Codes of Conduct and International Standards: An Analytical Comparison', state that companies increasingly develop the compliance and monitoring schemes, used to implement and enforce those codes once they have been established. The World Bank estimated that there are more than 1,000 codes developed by individual multinational firms on a voluntary basis, depending on firms' business needs (World Bank, 2006).

Codes on corporate level of MNEs are initiated in order to fill the regulatory and legislative gap that exists between countries in which they operate. These codes can be internal. However, the strategic need for formulation and implementation of external codes of conduct becomes bigger when companies source out activities or use suppliers in developing countries. Extrinsic motivations for companies are also gaining importance, such as the risk of reputation damage triggered by critical NGOs (Van Tulder, Van Wijk, & Kolk, 2009).

Codes can be classified and scored along two dimensions: specificity and compliance (Kolk & Van Tulder, 2002). The specificity of a code indicates how elaborated a code is on several dimensions, for example how many issues it covers, how focused it is, the extent to which it refers to international standards and guidelines, and to what extent aspects of the code are measured. The compliance of codes is generally enhanced by clear monitoring systems in place, combined with

an independent monitoring agency and the possibility of sanctions. The higher the scores on both dimensions, the higher the implementation likelihood of the code. Mamic collected data from 22 multinational companies and 74 of their suppliers in order to gain insights into how codes of conduct are implemented in the footwear, apparel and retail industry (Mamic, 2005). Based on this and other examples, Seuring and Muller conclude that comprehensive supplier audits are required (S. Seuring & Müller, 2008).

Companies develop codes of conduct individually or make use of partnering by so called 'joint codes of conduct' (Handfield & Ernest L. Nichols, 1999; S. Seuring & Müller, 2008). The latter are designed to minimise the burden on suppliers by reducing the number of standards with which they must demonstrate compliance. They are also intended to streamline the process of conducting joint audits of suppliers and to reduce the effort required of companies to design their own codes. However, there is a risk that joint codes do not meet specific sustainability concerns of the company (Sisco et al., 2010). Typical examples of 'joint codes of conduct' are the Electronic Industry Citizenship Coalition (EICC) Code of Conduct and the Global Social Compliance Programme (GSCO) (Sisco et al., 2010).

2.3.1.4 *International Framework Agreements (IFAs)*

International Framework Agreements, also called Global Framework Agreements (GFAs), are transnational agreements negotiated between multinational companies and global union federations⁵ (Robinson, 2010; Stevis & International Labour Office. Job Creation and Enterprise Development Dept., 2010). These agreements are concluded between global or European trade union federations and management of individual multinational companies in order to define labour standards and joint principles of industrial relations. They are normally based on fundamental social rights as defined by the core conventions of the International Labour Organisation (ILO).

Although IFAs are not very concrete in comparison to national collective agreements, they are much more detailed than codes of conduct with regard to working hours, working conditions, OSH, etc. (European Trade Union Confederation, 2010). While codes of conduct focus on defining, monitoring and enforcing internal rules of behaviour related to CSR, IFAs aim more at regulating labour relations in MNEs. (Schömann, Sobczak, Voss, Wilke, & European Foundation for the Improvement of Living and Working Conditions., 2008)

Codes of conduct and IFAs are widely regarded as new instruments in international industrial relations that co-exist with other labour law standards, industrial relations systems and forms of employee representation at national, European and international levels. They are linked to the added value they represent compared to labour law standards. Besides their contribution to the corporate culture, and in the case of IFAs to the quality of social dialogue, both instruments may contribute to the

⁵ A global union federation is an international federation of national and regional trade unions organising in specific industry sectors (Stevis & International Labour Office. Job Creation and Enterprise Development Dept., 2010). Examples are: Building and Wood Workers' International (BWI), International Federation of Chemical, Energy, Mine and General Workers' Unions (ICEM), International Metalworkers' Federation (IMF), Union Network International (UNI) and Industrial Workers of the World (IWW).

definition of minimum standards, reaffirmation of core labour rights or creation of more effective enforcement of labour laws among the different subsidiaries of the company and within the company, as well as among its suppliers (Schömann et al., 2008).

2.3.1.5 *Industry collaboration and multi-stakeholder partnerships*

Industry collaboration and multi-stakeholder partnerships are instruments used by MNEs to address supply chain sustainability objectives, particularly for issues that are too challenging and complex to tackle alone. In addition, collaboration can increase the impact and overall efficiency of company's supply chain sustainability efforts by extending resources, reducing duplication and avoiding conflicting messages. Examples of industry collaborations are (Sisco et al., 2010):

- **AIM-Progress** - a forum of consumer goods companies assembled to enable and promote responsible sourcing practices and sustainable production systems. It is a global initiative supported and sponsored by Association des Industries de Marque (AIM) in Europe and the Grocery Manufacturers Association (GMA) in North America. Its key objectives include development of a forum for exchanging views on responsible sourcing practices and common evaluation methods to decrease duplicative auditing.
- **Apparel, Mills and Sundries Working Group** - a working group of apparel and retail companies and their suppliers that collaborate to address sustainability issues upstream, at the mills and sundries supplier level. The group is focused on implementation of its joint code of conduct through supplier evaluation and training.
- **Business Social Compliance Initiative (BSCI)** - a platform for retail, brand, importing and trading companies dedicated to the improvement of working conditions in their supply chain worldwide. The organisation has created a code of conduct and implements the BSCI Code through a combination of external monitoring and collaborative capacity building activities.
- **BSR's Beyond Monitoring Working Group** - a collaboration of leading companies from many industries that embrace a vision of supply chain sustainability which is driven by internal alignment, supplier ownership, worker empowerment and public policy engagement. Together these companies explore next generation supply chain sustainability approaches to improve their individual company programmes and to drive the field forward.
- **Electronics Industry Citizenship Coalition (EICC)** – it promotes an industry code of conduct and shared implementation resources for global electronics supply chains to improve working and environmental conditions. The EICC conducts joint audits, provides tools to audit compliance with the code, and offers resources for training to procurement staff and suppliers, and helps companies report progress. EICC membership is available to electronic manufacturers, software firms, ICT firms, and manufacturing service providers, including contracted firms that design, manufacture or provide electronic goods, and – as such – covers the vast majority of the electronics supply chain.

- **Ethical Trading Initiative** - an alliance of companies, trade union organisations, and NGOs that are committed to working together to identify and promote good practice in labour code implementation, including monitoring and verifying compliance with code provisions.
- **The Global e-Sustainability Initiative (GeSI)** - it brings together leading Information and Communication Technology (ICT) companies (including telecommunication service providers and manufacturers, as well as industry associations) and NGOs committed to achieving sustainability objectives through innovative technology.
- **Global Social Compliance Programme (GSCP)** - a business-driven programme for companies whose vision is to harmonise existing efforts in order to deliver a shared, global and sustainable approach towards the continuous improvement of working and environmental conditions across categories and sectors in the global supply chain. The GSCP offers a global platform to promote knowledge exchange and best practices in order to build comparability and transparency between existing systems.
- **Fair Labour Association** - a collaborative effort to improve working conditions in factories around the world. Participating companies commit to the FLA code, and the group has created a practical monitoring, remediation and verification process to achieve those standards.
- **ICTI-Care** - a toy industry's ethical manufacturing programme aimed at ensuring safe and humane workplace environments for toy factory workers worldwide. To achieve these goals, the group provides education, training, and a unified monitoring programme for toy factories.
- **Social Accountability International (SAI)** - a multi-stakeholder, multinational, multi-industry organisation of business, labour and NGOs whose mission is to advance the human rights of workers around the world. It carries this out through training, capacity building, and applying the **SA8000** workplace standard (see above).
- **Joint Initiative on Corporate Accountability and Workers' Rights** - a programme that brings together key organisations, involved in different aspects of code implementation and/or enforcement. Each of the partner organisations (Clean Clothes Campaign, Ethical Trading Initiative, Fair Labour Association, Fair Wear Foundation, Social Accountability International and Workers Rights Consortium) is involved in the global effort to improve working conditions in global supply chains. There is a strong belief that codes of conduct can only make an effective and credible contribution to this effort, if their implementation involves a broad range of stakeholders, including governments, trade unions, employers' associations and civil society.⁶

2.3.2 **Suppliers' management for sustainable products**

2.3.2.1 *Sustainable production*

According to Seuring and Muller, the term 'sustainable products' is used to comprehend all kinds of products that have or aim at an improved environmental

⁶ More information at: <http://www.jo-in.org>.

and social quality, which can be related back to the implementation of environmental and social standards (S. Seuring & Muller, 2008; S. Seuring & Müller, 2008). The ultimate aim is to satisfy customers and gain a competitive advantage in the market. Specifying product related requirements usually demands life cycle assessment methods, which leads to the establishment of life cycle management. In this case, the focal company also requests it from suppliers, but cooperation and even considerable investments in suppliers in this product based sustainability is important. A good example for this is the supply of organic cotton (S. Seuring & Müller, 2008; S. Seuring, 2004).

2.3.2.2 *Life Cycle Management*

Specifying product-related requirements usually demands the application of life cycle assessment methods, which leads to the establishment of life cycle management. According to Remmen, Jensen and Frydendal, Life Cycle Management (LCM) is a product management system aiming to minimise environmental and socioeconomic burdens associated with an organisation's product or product portfolio throughout its entire lifecycle and value chain (Remmen et al., 2007). In order to produce valuable knowledge about the consequences of business operations, companies can use different models, methods and tools, for instance analytical tools, such as Life Cycle Assessment (LCA) or procedural tools, such as audits and benchmarks. Further on, LCM can make use of the instruments already mentioned in relation to the company strategy for preventing risk and assuring performance (e.g. management system, procurement- purchaser systems, etc -see 2.3.1).

The lifecycle of a product involves flows of material, energy and money. Nonetheless, the picture is not complete, unless we also look at the impacts of production and consumption on all actors along the 'value chain' – workers, local communities, consumers and the society itself.

Different life cycle assessment techniques allow individuals and enterprises to assess the impact of their purchasing decisions and production methods along different aspects of this value chain. An Environmental Life Cycle Assessment (ELCA) looks at potential impacts on the environment as a result of the extraction of resources, transportation, production, use, recycling and discarding of products; Life Cycle Costing (LCC) is used to assess the cost implications of this lifecycle; and Social Life Cycle Assessment (SLCA) examines the social consequences.

Because ELCA is holistic, systemic and rigorous, it is the preferred technique when it comes to compiling and assessing information about potential environmental impacts of a product. It has been standardised in the ISO 14040 and 14044, and is applied by practitioners globally (United Nations Environment Programme. & Society of Environmental Toxicology and Chemistry (SETAC), 2011).

According to the same publication, life cycle costing as a technique to calculate and manage costs, especially for large investments, has been used to support decision-makers in procurement for decades, with a rigorous focus on private costs. Prerequisites for better alignment with (environmental) LCA are currently being researched and will help further development of the method. In recent years, decision-makers from several areas have shown increasing interest in the inclusion of social aspects into the environmental life cycle assessment of products and systems, the so called Social Life Cycle Assessment (SLCA). As an emerging technique, SLCA will play a key role in complementing material- and energy flow-

related information (Sonnemann, Vigon, United Nations Environment Programme, & SETAC (Society), 2011). The question, however, is whether this method is applied by companies. Jorgensen et. al argue that the application of SLCA may only be possible for companies in a very limited lifecycle perspective (Jorgensen, Hauschild, Jorgensen, & Wangel, 2009). A full analysis of the lifecycle may be out of reach for most companies, as the data collection is very time- and resource-consuming. This deviates from the original thought behind the LCA tools as holistic decision tools. The major problem has been data availability to perform assessments. The use of SLCA by companies has been, therefore, mostly limited to first tier suppliers and generally seen as part of external product marketing and less of internal sustainability management. Additionally, within companies a shift in focus has been seen between the upstream part of the lifecycle, which is more focused on the total production site of the supplier, and the downstream part of the lifecycle which was more focused on the product itself.

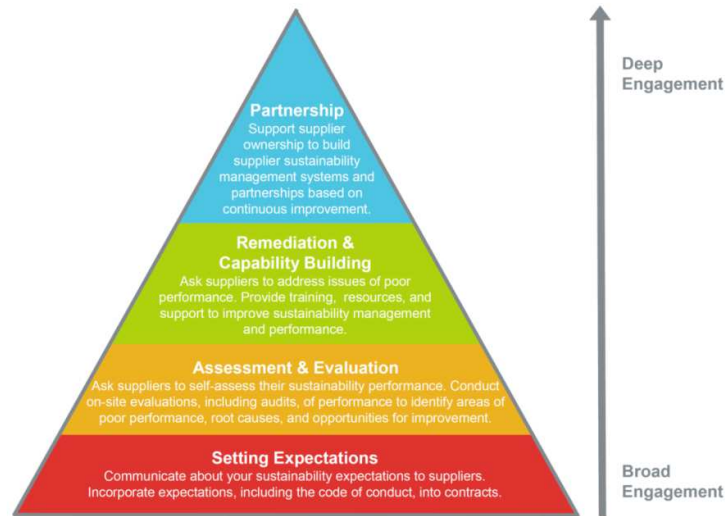
2.3.2.3 *Trade and industry initiatives*

A typical example of industry initiative is the Responsible Care and Product Stewardship programme, which concerns the sound management of safety, health and environmental effects of products, and is promoted by the chemical industry (European Agency for Safety and Health at Work, 2010; Walters & James, 2009; Walters & James, 2011). This cooperation between dealers and users is intended to offer an early warning system for safety, health or environmental risks relating to a product, allowing problems to be tackled in a timely manner. Walters and James (2009) point out that these programmes aim to increase trust between suppliers and customers and confidence throughout the whole product chain, as well as acting as a motor for continuous innovation that will enable incorporation of both new regulatory and market developments. Collaborative types of arrangements are most likely when a great deal of mutual dependency and risk sharing exists, and when power is relatively evenly distributed. However, there is limited evaluation of these programmes; the existing evaluations show that they are successful within the industry itself, but uncertainty remains concerning their reach, for example, to users outside the tight relationships within the industry.

2.3.3 *Engaging with suppliers*

Both strategies discussed above make use of different instruments in order to engage with suppliers. The UNGC guidance for supply chain sustainability (United Nations Global Compact, 2010) presents the use of some of the already discussed instruments in relation to extending suppliers' engagement (See Figure 3).

Figure 3: Instruments for engaging with suppliers on sustainability



Source: BSR, 2010, p.3; UNGC, 2010, p.33.

Further, the UNGC guidance suggests that suppliers are often more motivated by incentives, rather than negative consequences (Sisco et al., 2010). Some examples of incentives that can be put in place for suppliers are reducing the number of audits conducted, establishing a preferred supplier programme, increasing business, providing recognition and awards, allowing participation in strategic buyer/supplier planning meetings, sharing costs for sustainability improvements, and providing assistance for capability building. The ultimate goal of engaging with suppliers should be supplier ownership of sustainability, which occurs when suppliers integrate the value, impact and return on investment of responsible labour and environmental conditions into their mission, strategy and decision-making.

The same document outlines the roles of focal companies and their suppliers (Sisco et al., 2010).

Focal companies should:

- share relevant business information with suppliers;
- build long-term relationships;
- create incentives for sustainability;
- expect improvements to sustainability management systems;
- encourage and reward transparency;
- be sensitive to how their own business practices may impact suppliers ability to meet sustainability expectations.

Suppliers should:

- demonstrate personal executive commitment;
- incorporate sustainability into strategic planning and evaluation;
- demonstrate continuous improvement;
- proactively communicate CSR challenges and progress to companies.

The recently published 'Guidelines for Multinationals' (OECD, 2011) also gives recommendations on how MNEs can engage with suppliers in the best possible manner.

3 Companies' internet review

Document analysis of the external public documents (websites, sustainability and annual reports) of twenty one companies was applied in order to gather data on practical information on sustainability in the supply chain and to select focal companies with best practices to be included in further the in-depth interviews for developing a case studies. The twenty one companies were classified by their level of sustainability integration, using the Bob Willard scale described in chapter 1 (Hallstedt et al., 2010). Companies studied were placed respectively at stage 2 (Compliance), stage 3 (Beyond compliance) and stage 4 (Integrated strategy). This classification does not aim to be precise and based on a thorough assessment, but to give an overview of the different levels of sustainability integration within the supply chain of the studied companies and select frontrunners for the case studies. The findings from the document analysis are presented per stage.

3.1 Companies at Stage 2 (Compliance)

Companies at stage 2 (Compliance) obey laws and regulations on environment, health and safety. Some management commitment for sustainability is communicated, but not very visible. Stakeholders are identified, but SHs dialogue is either not present, or is mentioned, but no concrete actions are visible. It is not clear whether companies participate in working groups at local or global level, or industry associations. Companies have initiatives on supply chain level, for example they identify the concept of shared responsibility and apply supplier evaluation systems or cooperate with suppliers in the search of alternative substances and/or product development, however the steps for approaching suppliers are not clearly communicated. The main drivers for approaching the supply chain is cost reduction and regulations.

The following companies were placed in this level: PPG/Sigma (chemicals industry), DAF (heavy-duty commercial vehicles) and Crucell (biotechnology).

3.1.1 *Strategy and vision*

3.1.1.1 *Management commitment*

At PPG/Sigma, management commitment is established by the appointment of a Vice-president for Environment Health and safety (EHS) and Community affairs, as well as committees on Technology & Environment, Product Stewardship etc. The corporate social responsibility of Crucell has been taken on by their CEO. Management commitment at DAF is not very visible from the website, although an 'ecodesign team' has been installed by the board and instructed to include environmental aspects early in the development phases.

3.1.1.2 *Strategy/vision and trends*

All companies have analysed trends, however their strategies are focused on different issues. PPG/Sigma and Crucell address the society's changing needs, whereas DAF is driven by changes in legislation and customer needs. In more detail, PPG/Sigma faces various sustainability issues that may have a material impact to the company. Continuous innovation is pursued to meet the changing

needs of the society. Crucell addresses the issues of globalisation, urbanisation, climate change, population growth and aging, and focuses on bringing benefit to people's lives by producing medicines for infectious diseases. Finally, DAF has increased demands for trucks, regarding, for example, reliability, low emissions and low fuel usage.

3.1.1.3 *Stakeholders engagement*

All companies have defined their stakeholders, and aim at establishing successful and enduring relations. The stakeholders are usually customers, suppliers, employees, and investors, as well as the local community, the media, governments and NGOs. DAF and PPG/Sigma report their involvement in dialogue with some or all stakeholders, but no concrete actions are mentioned. It is not clear whether those companies participate in working groups at local or global level, or industry associations. Crucell arranges constructive interaction with its stakeholders, and regards sustainability issues as an integral part in their dialogue.

3.1.2 ***Policy and practice***

3.1.2.1 *Environmental policy*

Both PPG/Sigma and DAF have Environmental Management Systems (EMS) in place. PPG/Sigma is focused on product development aiming at early compliance, and reducing emissions (VOC-reduction, water pollution with metals) to the environment. DAF focuses on CO₂ reduction, energy use and motor emissions; environmental performance for DAF is more of a response to relevant legislation. As for Crucell, CO₂ emissions and energy use are important issues, together with water use, waste minimisation and treatment and accident investigation.

3.1.2.2 *Hazardous substances policy*

Generally, lack of information on the company websites was observed. PPG/Sigma has adopted a reactive approach as part of REACH and takes part in Substance Information Exchange Forums (SIEF's), although there is not much information available. There are dedicated units to deal with substances, and information on the substances is published. Focus is given on Volatile Organic Compounds (VOCs), mercury and nanoparticles. In Crucell, importance is given on safe working with substances, and an in-house Biological Safety Manual is in place to meet the specific needs of the working environment. DAF focuses on motor emissions, although there are also projects addressing heavy metals and VOCs.

3.1.2.3 *Social policy*

All three companies identify OSH/HSE as a key social issue. PPG/Sigma has a Global Code of Ethics in place and also focuses on diversity, employees' education and community relations. The working environment in Crucell is also based on respect for the individual, innovation and creativity. DAF's website, on the other hand, does not have much information on 'broader' social issues.

3.1.3 Supply chain management/ policy

3.1.3.1 Supply chain upstream

All three companies identify the concept of shared responsibility (limited to direct suppliers only), and apply supplier evaluation systems ('Supplier Added Value Effort' for PPG/Sigma, 'Crucell Code of Conduct', 'General purchasing conditions' and 'Preferred suppliers' for DAF). Also, PPG/Sigma and DAF cooperate with suppliers in the search of alternative substances and/or product development. However, the steps to approach suppliers are not clearly communicated.

3.1.3.2 Supply chain downstream

PPG/Sigma offers and markets its sustainable products and solutions to its customers, and informs them on issues, such as safe handling. There are also recycling programs in place, e.g. for bulk packages of customers, but not much information is available. Crucell has also launched a programme for recycling cool boxes from its customers. DAF focuses on promoting low fuel consumption and motor emissions, however cost reduction and regulations constitute the major drive for this.

3.2 Companies at Stage 3 (Beyond compliance)

Companies at level 3 (Beyond compliance) recognise sustainability as an opportunity to cut costs, however it is still separated from core business development. Companies at this stage are compliant with the regulations and also take some additional sustainability initiatives. Those companies focus on single sustainability issues which are seen as business opportunities. Management commitment is communicated, however it is not very visible. Sustainability management structure at different levels is also not clear. Stakeholders are identified, but stakeholders dialogue is, either not present, or is mentioned, but no concrete actions are visible. It is not clear whether companies participate in working groups at local or global level, or industry associations. The companies' strategies are focused on developing innovative products and solutions (eco-efficient, green products, sustainable solutions). There are some initiatives on supply chain level. Some companies focus on direct suppliers, but they do not state that sub-suppliers are subject to the same requirements. All companies state that they apply code of conduct, regulations or other sustainability requirements to their suppliers, however they do not communicate clear steps to approaching suppliers. Generally, the companies offer and market their eco-efficiency proposals, eco-products and sustainability approach to their customers. However, at the websites of most companies there is not much available information regarding recycling.

The following companies were placed in this level: DOW (chemicals industry), Océ (electronic industry), BAM (construction industry), Sika (construction industry), Waternet (diverse industry).

3.2.1 Strategy and vision

3.2.1.1 Management commitment

For DOW Chemical, management commitment is present (mainly on corporate high level), however the management structure at all levels is not communicated and the sustainability is still separated from the core business development. Océ has a Corporate Sustainability Forum that advises the Board of Directors on all sustainability issues, however the power of this forum is not known. At Sika, strong management commitment is not very visible from the website. It is mentioned more in relation to OSH and members of management are expected to act as role models and lead by example. Waternet's main core business is sustainable water cycles, and it claims to have management commitment, however no responsible persons or committees are mentioned.

3.2.1.2 Strategy/vision and trends

Most companies at level 3 have analysed trends, however their strategies are focused on different issues. For example, DOW Chemical is committed to sustainable chemistry, stakeholder involvement and product safety assessments, whereas Waternet focuses on sustainable water management (e.g. safety of dykes, water purification) and climate change. Océ's strategic aims revolve around paper, energy, reuse, product responsibility and establishing the company as an employer of choice. Sika's sustainability initiatives address issues, such as climate change, infrastructure, and social stability. In general, all companies' strategies are focused on developing innovative products and solutions (eco-efficient, green products, sustainable solutions), while addressing issues such as resource and energy scarcity, lifecycle view of products, and environmental and social improvements.

3.2.1.3 Stakeholders engagement

All companies have defined their stakeholders, which usually include customers, suppliers, employees, investors, governments, local authorities, NGOs, sub-contractors and the community. More specifically, stakeholder engagement at DOW Chemical is part of their Responsible Care and Product Safety programmes. Océ has organised a sustainability event for its external relations. Waternet and BAM state that they are involved in dialogue with some or all stakeholders, but no concrete actions are visible. It is not clear whether it participates in working groups at local or global level or industry associations.

3.2.2 Policy and practice

3.2.2.1 Environmental policy

Issues such as CO₂ reduction, energy, water and other resources' use, waste minimisation and treatment, and eco-efficiency are central for most companies. DOW Chemical has EMS in place and aims at reducing emissions to the environment (greenhouse gases, NO_x, VOCs) by reducing waste and optimising the logistics of its products. Océ has adopted a lifecycle approach to its environmental performance. Paper production is the most energy intensive activity for Océ (around 80% of total energy consumption per print), therefore the 'Océ Paper Sustainability Programme' is in place, concentrating on sustainable forestry,

paper recycling, paper waste and energy (CO2 emissions). Sika also focuses on optimisation of resource consumption, as well as product safety.

3.2.2.2 *Hazardous substances policy*

The hazardous substances policy usually falls under the product stewardship section of the company websites. DOW Chemical treats compliance with EU legislation as the first step, and has dedicated units to deal with substances. Its plan is to make safety assessments for its products on a global scale publicly accessible (by 2010 for high priority products, by 2015 for remaining products), and close relevant gaps in hazard and exposure information through the implementation of REACH. Océ has built a framework of safety measures to identify, evaluate, handle and eventually eliminate hazardous substances as much as possible. Also, Océ states its compliance with REACH, however little information is available on the company's website. Little information is also found on the website of Waternet and it focuses on minimal use of commodities, substances and additives to drinking water. Sika has published extended information on hazardous substances policy on its website. It has implemented REACH and has dedicated REACH Implementation Manager. Sika is a downstream user, producer and importer under REACH legislation. All information described in their technical documentation for usage and application along the supply chain is under review.

3.2.2.3 *Social policy*

The key social issues are diverse for each company, although all companies identify the importance of good working conditions and OSH policies. DOW Chemical supports inclusion and diversity. Its values include Integrity and Respect for People, and the company is also closely involved in the local community. Océ uses a 'health monitor' for all employees as an assessment and input tool for possible improvements, and also pays significant attention to diversity. Sika has extensive information on its website, stressing the importance of OSH and the company's compliance with acknowledged standards of Social Responsibility (e.g. ISO 26000). It also engages collaboratively within the society. Waternet uses an integrated HSE and quality programme, and is also involved in the sustainable improvement of water cycles in parts of the world where the need is high.

3.2.3 **Supply chain management/ policy**

3.2.3.1 *Supply chain upstream*

DOW Chemical does not look upstream of the supply chain. Waternet's main strategy for supply chain management involves dialogue with the society, and it strives for a sustainable mentality in the community for the supply chain upstream. The other companies focus mainly on direct suppliers, but they do not state that sub-suppliers are subject to the same requirements. All companies state that they apply code of conduct, regulations or other sustainability requirements to their suppliers, however they do not communicate clear steps to approach suppliers.

3.2.3.2 *Supply chain downstream*

Generally, the companies offer and market their eco-efficiency proposals, eco-products and sustainability approach to their customers. However, there is not much available information regarding recycling, with the exception of Océ. For

example, Océ was the first company to establish a complete Asset Recovery factory. Also, it places great importance on informing its customers and supporting their own initiatives through the 'Océ Eco Start Programme'. Sustainable development has also become a central challenge for Sika in the development of economically successful products, mainly driven by customer needs. Similarly with the supply management upstream, Waternet considers sustainability as part of the mentality in the downstream supply chain and aims to positively influence all stakeholders.

3.3 Companies at Stage 4 (Integrated strategy)

Companies at level 4 (Integrated strategy) have integrated sustainability in the vision and strategy of the company. Those companies are characterised by strong management commitment and established sustainability management structure through the whole company. Stakeholders are also identified. Companies are proactive, initiate and systematically engage in stakeholder dialogue. They are active members in industry associations, recognise the importance of the sector partners and participate in working groups, NGOs and/or policy drafting. Sustainability is part of their business model, and there is an integrated approach to sustainability (not only single issues addressed, like in companies at stage 2 and 3). These companies use integrated sustainability supply chain management, that includes a combination of approaches, with clear and fairly extensive arrangements. These arrangements relate to the application of codes of conduct, guidelines, regulations, or other sustainability requirements to their suppliers, auditing and monitoring of suppliers, and further partnering where joint process improvements are conducted and innovative products developed. In the downstream supply chain, companies at level 4 offer and market their eco-efficiency proposals, eco-products and sustainability approach to their customers, focusing on cradle-to-gate and cradle-to-grave approaches where the waste stage is taken into account, and give special attention to collection and recycling. Sustainable/responsible marketing and education for customers is applied by using different programs.

The following companies were placed at this level: AkzoNobel (chemicals industry), DSM (chemicals industry), BASF (chemicals industry), Rhodia (chemicals industry), Philips (electronic industry), Nokia (electronic industry), Siemens (electronic industry), Ahold (Retail/Consumer goods/food industry), Unilever (Food, Personal Care and Home Care industry), Procter & Gamble (Beauty, Grooming and Household Care products), Ikea (Home Furnishing and Food Services), L'Oréal (Household & Personal Products), TNT (Mailing Services).

3.3.1 *Strategy and vision*

3.3.1.1 *Management commitment*

All companies at level 4 communicate strong management commitment on their websites. Some companies, especially within the chemical industry, also demonstrate a structured management organisation at each company level (AkzoNobel, DSM, BASF, Rhodia, Nokia, Ahold, Unilever and IKEA). As the best example, AkzoNobel has a Sustainability Council in place. The Corporate Director of sustainability reports directly to the CEO. Also, a network of focal points is established, and each focal point brings together a sustainability team. They have regular meeting to discuss opportunities and further development. Sustainability is

included in the corporate business unit planning process. Further on, there is a 'Technology and Engineering Sustainability Group' to assist the company and the other members of the supply chain. Sustainability is an integral part of the business operations and strategy of AkzoNobel. As another example, a committed Executive Vice President drives sustainability at the Executive Board of Nokia. The Corporate Responsibility Steering Group oversees the industry and approves the work of a Nokia Sustainability Management Team (NSMT). The latter represents all Nokia relevant units and develops strategy, targets and priorities. The Sustainability Network acts as virtual team and is led by the Head of Sustainability Operations. IKEA has a committed Chief Executive Officer (CEO), a Global Supply Chain Manager, as well as a Sustainability Manager. L'Oréal, on the other hand, claims to have management commitment, however no responsible persons or committees are mentioned.

3.3.1.2 *Strategy/vision and trends*

The vast majority of companies at level 4 (except for Rhodia) have analysed trends, and address both environmental and social improvements. Their focus, however, can lie in different areas. Innovation and developing eco-premium products and solutions (e.g. green products, energy-efficiency) are central for all companies within the chemical and electronics industry, as well Unilever and P&G. Analysing the impact during the entire lifecycle of products is an important tool that some of these companies use towards this purpose. AkzoNobel and DSM have adopted a proactive sustainability strategy, and also focus on the growing markets. In addition, incorporating the environmental and social standards at the supply chain is a strategic aim for Rhodia, AkzoNobel and DSM. BASF sees sustainable development as a fundamental requirement for on-going profitable performance, and the focus areas are defined based on trend analysis. Philips and Nokia place high importance on supply chain compliance and improvements. IKEA holds sustainability as part of its philosophy and has a never ending list of improvements for a more sustainable IKEA. Also, for some companies (Unilever, Ahold, Siemens) sustainability is a central part of their business strategy. Ahold's strategy revolves around 5 main themes: healthy living, sustainable trade, climate action, community engagement and the group's employees. Similarly, TNT has identified 4 key focus areas: employees, environment, other stakeholders (e.g. customers, sub-contractors) and voluntary contribution to society.

3.3.1.3 *Stakeholders engagement*

All companies at level 4 have defined their stakeholders, which usually/normally include the following groups: customers, employees, suppliers, investors, the community, the media, NGOs, governments, sub-contractors and scientific institutions (for some companies). For Rhodia, the environment is also included in the stakeholders. Some companies (e.g. AkzoNobel) also present the issues per stakeholder. Most of the companies (e.g. AkzoNobel, DSM, Philips, Siemens, Nokia, Unilever, TNT, P&G and IKEA) are proactive, initiate and systematically engage in stakeholders dialogue, and participate in working groups, NGOs and/or policy drafting. AkzoNobel publicises position statements regarding issues like biodiversity, child labour, product testing, vendor policy, energy efficiency and climate change, and organises community programmes supporting the involvement of its employees. Companies in the electronics industry, such as Philips and Nokia, are active members of (electronic) industry associations, recognise the importance

of the sector partners and participate in working groups, such as the ones at the Global Sustainability Initiative (GeSI): Supply Chain Working Group, e-Waste Working Group and Climate Change Working Group, Electronics Industry Citizenship Coalition (EICC) (collaborates with the GeSI Supply Chain Working Group on a number of different supply chain activities), International Chamber of Commerce (ICC), World Business Council for Sustainable Development (WBCSD). TNT has a 2-step approach to stakeholders: (1) an on-line survey sent to stakeholders and (2) multi-stakeholder dialogue meetings.

3.3.2 Policy and practice

3.3.2.1 Environmental policy

Most companies have adopted a lifecycle approach to their environmental performance, and developing innovative and sustainable products is of great importance (e.g. AkzoNobel, DSM, BASF, Philips, Nokia, Siemens, P&G, L'Oréal, IKEA). For example, IKEA uses the "e-wheel" with several checkpoints, which are divided into four phases: raw material, manufacturing, product use and end-of-life. Also, responsible behaviour in the supply chain, energy, water and other resources' use, emission reduction, and waste minimisation and treatment are central for many companies (AkzoNobel, DSM, BASF, Ahold, Unilever). For example, Unilever has calculated that consumers generate 70% of the environmental impact of its products, and therefore focus on educating customers. Also, P&G has developed a supplier sustainability scorecard, which assesses the environmental footprint of their suppliers, enabling P&G to partner with them and help reduce the environmental impact along the supply chain. In addition, AkzoNobel and DSM are concerned with HSE performance at their own operations and also those of the supply chain. Their tools include EMS, Product stewardship, LCA, and different programs such as eco-premium solutions (AkzoNobel) or value chain analyses (DSM). BASF takes responsibility for its products worldwide, and an eco-efficiency analysis has been developed as a tool for assessing products and processes on a comprehensive and comparative basis. When analysing the entire lifecycle of a product, BASF also includes the environmental impact of the materials used, the product use by customers and end-consumers, as well as options for recycling and disposal. Also, BASF has Product Stewardship, Responsible Care and Global Product Strategy programmes in place. Philips, P&G, BAM, IKEA, TNT focus on CO2 reduction, and some of them look at the CO2 footprint within the supply chain (Philips, TNT, IKEA, P&G) and have their own calculation methods. Companies within the electronics industry focus on diverse key environmental issues. As already mentioned, Philips is focused on CO2 reduction and CO2 in the supply chain (EICC Carbon reporting System), as well as energy efficiency, cradle-to-cradle and phasing out certain chemical substances. Nokia's environmental efforts concentrate on four issues: substance management, energy efficiency, product take-back and recycling, and promoting sustainability through services and software. Nokia's EMS covers all production sites and offices, as well as suppliers' sites where improvement targets apply. Siemens has a wide range of products and solutions for environmental and climate protection in order to improve its own environmental performance and that of its customers and suppliers. However, key environmental issues are not mentioned on its website.

3.3.2.2 *Hazardous substances policy*

The majority of the companies at level 4 communicate extensive information regarding hazardous substances on their websites (AkzoNobel, DSM, BASF, Rhodia, Philips, Nokia, L'Oréal, IKEA). For example, in the chemical industry the hazardous substances policy is usually under the product stewardship section of the company websites. Compliance with the EU legislation as REACH, CLP, EU VOC is the first step. Also, these companies participate in industry associations and programmes such as Global Product Strategy (GPS) developed by ICCA, Responsible Care® developed by CEFIC. Some companies have their own programmes, such as eco-premium solutions and product stewardship. AkzoNobel and DSM see REACH as an important instrument to further promote safe working with substances to suppliers and customers. All 4 companies have dedicated units to deal with substances. Nokia and to a less extent Philips are leaders in substance management. Both state that they comply with REACH and RoHS. Philips is part of the developing of the industry platform to provide full material declaration for the products they sell. Nokia also provides full material declarations, but goes beyond compliance by seeking development and efficient use of more sustainable products (biomaterials, recycled plastics). Nokia also follows precautionary principle which leads to some voluntary substitution of substances. IKEA and L'Oréal have also published extensive information on hazardous substances policy on their websites. L'Oréal considers product safety and green chemistry its core objectives and seeks proactive substitution. Within L'Oréal, there is a Chemistry Regulatory Affairs Division. IKEA has an even better developed policy. For chemicals used in their products, restrictions are outlined in an internal company specification called "Chemical compounds and substances". Together with other material and product specifications and requirements, this specification comprises the binding contract between IKEA and its suppliers. To follow-up on fulfilment of requirements IKEA carries out random checks, performed by a third party. The EU REACH requirements are in line with how IKEA works with chemicals. The precautionary principle and substitution principle are the basis for how both REACH and IKEA works with chemicals. The rest of the companies communicate less information regarding hazardous substances on their websites. One such example is Siemens which states that it complies with REACH and RoHS legislation, but the relevant public information is limited. Unilever states that it supported the latest development of REACH, and contributes to its successful implementation, working with others in the industry. However, there is no REACH information on the website. Finally, P&G focuses on eliminating PVC in packaging by working together with packaging suppliers.

3.3.2.3 *Social policy*

The key social issues are diverse per company. AkzoNobel, DSM, BASF and Rhodia state that they apply global and/or national social standards (e.g. ILO, UNCCI, Diversity Charter in France). In addition, DSM and BASF look at social assessment tools. AkzoNobel follows its own Code of Conduct and a Compliance Committee ensures compliance with it. Philips' General Business Principles (GBP) are central to how they operate, enabling them to maintain an ethically responsible attitude in all countries and cultures. Siemens focuses on employee training, health and welfare. Nokia presents more information on its social policy and the focus is on diversity, OSH, global operation injuries, and illness and wellbeing. Other issues for Nokia are: Discrimination, forced labour, child labour, freedom of association,

occupational safety, occupational health, disciplinary practices, working hours and compensation. L'Oréal focuses on OSH/HSE. In addition, L'Oréal has a code of business ethics in place. TNT focus on reducing fatalities, BAM on HSE/OSH, education of its employees, community relations. IKEA, Ahold, Unilever and P&G have more extensive information on their websites. IKEA respects fundamental human rights and treats workers fairly and with respect. IKEA products are manufactured under acceptable working conditions by suppliers. Ahold helps suppliers act in a responsible way, but also develops a culture that encompasses its core values. There are programmes for health challenges, wellness activities and motivation in the workplace. Unilever is focused on teaching customers how to use its products, and P&G on safety and welfare of the employees and improving life for disadvantaged children.

3.3.3 Supply chain management/policy

Supply chain management requires engagement of all company structures and activities, and only leading companies do it. For example, Akzonobel takes the challenge to integrate sustainability tools and processes throughout all functions in the value chain. This is performed by market research, R&D and Innovation, Communities of Practice (CoP's), investment decisions, mandatory eco-efficiency assessment, sourcing, manufacturing, sales and marketing. Each element of the value chain identifies focus areas. These include personal targets, product development processes, the vendor policy, health, safety, environment and security performance monitoring and reporting, 'code of conduct' training and a global complaint procedure.

3.3.3.1 Supply chain upstream

All companies at level 4 state that they apply codes of conduct, guidelines, regulations, or other sustainability requirements to their suppliers. Most companies communicate clear steps regarding their approach to suppliers (e.g. AkzoNobel, DSM, BASF, Philips, Nokia, IKEA, Unilever, P&G), even though the steps can be organised differently at each company. The majority of the companies focus mainly on direct suppliers (Ahold, Unilever, P&G, L'Oréal, Philips, Nokia and Siemens), and some state that each tier should take responsibility for its own suppliers (Philips, Nokia and Siemens). One exception is IKEA that states that sub-suppliers are subject to the same requirements, while Philips recommends that the industry initiatives reach second- and third-tier suppliers. In more detail, for companies in the chemical sector, the steps encompass code of conduct declaration, self-assessment (DSM, BASF), on-site audits and training (for suppliers and for purchasers). AkzoNobel, additionally, focuses on innovation and has developed the 'Key Suppliers Management Program' which works together with suppliers to develop eco-premium solutions. AkzoNobel has also defined focus sustainability areas for sourcing product and services that offer opportunity to reduce eco-footprint: Logistics & Travel, Waste Management, Packaging, Carbon Management, Renewable Raw Materials, ICT and Lease Cars. In the electronics industry, Philips and Nokia are members of EICC, and use EICC code of conduct for suppliers, while adding their own sustainability requirements to it. Siemens recognises the EICC, but has its own internal code that is similar to the EICC code. Siemens' website does not present clear steps for approaching suppliers, whereas Philips and Nokia have few steps on the approach to suppliers. The steps encompass setting the requirements, self-assessment (E-TASK provided by EICC) and on-site audits and

training. Philips has a 5-pillar programme: (1) setting out its requirements; (2) building understanding and agreement; (3) monitoring identified risk suppliers through audits using the EICC checklist (90% of initial audits are conducted by specialised external auditing bodies); (4) working with suppliers to resolve issues quickly; and (5) engaging stakeholders. Philips uses external companies for the audits and lets suppliers pay for it. Nokia's approach is a bit different: (1) Self-Assessment Questionnaire (SAQ) delivered through the on-line tool E-TASC, (2) compliance is monitored with the Nokia Supplier Requirements (NSR) through regular assessments called "System Assessments" (key suppliers are generally assessed every two years), (3) in-depth assessments provide an opportunity for more insight into how a supplier manages and performs in terms of the ethics, environment, labour and health & safety requirements defined in NSR. Nokia trains assessors and also participates in joint industry assessments which are conducted by third-party assessors. Finally, Unilever assures sustainable sourcing by certification and self-verification, IKEA does random checks tested by a third-party and performs regular visits by IKEA inspectors, and P&G uses regular commercial and technical suppliers visits and also third-party assessments.

3.3.3.2 *Supply chain downstream*

Almost all companies at level 4 offer and market their eco-efficiency proposals, eco-products and sustainability approach to their customers (AkzoNobel, DSM, BASF, Rhodia, Philips, Nokia, BAM). Leading companies like AkzoNobel and DSM are focused on cradle-to-gate and cradle-to-grave approaches, where the waste stage is taken into account. Nokia and Philips give special attention to collection and recycling, while recycling programmes are also organised by IKEA and Ahold. Finally, TNT, Ahold, Unilever, L'Oréal, IKEA and P&G use sustainable/responsible marketing and education for customers and apply it via different programmes.

4 Case studies of companies' good practice

Five focal companies with best practices were selected for the case studies. The data generation for the case studies was based on two qualitative methods, a documents analysis and in-depth interviews with company representatives (see Annex 4).

4.1 Royal Philips Electronics⁷ (Electronic goods - Healthcare, Lifestyle and Lighting)

4.1.1 Introduction to the company and its activities

Royal Philips Electronics (or Philips) is a diversified Health and Well-being company that serves its customers (professionals and consumers) through three overlapping sectors: Healthcare, Lighting and Consumer Lifestyle. Philips was established in 1891 in Eindhoven, the Netherlands, and is still headquartered in the Netherlands. It employs over 120,000 people and sells its products and services in more than 100 countries world-wide (Royal Philips Electronics website).

Philips's supply chain includes suppliers and (sub-)contractors. Within Philips, there is differentiation between the services and the materials chain. The non-product related service chain is managed centrally, whereas the material chain is managed at local operating levels within the sectors of Philips. However, both chains have to comply with the company's Code of Conduct. Philips has 10.000 first-tier suppliers in the material chain and 30.000 in the services chain, and 1.000 suppliers account for 80% of the supplying activities.

Sustainability is central in Philips' strategy, and the company's targets are set by a series of programs, such as EcoVision, Green Manufacturing 2015 and the Supplier Sustainability Involvement Program (Royal Philips Electronics, 2012). Philips' new approach to sustainability considers the ecological footprint of its activities, together with the company's health and well-being strategy. Philips' commitments include reduction of the environmental footprint of its products, its manufacturing and procurement activities, the communities where the company operates and the working practices of its employees (Royal Philips Electronics website). Philips is committed to a sustainable supply chain, and the role of suppliers in the company's efforts towards sustainability is considered central. Philips is currently (end of 2011) in a transition phase, but it is expected that sustainability will continue to be a very important topic.

In 2011, Philips received several awards for its sustainability performance, including the Responsible Supply Chain Management Award from the Dutch Association of Investors for Sustainable Development (VBDO) for the 4th consecutive year and the Gigaton Award by the Carbon War Room for its EcoDesign product design process. External recognition includes acknowledgement of Philips as the top rated company within the Consumer Discretionary sector in the Carbon Disclosure Project's Global

⁷ Additional information sources used for the purpose of this case study: 'Supplier Sustainability Declaration – Electronic Industry Code of Conduct v3.0', 'Supplier Sustainability Program Manual – Issue 2.0', 'Philips Supplier Sustainability Involvement Program: AUDIT QUESTION LIST 2010, Aligned to EICC Code of Conduct Version 3 (2009), EICC Audit Question List Version 6.0 (Dec 2009)', 'Philips Annual Report 2009' (Royal Philips Electronics & EICC, 2009; Royal Philips Electronics, 2009; Royal Philips Electronics, 2010a; Royal Philips Electronics, 2010b)

500 Report 2011 and receiving the distinction of 'Supersector leader' in the Personal and Household Goods category of the 2011-2012 Dow Jones Sustainability Index (Royal Philips Electronics website).

4.1.2 Strategy and vision

4.1.2.1 Management commitment

Philips' Sustainability Board is chaired by a member of the Board of Management, and it monitors the key performance indicators on sustainability developments (score cards) within all company sectors. In addition, there is a board for General Business Principles (GBP) covering the social and ethical aspects of sustainability. This board is responsible for weighting production requirements to the full compliance of the GBP.

4.1.2.2 Strategy/vision and trends

Philips' mission is to improve the well-being of individuals and communities that the company operates in. At the same time, it works towards improving the environmental performance of both products and processes, and driving sustainability throughout its supply chain. Therefore, Philips' sustainability agenda includes environmental and social aspects, health and safety issues, ethical issues and dangerous substances.

The main drivers for Philips to improve the sustainability of its supply chain are related to protecting the brand image and meeting the sustainability standards required by big customers, such as Walmart. Accordingly, Philips performs trend analyses of its competitors and collects information from NGOs and the society in order to supplement the company's strategy.

EcoVision4 and EcoVision5 were action programs that Philips had launched directed to the supply chain. The aims of the programs involved energy and material efficiency through the entire product lifecycle. EcoVision4 began in 2007 and ran through 2012; the company's commitments related to generating 30% of total revenues from 'green' products, double investment in 'green' innovations, improvement in its operational energy efficiency (25%) and reduction of CO2 emissions (25%) by 2012, as compared with the base year 2007. EcoVision5 ran from 2010 to 2015, and addressed three key performance indicators for Philips: (1) bringing care to more than 500 million people (Healthcare sector), (2) improving energy efficiency of its products by 50% by 2015 compared to 2009 (Lighting sector), and (3) closing the materials loop by doubling global collection, recycling amounts and recycled materials in products by 2015 compared to 2009 (Consumer Lifestyle sector) (Royal Philips Electronics website). From 2012 and on, these 2 programs have been merged into one labelled as Ecovision (Royal Philips Electronics, 2012).

4.1.2.3 Stakeholder engagement

Philips believes that cooperation with other stakeholders, such as governments and NGOs, is essential. Accordingly, the company participates in meetings and task forces as a member in organisations of the electronic industry. For example, being a member of the Electronic Industry Citizenship Coalition (EICC), Philips has taken active part in the development of the EICC sustainability standards.

Philips is also involved in another initiative – the Dutch Sustainable Trade Initiative ('Initiatief Duurzaam Handelen' – IDH). IDH brings together government, frontrunner companies, civil society organisations and labour unions. The mission of IDH is to accelerate and up-scale sustainable trade in mainstream commodity markets from the emerging countries to Western Europe. Philips participates in the IDH Electronics Program, which has set itself the target of improving the working conditions of 500.000 workers in China's Pearl River delta. This multi-stakeholder program expects to engage with local civil society organisations, authorities, and management and workers of companies in the supply chain. It aims to identify needs related to a number of key themes, including workplace health and safety and communication between workers and management, and to implement improvement plans, using available best practices. A nice example is the LEAN manufacturing project in China which resulted in less expenses for the company that increased the remuneration of its workers. The employee turnover dropped and worker training levels increased, resulting in improved productivity and even more profit for the company.

4.1.3 Policy and practice

4.1.3.1 Environmental policy

As a member of EICC, Philips has taken active part in the development of the EICC sustainability standards. EcoVision and Green Manufacturing 2015 are programs that Philips has launched and they aim at improving Philips' sustainability performance throughout the supply chain and the environmental performance of its manufacturing facilities, respectively. These programs address energy and material efficiency, water use, recycling of waste and chemical substances (Royal Philips Electronics, 2012). Some of the instruments used include involvement in green innovation, cradle-to-cradle approach, phase-out of hazardous materials, EICC carbon reporting system and 'Bill of Material (BOM) check'. The products' overall environmental improvement is determined by using lifecycle approach. The EICC carbon reporting system is an online software that allows companies in the Electronics industry to calculate greenhouse gas (GHG) emissions and share these data with other companies in the industry. 'BOM check' is an industry platform where suppliers provide chemical information on the materials they sell. This also facilitates compliance with the EU Directive on the 'Restriction of the use of certain hazardous substances in electrical and electronic equipment' (2002/95/EC).

4.1.3.2 Social policy

The Philips GBP are central to how the company operates, enabling them to maintain an ethically responsible attitude in all countries and cultures. Philips focuses on projects that simply enhance life with light and simplify healthcare with a resolute focus on people's needs. One of their initiatives is the 'Philips Bright Energy Saving Kampong' program that was launched in Indonesia. With regards to its employees, Philips' ambition is to employ 15% female executives in 2012.

4.1.4 Supply chain management

4.1.4.1 Supply chain upstream

Philips' requirement for suppliers is to share the company's commitment to sustainability, reflecting both the Philips GBP and the EICC Code of Conduct. The

company's approach to sustainability upstream in the supply chain focuses on its main suppliers and suppliers that pose high risk.

The 'Philips Supplier Sustainability Involvement Program' is based on five pillars: (1) creating commitment by setting out the company's requirements, (2) building understanding between the company and its suppliers regarding these requirements, (3) monitoring identified risk suppliers through audits, (4) working with suppliers to resolve issues, and (5) engaging stakeholders.

Before selecting suppliers a risk assessment is performed based on the country of production. This assessment is based on the Maplecroft indices (countries risk analysis and mapping organisations). Philips uses two particular Maplecroft indices to determine the countries for business, the Human Rights index and the Legal and Regulatory Environment Risk index. This assessment is a first indicator of the supplier's ability to comply with the code of conduct of Philips.

In addition, frequent audits (90% performed by external audit bodies) are performed using the EICC audit check list. Each selected supplier receives an external audit and, if not compliant, a corrective action plan is developed and has to be implemented, followed by a resolution audit. The ultimate consequence of not adhering to the requirements is termination of the business relation.

To help suppliers before the sustainability assessment audit, Philips provides training, initiates capability programs and provides a self-assessment questionnaire. This is supported by 10 local sustainability experts from Philips who are responsible for tailoring training and coaching to the local suppliers' needs. Specific training on sustainability topics for suppliers is also provided by EICC.

In order to implement structural changes, buyers of the purchasing departments in Philips are trained in sustainability as one of the selection criteria for suppliers. Buyers have a strong focus on competitiveness, especially when faced with the current economic situation. Therefore, criteria could be conflicting in practice. Even in these cases, Philips' code of conduct is seen as a minimum requirement which needs to be fulfilled.

In the annual sustainability report of Philips the main findings for all suppliers are published. For improvements on transparency, Philips has received the VBDO "Ketenbeheer" (supply chain management) award for 4 consecutive years (2008-2011).

4.1.4.2 *Supply chain downstream*

Philips' activities for integrating sustainability downstream in the supply chain are focused on providing consumers with energy-efficient solutions (e.g. energy saving lamps). Also, considering end-of-life and improving the environmental performance of collection and recycling compliance schemes are part of their sustainability agenda. These efforts are mainly focused in EU markets, although they have been expanded to include countries like India, Brazil and Argentina. Finally, Philips supports the development of Waste Electrical and Electronic Equipment (WEEE) EU directive.

4.1.5 *Success factors and main barriers*

The most important success factors for Philips' sustainability agenda are the high level of commitment to sustainability and the presence of strong and passionate

ambassadors within the company. However, the main barrier in implementing a sustainable supply chain is getting full commitment in the upstream supply chain. This is a common struggle for Philips, especially since sustainability's contribution to profitability is difficult to calculate and/or prove. However, structural improvements are pursued by integrating sustainability in the management system of its local management teams. In addition, Philips pursues long-term agreements with suppliers (4 years), in order to motivate their contribution to different, more energy-efficient materials.

4.1.6 Conclusions

Philips works towards driving sustainability throughout its supply chain. Its sustainability agenda includes environmental and social aspects, health and safety issues, ethical issues and dangerous substances. Strong top management commitment is evident within the company; there is a Sustainability Board and a board for GBP in place.

The main drivers behind Philips' sustainability performance improvement plans are protecting the brand image and meeting sustainability standards required by its big customers.

Philips' strategy to integrating sustainability in its supply chain involves instruments aimed at both supplier management for risks and performance and supply chain management for sustainable products, although more information regarding the former were collected during this study. For the latter, lifecycle approach is taken into account when determining environmental improvements of Philips' products.

The company's strategy targets at improving the environmental performance of its products and driving sustainability in its supply chain. EcoVision is Philips' action programme directed at the supply chain, and it represents the company's goals and commitments regarding sustainability.

In the upstream supply chain, Philips considers both the material and services chain. The 'Philips Supplier Sustainability Involvement Program' is based on creating commitment by setting out the company's requirements (e.g. Philips GBP and EICC code of conduct), building understanding between the company and its suppliers, monitoring identified risk suppliers through audits, working with suppliers to resolve issues, and engaging stakeholders. Philips requests its suppliers to provide information about their products using 'BOM check', and supplier audits are performed using the EICC audit check list. In case of non-compliance, corrective actions are planned in co-operation, followed by a resolution audit of the supplier. Training, capability programs and self-assessment questionnaires are provided to suppliers prior to sustainability assessment audits. Sustainability training is also provided to the buyers of Philips' purchasing departments. Potential new suppliers undergo risk assessment based on the country of production, which is based on the Maplecroft indices. This provides a first indicator of the supplier's ability to comply with Philips' code of conduct.

In the downstream supply chain, Philips focuses on developing energy-efficient solutions for its customers, considering end-of-life of its products and improving the environmental performance of collection and recycling compliance schemes.

Philips' success factors in integrating sustainability in its supply chain mainly involve the high level of commitment to sustainability of both management and employees

and the presence of passionate ambassadors within the company. The main barriers that Philips faces in implementing its sustainability targets relate to achieving commitment of its suppliers and proving them that sustainability can lead to profitability.

4.2 Inter IKEA Systems B.V. (Home Furnishing and Food Services)

4.2.1 Introduction to the company and its activities

IKEA is a home furnishing company that was established in 1943 by Ingvar Kamprad in Sweden. In 1982, its founder established the 'Stichting INGKA Foundation' which owns the parent company of the IKEA Group, INGKA Holding B.V. The IKEA Group operates in 41 countries, and it employed approximately 131.000 co-workers worldwide in 2011. IKEA's product range includes approximately 9,500 products (IKEA website, IKEA, 2010b; IKEA, 2011b).

The IKEA Group encompasses all IKEA operations and is a group of companies working in four basic areas: range strategy and product development, production, supply and retail. IKEA has a fully integrated supply chain that includes its own industrial groups. IKEA Industry is separated in three Industrial Groups: 1. Swedwood, a manufacturing group within the IKEA Group (16.000 co-workers and 33 production units in 10 countries), 2. Swedspan, an industrial supplier within the IKEA Group (700 co-workers and 5 production units in 5 countries), 3. IKEA Industry Investment & Development (IIID), an advisory and investment service company (13 co-workers) (the numbers reflect data from year 2011) (IKEA, 2010b; IKEA, 2011b; IKEA website). Within IKEA, suppliers, sub-suppliers, contractors and co-workers are considered part of the supply chain. In 2011, IKEA had 1,018 suppliers in 53 countries (IKEA, 2011b).

The IKEA brand represents the group's 'no-nonsense' and nature-oriented culture influenced from the Swedish culture and lifestyle. Sustainability has been integrated in the genes of IKEA, starting around 1990. The term evolved from 'Environment and Corporate Social Responsibility' to Sustainability, but has remained the same in essence. The 'IKEA Sustainability Direction 2015' was launched in 2010, as part of the 5-year strategy for IKEA, 'Growing IKEA together'. Sustainability is central in IKEA's strategy, and the 'IKEA Sustainability Direction 2015' outlines the group's priorities until 2015 (IKEA, 2010a; IKEA, 2011a).

4.2.2 Strategy and vision

4.2.2.1 Management commitment

IKEA management sees sustainability as an integrated part of its business and is, therefore, a key driver. Since 2010, a dedicated Chief Sustainability Officer (Steve Howard) has joined the Executive Management of the IKEA Group. A Global Supply Chain Manager (Jesper Brodin) also participates in the Executive Management. Each sector within IKEA has its own policy for sustainability and targets, for example lowering energy consumption in the IKEA stores and during the manufacturing and use-phase of IKEA products. Their performance on sustainability is globally monitored and evaluated. Each manager within the company takes part in a 'leadership' training, where sustainable ambassadors are created and trusting and facilitating leaders are trained.

4.2.2.2 *Strategy/vision and trends*

IKEA's vision is a better existence for the many ('creating a better everyday life for the many people' (IKEA, 2010a), by offering a broad spectrum of high-quality products for people's homes at a low price. According to IKEA, caring about people and the environment is a prerequisite in this effort (IKEA, 2010a).

IKEA strives for building long-term relationships with its customers and tries to offer integrated solutions to them, for example integrating televisions in their furniture. IKEA has faith in its ability to create better solutions than other companies, and, therefore, uses internal expertise for that. IKEA wants to stand at the top of the customers' mind and to be considered as the trusted company to buy home products. Products can differ for each market due to different customer demands and budgets (e.g. stores in Korea). Prices at IKEA stores can be low due to, for instance, the standardisation of furniture fixings or the use of side panels for kitchens to other cabinets. This requires involving strategic partners in the development of IKEA.

Sustainability is one of the four cornerstones in IKEA's 5-year strategy (running from 2010 to 2015). The 'IKEA Sustainability Direction 2015' outlines the group's priorities for that period which consider the entire value chain across the product lifecycle. These are offering more sustainable products, creating a low carbon society, turning waste into resources, reducing water footprint and taking social responsibility (IKEA, 2010a; IKEA, 2011a).

IKEA actively monitors trends in sustainability; these include increasing transparency on the origin of products, customers' concerns on health-related issues, and addressing consumer inquiries regarding the materials used in IKEA products. IKEA works together with FSC, WNF and Milieu Defensie in order to further increase their knowledge on the sustainability of their products and avoid surprises caused by negative issues, such as child-labour related issues, or ocean pollution issues caused by the use of scrubbing agents in douche gel.

Sustainability is considered as an integrated part of the group's business; it is seen as a business opportunity and a 'condition for being a good company' (IKEA, 2010a). One of the main drivers for sustainability is obtaining knowledge about the impact of IKEA products on the health of workers and customers (e.g. use of formaldehyde). Any negative impact on employees or customers of IKEA products can harm the IKEA brand. The knowledge of impact on sustainability constantly increases, and this process involves asking fundamental questions for IKEA, such as 'is wood (70-80% of the materials used by IKEA) really necessary?'. To meet these challenges, IKEA will use the knowledge of all its 131.000 employees to look for solutions, by means of global sustainability competitions. Finally, it is necessary for IKEA that co-workers at all levels have faith in the company, its departments and products.

4.2.2.3 *Stakeholder engagement*

The IKEA Group co-operates with stakeholders and partners, and sees stakeholder dialogue as a way of gaining knowledge, and developing and reinforcing the impact of its work within the social and environmental fields. IKEA works with suppliers and their employees, co-workers, customers, trade unions, NGOs and other organisations. Some of the organisations and/or networks that IKEA co-operates are 'Business for Social Responsibility' (BSR), 'International Labour Organisation'

(ILO), 'Rainforest Alliance', 'Green Power Market Development', UNICEF, 'UTZ Certified' and WWF.

One of the key indicators for IKEA's performance on sustainability globally is the yearly assessment from the group's co-workers and suppliers on their perception of trust in the sustainability and products of IKEA. 90% of IKEA's co-workers perceive the company and its products as sustainable. For suppliers this is 70%, which is not considered adequate by IKEA.

4.2.3 Policy and practice

4.2.3.1 Environmental policy

IKEA's environmental policy focuses on reducing CO2 emissions throughout the entire value chain, from raw material extraction to end-of-life of products. IKEA uses the "e-wheel" in order to understand and evaluate the environmental impact of its products. The "e-wheel" contains several checkpoints, which are divided into four phases: raw materials, manufacturing, product use and end-of-life. Instruments that IKEA uses towards this direction include using efficient packaging for transport, using transport service providers that meet certain environmental criteria, and offering free shuttle buses to and from their retail locations.

Within the Retail sector, one of the targets is for IKEA stores to reuse 50% of their own waste (90% packaging) and 90% of their wood and iron. The success of these targets depends on local issues, such as the contract with waste contractors. IKEA's retail locations are technically advanced and very sustainable. In the Netherlands, building regulations do not allow solar energy investments, but IKEA aims to put up two new sites which will be the most sustainable sites. One of IKEA's long-term goals is to run all its units entirely on renewable energy.

4.2.3.2 Social policy

IKEA's social policy covers different aspects of the company's activities and aim at using responsible business practices. Regarding labour practices, IKEA supports diversity and inclusion within its work-force and focuses on competence and leadership development of its people. Safe working conditions for co-workers are central in the company's policy. Also, IKEA products must be manufactured under acceptable working conditions by suppliers; the group expects its suppliers to respect fundamental human rights, and to treat their workers fairly and with respect. The IKEA foundation is the charitable part of Stichting INGKA Foundation and works in collaboration with partners like UNICEF and 'Save the Children' towards improving the lives of people in disadvantaged communities (IKEA, 2011b).

4.2.4 Supply chain management

4.2.4.1 Supply chain upstream

IKEA considers suppliers as partners in helping the group achieve its goals. Suppliers have to be trusted to be responsible for the production methods they use, providing sustainable products, and helping in the development of alternative materials. In previous years IKEA reduced the number of suppliers from about 4.000 to approximately 1.000 worldwide.

In 2000, IKEA introduced IWAY – the IKEA code of conduct – which sets the group’s requirements for its suppliers of products and services and regarding what suppliers can expect from IKEA. In addition to IWAY, there are supplementary industry-specific guidelines and a special code of conduct for child labour. It is the suppliers’ responsibility to communicate their content to their employees and sub-suppliers (IKEA website). In the past, the main focus was on suppliers, but now also contractors (e.g. responsible for cleaning or safety & security) are expected to comply with the IKEA code of conduct. However, the requirements for suppliers and contractors can be different because of the nature of their services.

In order for IKEA to ensure suppliers’ compliance with the IKEA code of conduct, audits are performed. These audits can be random or regular, and announced or unannounced. In the past, verification on compliance was only performed by internal auditors, but now it is also performed by external auditing companies. The reason is that internal auditors can be biased due to the relationships they have with the suppliers.

In case a problem related to the quality of a product of a supplier appears, IKEA does not stop the relationship with the supplier. IKEA works together with suppliers on improving product quality, or developing different products, and also supports its suppliers in improving their sustainability performance. In the event that more than 50% of the production capacity of a supplier goes to IKEA, a second supplier is contracted, in order to protect suppliers from being over-dependent.

IKEA uses its own factories as an example of sustainable working practices for its suppliers, and these sites function as training centres. All suppliers undergo the sustainability introduction training, and some employees follow additional training.

For new suppliers, even stronger programmes are in place to make sure that they are compliant with the code of conduct. Before tendering, suppliers are requested to comply with 12 essential requirements of IKEA, and are sometimes given two years in order to fulfil those requirements. In case of non-compliance, suppliers cannot take part in the tendering procedure. When suppliers are submitted in the procedure, an audit is performed during which internal auditors test on product quality and follow the entire supply chain of the products. Transparency and traceability of their products is most important to IKEA.

IKEA’s specifications for its products are very strict and impose many demands on suppliers (e.g. implementing REACH legislation). In return, IKEA offers its suppliers prompt payment, financial and expertise support and on-site help by IKEA experts. For instance, support was provided to a factory in Bangladesh in order to improve safety practices, since no ISO system was likely to be in place.

4.2.4.2 *Supply chain downstream*

For IKEA, the scope and attention of sustainability in the downstream supply chain are shifting towards communication to the consumer by offering them tips on how to be more sustainable. At the same time, the group continues to believe that the IKEA brand needs to be equal to a sustainability hallmark, therefore every product needs to be sustainable.

Examples of instruments used in order to communicate sustainability to the public include the development of a LED lamp which is cheap and can be used by everyone, as well as the ‘Sustainable Home’ that is on display at their stores. The latter was developed in cooperation with WNF and FSC.

Sustainable transportation of products and customers is important in IKEA's effort to reduce its CO2 emissions. The level of success depends on each country's possibilities and local circumstances. For example, cars are less common in Russia, and a dense public transport network is in place. On the other hand, IKEA stores in the Netherlands are located close to highways, therefore customers use their car in 70% of the cases. As a result, IKEA's efforts to stimulate use of public transport to and from its stores are less successful.

In most IKEA stores, waste returning and recycling schemes are currently in place for spent batteries, low-energy bulbs, discarded packaging, and electrical and electronic equipment. New projects have also started for kitchens, mattresses and fabrics. Attempts are made to start up a recycling project for old benches, but, in light of compliance, safety and demands on processing and logistics this will be difficult for IKEA to achieve.

Regarding the 90-day return policy on its products, IKEA tries to learn from customer complaints in order to reduce the number of returned products. For some product groups (e.g. mattresses), returned products are used to improve product quality, service advice, packaging and positioning in the retail locations.

4.2.5 Success factors and main barriers

Within IKEA, there has been a strong top-down strategy, but also the recognition of bottom-up inspiration. To implement a sustainable supply chain, a culture turnover of sales perspective was necessary for the group. Issues such as the use of different materials for wood, or phasing out Teak Wood could bring strong resistance. However, IKEA has a creative culture, and always sees opportunities instead of problems. For example, IKEA uses global sustainability competitions as a means to using the knowledge of all its co-workers towards solutions to the challenges the group faces.

4.2.6 Conclusions

Sustainability is one of the 4 cornerstones in IKEA's strategy for the period 2010-2015 and it is embedded throughout its entire product supply chain; it involves suppliers, sub-suppliers, contractors, co-workers and customers. Top management commitment is evident, and since 2010 the group has a dedicated Chief Sustainability Officer. IKEA's sustainability performance is monitored and evaluated on a global level.

The main drivers for the group's sustainability agenda lie in the business opportunities that it offers and protecting the IKEA brand. Sustainability is not only seen as a condition for being a good company, but it can also protect the group from the harm caused by potential negative impact of its products on co-workers and consumers.

The strategies and instruments that IKEA uses in order to integrate sustainability in its supply chain involve both supplier management for risks and performance and supply chain management for sustainable products. For the latter, IKEA considers the entire value chain and takes into account the impact throughout the product lifecycle.

The 'IKEA Sustainability Direction 2015' sets the priorities for the group's sustainability agenda, which focuses on developing more sustainable products,

contributing to low carbon society, turning waste into resources, reducing the group's water footprint and taking social responsibility. The instruments used in the upstream supply chain include IKEA's code of conduct (IWAY) that covers suppliers, sub-suppliers and contractors, performing audits by both IKEA and third-party auditors, and ensuring compliance of potential new suppliers before entering the tendering process. In cases of non-compliance, IKEA co-operates with its suppliers in order to improve product quality, develop different products, and improve their sustainability performance in general. In the downstream supply chain, IKEA places great importance on communicating issues and advice regarding sustainability to customers, and also providing them with sustainable products. Recycling and reuse schemes are in place in most IKEA stores, and they are expanded in order to include more product groups. Finally, sustainable transportation of products and customers is promoted, when the regional circumstances allow it.

In order to fulfil its sustainability goals, IKEA had to undergo a culture turnover of sales perspective. Issues are also likely to appear when looking for replacing materials with other alternatives, such as wood. However, IKEA's creative culture contributes to overcoming and tackling challenges that come up.

4.3 Procter & Gamble (Beauty, Grooming and Household Care products)

4.3.1 *Introduction to the company and its activities*

P&G is a company providing branded products and services for the markets of beauty & grooming and household care in more than 180 countries, serving about 4,4 billion customers. It started as a small, family-oriented soap and candle company in 1837. Nowadays, the company occupies more than 138.000 employees in over 90 countries worldwide (Procter & Gamble website).

P&G's is organised in Global Business Units (GBUs), Market Development Organisations (MDOs), Global Business Services (GBSs) and Lean Corporate Functions. GBUs focus only on consumers, brands and competitors around the world and are responsible for the innovation pipeline, profitability and shareholder returns from their businesses. MDOs are in charge of knowing consumers and retailers in each market where the company competes, and integrating innovations into tailored business plans for each country. GBSs provide business support services (Procter & Gamble website).

Working on Health & Safety issues for their products and plants even before 2000, P&G has been at the forefront of integrating sustainability in its operations. P&G's definition of sustainability includes both environmental sustainability and social responsibility, and its sustainability agenda aims at ensuring a better quality of life for people and the planet. P&G considers itself one of the leaders in sustainability in Europe; according to the Dow Jones Sustainability Indices, P&G is one of the Global 100 Most Sustainable Corporations in the World, with top rankings from 2000-2011 (Procter & Gamble website).

4.3.2 Strategy and vision

4.3.2.1 Management commitment

At P&G, top management commitment is necessary in order to define the purpose and principles of the company, and determine the focus areas of the sustainability agenda. The CEO's personal motivation towards this direction also has a positive contribution.

At global level, P&G has established a steering group which acts as a Global Sustainability Board and a Global Product Supply Officer. At local level, no dedicated sustainability departments are present, however sustainability is integrated in all levels and in each employee's function. The content of the sustainability report is decided by the business groups. P&G uses a bottom-up approach for implementing sustainability improvements, and a top-down approach for planning the company's strategy.

At P&G, great importance is given to stimulating its people to come up with ideas and providing them with the appropriate tools. Employees are given the incentive to see where they can make changes, increasing their motivation levels. An example of such an initiative is the wind turbine that was built at the company's facilities in Coevorden, the Netherlands. Such decisions are made in the business organisation and do not require the approval of the CEO. Other initiatives, such as organisation of voluntary work during working hours, form part of the employees' personal evaluation and are included in their working development plan.

4.3.2.2 Strategy/vision and trends

P&G's mission statement integrates the company's drivers to improve its sustainability performance. Improving consumers' lives 'for now and the generations to come' through the company's products and services can lead to leadership sales, profit and value creation. As a result, employees, shareholders and the communities in which they live and work can also prosper (Procter & Gamble website). The impact of the company's products and activities on the world is measured, and possible actions are investigated in order to develop sustainable innovations that improve the environmental profile of its products and operations. Governmental and societal influences also constitute important drivers, as well as P&G's responsibility towards society. P&G is one of the front-runners in sustainability, thus it also sets the example for other companies. Besides improving its environmental performance, P&G has social responsibility programs in place, such as those aiming at improving children's lives.

4.3.2.3 Stakeholder engagement

P&G builds relationships with all the parties that contribute to fulfilling its Corporate Purpose. This includes customers, suppliers, universities and governments. Co-operation with stakeholders is done in a transparent way in order to enable continued freedom to innovate in a responsible way. For example, the company has a special website called 'Connect & Develop' which allows external relations like suppliers and universities to post sustainability ideas.

4.3.3 Policy and practice

4.3.3.1 Environmental policy

P&G has performed LCA's for all its product lines, and the results are used in order to apply respective improvements. Product design focuses on reducing waste as much as possible; for example, fat and cooking oil used in Pringles manufacturing is later sold for biodiesel. P&G does not have factories in the Netherlands for their main businesses, therefore logistics has the largest environmental impact. Together with local supermarkets, P&G tries to reduce that impact. Environmental and social issues that the company focuses on are written in the 'Sustainability Guidelines for Supplier Relations', and form part of the contract with suppliers and contractors. Besides these guidelines, P&G introduced the Supplier Environmental Sustainability Scorecards in 2010, which aim at offering further help to suppliers. Suppliers fill in the scorecard themselves, and this gives them an overview of their position, improvement points and targets to be set.

4.3.3.2 Social policy

Social sustainability is also part of the 'Sustainability Guidelines for Supplier Relations' and forms part of the suppliers' contract. Suppliers have to report to P&G, and audits are performed. Further checks are performed when relevant (high-risk or new suppliers). Audits are performed by P&G or third-party auditors.

4.3.4 Supply chain management

4.3.4.1 Supply chain upstream

The purpose, values and principles of the company serve as the foundation of the 'Sustainability Guidelines for Supplier Relations'. Building longer-lasting relationships with suppliers holds an importance place for P&G.

The most effective instrument directed at the upstream supply chain is to incorporate these guidelines in the contract with the suppliers and to perform audits. These audits can be periodic performance assessments and/or technical visits, and they can be performed by P&G or a third party. In addition, audits can help identify areas of improvement.

Communication between the company and the suppliers is also integrated in the business group that buys the materials and is in contact with suppliers. For this reason, training of both purchasing personnel and suppliers is required. For instance, purchasers receive training on the supplier guidelines and how to conduct supplier assessments. Integration of sustainability into the purchasing procedure is also part of their curriculum. Also, there is a special website dedicated to suppliers, where they can receive training. Each supplier receives training on how to use the website and guidance. The focus is placed on direct suppliers, although some attention is also paid to second-tier suppliers depending on the type of material. The results from supervision procedures and audits are not made public.

In 2010, P&G started using another relevant instrument: the Environmental Sustainability Supplier Scorecard. As already mentioned, the scorecard is filled in by the suppliers. It helps them track their own environmental performance and encourages appropriate improvements. It also aims at improving collaboration across the supply chain and promoting sustainable innovation. In 2011, scorecards

became mandatory for suppliers to complete; the results form part of a supplier's rating and affect its ability to do further business with P&G (Procter & Gamble, 2011b).

In case suppliers need to improve their sustainability performance, P&G offers training and checks their improvement plan, while trying to have a neutral effect on the cost. One such example is the supply of palm oil; P&G invested in educating suppliers on sustainable forestry, which can have a longer-term positive impact in their sustainability performance. However, in case suppliers do not accept the company's sustainability criteria, they are disqualified for new and on-going supply agreement.

4.3.4.2 *Supply chain downstream*

In order to reduce the environmental impact of its products in the downstream supply chain, P&G focuses on reducing customer waste by reducing the amount of packaging and making packaging easier to enter the waste streams (e.g. packaging made from one material). With regards to waste management, P&G has also performed research on composting diapers. Although the idea proved to be possible, the Dutch government did not support this idea due to the difficulties in changing consumers' behaviour. 'P&G Future Friendly' is a programme that is designed to promote environmental responsibility and consumer conservation education. This programme focuses on showing consumers how to save water, waste and energy at home while using the company's products. P&G also works together with NGO's on campaigns to change consumer behaviour. Such an initiative is the campaign for washing clothes at lower temperatures. Finally, P&G has developed an action together with UNICEF so that for each pack of diapers sold UNICEF receives the funds for tetanus vaccin.

4.3.5 *Success factors and main barriers*

P&G has not faced significant barriers in implementing the aforementioned strategies and instruments in order to integrate sustainability in its supply chain. On the other hand, there are several factors that have contributed to the success of this process. For example, P&G owns a large part of the supply chain and does not regularly use contract manufacturers for the production of its products. With regards to employees' contribution to sustainability performance, integrating sustainability throughout the whole business has also brought positive results. Sustainability performance is included in the employees' personal evaluation and working development plan. Finally, using marketing campaigns (e.g. washing clothes at lower temperatures) as a means of improving the company's sustainability performance downstream in the supply chain has also returned positive results.

4.3.6 *Conclusions*

P&G is one of the leading companies in the field of integrating sustainability in the supply chain. Top management commitment is necessary in order to define the purpose and principles of the company and determine the focus areas of the sustainability agenda, and all business groups are involved in developing the content of the sustainability report. Sustainability is integrated within the whole company, and forms part of each employee's function and evaluation.

The main drivers for P&G's commitment to sustainability are leadership sales, profit and value creation, while improving people's lives 'now and for generations to come' (Procter & Gamble website). Also, governmental and societal influences, as well as P&G's responsibility as a leader in sustainability, drive improvement actions in the company's sustainability performance.

The strategies that P&G uses in order to integrate sustainability in its supply chain involve both supplier management for risks and performance and supply chain management for sustainable products.

In the upstream supply chain, P&G's strategy aims at building longer-lasting relationships with its suppliers. P&G incorporates its Sustainability Guidelines for Supplier Relations in the contracts with suppliers, and uses scorecards to track and encourage improvements in its suppliers' environmental performance. Supplier audits and appropriate training for purchasing personnel and suppliers are also used.

With regards to reducing the environmental impact of its products in the downstream supply chain, P&G invests in developing sustainable innovations and reduce the amount of packaging in its products. Also, P&G has launched marketing campaigns ('Future Friendly' program) and co-operates with NGO's in order to change people's behaviour towards sustainability.

P&G has not faced significant barriers in implementing its sustainability agenda in the supply chain. Part of the company's success is that it owns a large part of the supply chain, ensuring better sustainability performance throughout the product lifecycle. Also, employee's contribution to this effort has been significant. Finally, marketing campaigns for consumers have proven helpful in targeting sustainability performance downstream in the supply chain.

4.4 Koninklijke Ahold N.V. (Retail/Consumer goods)

4.4.1 *Introduction to the company and its activities*

Ahold is an international retailing group based in the Netherlands, with local consumer brands operating in Europe and the United States. Its main operations lie within food retailing, although health and beauty care products are also included in its brand portfolio. Ahold's core business is supermarkets, but other retail formats, such as online shopping, are also available. At the end of 2011, Ahold had about 3.000 stores and employed around 218.000 employees world-wide (Royal Ahold, 2012a; Royal Ahold website).

Ahold is a public company and is managed by a Corporate Executive Board (CEB), which is supervised and advised by a Supervisory Board. Both boards are accountable to the General Meeting of Shareholders. Ahold's businesses are operated from two continental platforms – Ahold Europe and Ahold USA. However, the Group's strategy and business supporting functions are responsibility of the Corporate Centre (Royal Ahold website).

Ahold's supply chain management differentiates between suppliers and contractors (or 'not for resale' suppliers). So far, the group has built strategic partnerships with certain suppliers, however the intention is to expand strategic partnerships in the supply chain in the future.

Responsible retailing is one of the six strategic pillars in Ahold's strategy for the period leading to 2015; in 2010, the Group revised its Corporate Responsibility (CR) strategy, which now includes clear and measurable targets for each of the priority areas. Ahold's aim is to embed sustainability in all its businesses and, engage its employees in realising the Group's CR strategy (Royal Ahold website). Ahold's ambition is to contribute to creating a 'healthier and more sustainable future for generations to come', while securing the longevity of its business (Royal Ahold, 2012b).

4.4.2 Strategy and vision

4.4.2.1 Management commitment

Management commitment to sustainability is of great importance to Ahold's plans to integrate sustainability in its supply chain. The CEO of Ahold, Dick Boer, is himself a sustainability champion and his vision, when still working for Ahold Europe, was to achieve 100% sustainably-sourced products for Ahold Europe's own-brand product portfolio.

Both the CR department and Product Integrity (PI) department report to the CEB through the Chief Corporate Governance Counsel and member of the Board, Lodewijk Hijmans van den Bergh. The CR Steering Committee oversees CR within the organisation – it is formed by senior representatives from each of the group's companies and is chaired by van den Bergh. The CR Management Committee is chaired by the Vice President CR and co-ordinates the daily CR activities, together with people responsible for CR at each of the operating companies. At each company, CR responsibilities are designated to specific employees (Royal Ahold website). Therefore, Ahold's sustainability strategy is decided by the CR department globally, and it is implemented locally within the group's companies. The PI department is responsible for developing specific policies and guidelines on all issues related to the pillar of Sustainable Trade. Implementation of sustainability strategy in the supply chain is a combined effort of the quality, purchasing and commercial departments for each product category.

4.4.2.2 Strategy/vision and trends

Since 2011, Ahold's vision is to provide all its stakeholders with 'better choice, better value, better life, every day'. The group's strategy to reshape retail is based on 6 strategic pillars aiming at creating and enabling growth: increasing customer loyalty, broadening offering, expanding geographic reach, simplicity, responsible retailing and people performance (Royal Ahold website).

Following trend analysis, the group identified 5 priority areas for its CR strategy, affecting different stakeholder groups: healthy living, sustainable trade, climate action, community engagement and the group's employees. Ahold wants to operate as the 'responsible retailer' in all its markets, and has set clear, measurable goals for the period 2010-2015 for each of the priority areas. These areas were selected close to Ahold's business, where the group's CR strategy can make a difference (Royal Ahold website). Sustainable trade is the priority area targeting directly at supply chain management; Ahold's ambitions are to source safe and responsible products, and reduce the footprint of its supply chain/sourcing of products (Royal Ahold, 2012b; Royal Ahold website).

From a stakeholders' perspective, suppliers form a very important stakeholder group for Ahold. Therefore, it makes sense for the company to include them, when investigating improvements in its sustainability performance within the supply chain. Other drivers to improve sustainability performance within the supply chain for Ahold are risk management, reputational damage, improving efficiency and overall performance of its supply chains, and also ensuring the supply of high-quality products now, as well as 20 years from now. This mainly concerns the supply of fruit, vegetables and tropical commodities (including coffee, tea, cocoa, palm oil, spices, soy, seafood); the risk of not having high-quality products available for sale in the future requires more strategic approach in order to assure the business' activities. Pressures from external stakeholders constituted a driver mainly in the past; nowadays, integrating sustainability in the company's supply chain is more a business-case matter.

4.4.2.3 Stakeholder engagement

The key stakeholder groups for Ahold are customers, employees, suppliers, communities, NGOs and shareholders (Royal Ahold, 2012b). Ahold wants to have an active, contributing role to society, and support the communities in which it operates. Ahold also co-operates with other retailers, and participates in several initiatives, such as the Sustainability Consortium and the Round Table on Responsible Soy (RTRS), in order to promote and facilitate improvements in its suppliers corporate responsibility performance. For example, Ahold is currently working with relevant stakeholders in the Global Social Compliance Programme (GSCP) on creating benchmarks for environmental and social performance standards, similar to the Global Food Safety Initiative (GFSI) standards for food safety. In addition, the Albert Heijn Foundation works with several strategic fruit and vegetable suppliers, in order to support the local community in several countries and improve the life for suppliers and workers.

4.4.3 Policy and practice

4.4.3.1 Environmental policy

Ahold currently has short-term targets on food safety and social compliance in the supply chain, and a long-term environmental target. However, the group has several environmental policies in place, in order to reduce the footprint of its operations and improve the environmental profile of its own-brand products. The group endeavours to make its operations more environment-friendly by recycling cardboard and plastic, and encouraging its customers to do the same. Ahold tries to incorporate climate-saving characteristics to the design of its stores and distribution centres, and make them more eco-efficient. Such solutions include installing more efficient heating and cooling systems, environment-friendly lighting systems (e.g. LED lighting, skylight windows), placing glass doors to wall fridges and using renewable sources of energy. Also, efforts focus on reducing emissions throughout the transport network, as well as the number of shopping bags used by customers by no longer making them freely available at the checkout. Finally, the group works towards sourcing its own-brand products more sustainably, focusing mainly on fruit, vegetables and 'critical commodities' (tea, coffee, cocoa, palm oil, soy and seafood) (Royal Ahold website). Currently, performing product LCAs for the company's own-brand products is still at pilot phase, and a hotspot-based approach (both environmental and social) is the most attractive solution for Ahold at this stage. As

an active member of the Sustainability Consortium, Ahold participates in an initiative to combine all available LCA tools into one tool, and simplify the sustainability assessments of its products.

4.4.3.2 *Social policy*

Ahold's ambition is to actively contribute to the wellbeing of the communities it serves. The group's target is for each operating company to have a community engagement and a CR employee program in place. Employees are encouraged to lead a healthy lifestyle, support sustainable trade, contribute to the group's climate actions and engage in the community (Royal Ahold, 2012b). Ahold's social policies regarding its suppliers mainly focus on working conditions, which also encompasses Health & Safety issues. In addition, community engagement is taken into account, as well as more specific standards, depending on the affected community. Social sustainability is measured by auditing or certifying suppliers. Audits are performed by third parties, such as audit companies performing audits against the Business Social Compliance Initiative (BSCI). BSCI is an initiative involving retail companies, and provides questionnaires and manuals to suppliers for auditing purposes; however, its services do not constitute certification or labelling. As a member of BSCI, Ahold pays a membership fee, and suppliers need to pay for the audits. With the exception of certain products and commodities, focus is given on social compliance at the last stage of production; Ahold's target is that all suppliers are compliant with social standards by the end of 2012. Regarding critical commodities (e.g. coffee, cocoa, tea, soy, palm oil and seafood), Ahold works with other stakeholders, such as FairTrade, 'Rainforest Alliance', 'UTZ Certified'⁸, Roundtable on Sustainable Palm Oil (RSPO), Round Table on Sustainable Soy (RTRS), Marine Stewardship Council (MSC) and Aquaculture Stewardship Council (ASC) (Royal Ahold website). In addition, Ahold has founded the 'Albert Heijn Foundation'; its purpose is to work together with strategic suppliers, in order to support local communities in several parts of the world and improve the life of suppliers and their workers.

4.4.4 **Supply chain management**

4.4.4.1 *Supply chain upstream*

Ahold's most effective strategy for integrating sustainability in its supply chain is creating strategic partnerships with its own-brand suppliers, in order to ensure compliance with legal requirements and the group's 'Standards of Engagement'. The company pursues building strong, long-term relationships with its most strategic suppliers, initially focusing on foodstuff suppliers. Long-term contracts and pricing agreements ensure continuous supply of products, and make improvement plans easier to implement. Due to the high number of suppliers, it is not possible for Ahold to cover all areas of its operations. Subsequently, focus has initially been placed on foodstuff suppliers, especially those for fruit, vegetables and 'critical commodities'; all other suppliers will also be included in this process in the future. Creating long-term partnerships can, however, reduce the group's flexibility in cases of non-compliance; in these cases Ahold needs to provide help and support to suppliers in order to make improvement plans possible.

⁸ UTZ CERTIFIED is one of the largest sustainability programs for coffee, cocoa and tea in the world: one-third of all coffee that is sustainably traded worldwide is certified by UTZ.

Ahold is currently (early 2012) in the process of mapping its own-brand suppliers to the last stage of production where the products are produced or manufactured, using a Supplier Information Management System (Royal Ahold, 2012b). Understanding its supply chain better will increase the traceability of products and facilitate the implementation of a process that monitors and helps manage sustainability issues. However, this process is not complete due to the complexity of Ahold's supply chain, and further development of the system is required (Royal Ahold, 2012b).

All supplier groups (including those for national and own brands) need to comply with the 'Ahold Standards of Engagement' and with (inter)national labour legislation and social standards for their employees. Depending on the commodities, second-tier suppliers are also requested to comply with the 'Ahold Standards of Engagement' regarding labour conditions. Contractors are excluded from some sustainability targets, and no audits are performed.

The main areas that cover Ahold's Standards of Engagement with suppliers are legal compliance and social responsibility. Regarding food safety, Global Food Safety Initiative (GFSI) certification is a prerequisite for foodstuff suppliers. With regards to Genetically Modified Organism (GMO) issues, Ahold's requirements are based on local legislation. Social sustainability performance of suppliers is evaluated based on BSCI's auditing scheme or an equivalent program (currently several other programs are accepted by Ahold as equivalent). Focus is placed on the last stage of production for non-food and processed food products, and throughout the entire upstream supply chain for fruit, vegetables and 'critical commodities'. Regarding 'critical commodities', Ahold endeavours to use sustainably-sourced commodities that are certified against 3rd party standards (e.g. UTZ CERTIFIED, Rainforest Alliance and Fairtrade certified coffee, cocoa and tea, Marine Stewardship Council (MSC) certified wild fish, Aquaculture Stewardship Council (ASC) certified farmed fish and sustainably-sourced soy certified from the Initiative for Sustainable Soy) (Royal Ahold website). As mentioned previously, Ahold is also involved in creating benchmarks for environmental and social performance standards, similar to the GFSI standards for food safety, together with other stakeholders. The aim is to align methodologies used for applying standards and performing audits, and therefore increase transparency and credibility with regards to auditing and certification procedures.

Communication with suppliers is performed locally through Ahold's purchasing personnel in each of the group's companies. Depending on product category, the market and the supply chain structure in place, communication with suppliers is done directly or via traders. For example, in Europe Ahold involves first-tier suppliers of fruit and vegetables in the communication process, but is also in direct contact with the farmers. In the United States, on the other hand, communication with farmers is done mainly via traders. The information is, then, passed on to the quality department, where decisions regarding compliance are made. This ensures transparency in the decision making process, as purchasers are in direct contact with the suppliers, thus less objective.

Ahold works together with partners and other retailers in order to help suppliers with appropriate training and certification procedures. For example, Ahold asks all its suppliers to participate in training workshops organised by BSCI. The workshops are organised free of charge for suppliers. Also, Ahold uses internal expertise in order to provide training and support to fruit and vegetable suppliers. Currently, the

educational coverage of suppliers is about 20-30%. The highest potential for increasing supplier training coverage lies in suppliers in China; following the supplier identification and mapping process that Ahold has undertaken, the number of suppliers receiving training is expected to rise.

Since sustainability strategy and targets are decided centrally and implemented locally, it is important that sustainability is embedded within the whole of the organisation. Purchasing personnel and quality departments are directly involved in implementing sustainability requirements when dealing with suppliers, therefore appropriate training and workshops are organised for these groups, as well.

With regards to non-compliance cases, Ahold distinguishes between minor issues and unacceptable non-compliances ("deal-breakers"). Minor issues are dealt with by implementing improvement plans and providing support to the suppliers. Cases of child labour, forced labour and refusal to co-operate on behalf of suppliers form Ahold's three 'deal-breakers' with suppliers. At first, suppliers are suspended, and time is given to plan and implement improvement actions; if improvement is successfully demonstrated, then continuation of the contract is pursued. However, cases of non-compliance are never 'black or white', therefore, each situation is investigated separately. The type of supplier (e.g. small-holder family farm or large corporation) and the importance of the incident is taken into account. The final decision is part of the dedicated quality department's responsibilities for each product category.

In the past, results from audits and certification processes were not made public due to lack of relevant information and the subsequent risk of jeopardising credibility. However, since Ahold started mapping its supply chain, monitoring and evaluation of the compliance status of its suppliers has been made easier. Relevant information has started to become available via the company's publications, especially regarding the social performance of its suppliers, as well as cases of non-compliance.

4.4.4.2 *Supply chain downstream*

Ahold's approach to managing sustainability issues in the downstream supply chain is based on its internal approach not to make promises or claims that it cannot keep or fulfil, and communicate in a transparent manner, not only about the progress made, but also about challenges (in other words, to "under-promise and over-deliver"). For example, marketing and communication efforts aimed at improving sustainability performance in the downstream supply chain are not very detailed. The commercial departments of Ahold conduct research on ways to engage consumers, and investigate how its customers respond to the company's sustainability initiatives. Communication to consumers regarding sustainability issues is also done via the company's free-of-charge publications that are available in its retail locations. In the future, the company plans to communicate more on its performance and relative initiatives, such as the 'Albert Heijn Foundation'.

The company mainly focuses on providing its customers with the choice of purchasing sustainable solutions, such as the 'AH puur & eerlijk' ('pure & honest') product line offered in the 'Albert Heijn' stores in the Netherlands. Ahold Europe has a programme in place focusing on improving the sustainability of ingredients identified as having potential adverse effects on the environment or the society, and reducing the environmental impact of packaging and its supply chain (Royal Ahold, 2012b). Effort is put into ensuring that the available sustainable options are

presented to the consumers in a clear and understandable manner. For example, Ahold has launched a campaign for appropriate labelling on its own-brand products with regards to recycling instructions and logos.

In 2011, Ahold established waste management programmes for each of its operating companies (Royal Ahold, 2012b). For example, Ahold has set zero landfill targets for its operations by 2020. One of the tools addressing this goal is the '35% discount' stickers on products which need to be stickered in time for the consumer to buy them. In addition, making packaging more waste efficient forms part of Ahold's targets related to offering more sustainable products to the consumers. Also, Ahold tries to reduce the shopping bags used by its customers by no longer making them available for free at the checkout points (Royal Ahold website). Recyclable/reusable waste collecting schemes are generally organised at a local level, are very much based on local legal frameworks and depend on government decisions.

4.4.5 Success factors and main barriers

The main success factors contributing to Ahold's sustainability performance within its supply chain is achieving transparency (knowing the company's supply chain/mapping of suppliers), commitment and consistency (in carrying the message from top management, throughout the organisation, and finally to the purchasers), and managing expectations by communicating in a clear manner with the company's stakeholders.

One of the big challenges that Ahold and its suppliers face is the duplication and/or diversity in the requirements that different retailers request from suppliers. For this reason, Ahold is currently working with relevant stakeholders in creating benchmarks for standards. Another barrier in this process is getting all the relevant stakeholders involved, especially when it comes to including sub-contractors and second-tier suppliers. Finally, in the current economic climate, there is a risk that suppliers might turn to less demanding customers/markets with less requirements, jeopardising Ahold's ability to provide its products to consumers. For this reason, Ahold invests in strategic partnerships, and long-term contracts and pricing agreements with its suppliers, as mentioned earlier.

4.4.6 Conclusions

Responsible retailing is one of Ahold's main strategic pillars for the period 2010-2015, focusing on 5 priority areas. The group has set clear, measurable targets for each priority area, and top management commitment plays a very important role in achieving them. Sustainable trade is one of the CR priority areas for Ahold, involving safe and responsible sourcing of products and reducing the footprint of the group's supply chain.

The drivers for Ahold's commitment to embed sustainability in its supply chain are risk and reputational damage management, improving efficiency and overall performance in its supply chains, as well as maintaining the quality of its business. Ahold considers suppliers as very important stakeholders, and integrating sustainability in the supply chain can ensure continuous supply of high-quality products for Ahold's customers. In the past, external pressure was one of Ahold's drivers towards sustainability, but nowadays it is more of a matter of securing the longevity of the business.

The strategies and instruments that Ahold uses in order to integrate sustainability in its supply chain involve both supplier management for risks and performance and supply chain management for sustainable products. For the latter, Ahold mainly focuses on reducing impact of sourcing its own-brand products, although communication to customers and waste management issues are also taken into consideration. Life Cycle Analysis of Ahold's own-brand products is still at a pilot phase.

Ahold recognises the creation of strategic partnerships with suppliers as the most effective instrument for integrating sustainability in its supply chain. Mapping its suppliers contributes to better understanding and more efficient monitoring of the supply chain. Suppliers and contractors need to comply with 'Ahold Standards of Engagement', and third-party certification and auditing schemes are used for all direct suppliers in high-risk countries and for 'critical commodities'. Quality and purchasing departments are involved in the selection and auditing of the group's suppliers, and they receive appropriate sustainability training. Training and support is also provided to suppliers, using Ahold's internal expertise, as well as in collaboration with other retailers and stakeholders. Minor non-compliance cases are dealt with implementing improvement plans, whereas cases of 'deal-breakers' are tackled with suspension, planning and implementation of improvement actions and re-evaluation. Refusal to co-operate leads to termination of the contract. Audit and certification results, as well as 'non-compliance' cases are made public.

With regards to integrating sustainability in the downstream supply chain, Ahold focuses on offering the choice of sustainable product solutions to its customers, for example in terms of sustainably-sourced ingredients and waste-efficient packaging. Sustainability issues are communicated to customers via the group's publications and by using appropriate labelling on its own-brand products. In addition, ways to engage consumers in sustainability and their response to the group's sustainability initiatives are investigated. Waste management schemes have also been established in Ahold's companies, including long-term zero landfill targets for its operations, and recycling and reuse programs organised locally.

The factors leading to Ahold's successful integration of sustainability in its supply chain are knowing the company's supply chain, transparency, commitment to sustainability and consistency in carrying the sustainability message within the whole organisation, as well as managing stakeholders' expectations. Barriers in this process have been the duplication and/or diversity of requirements among retailers, and getting all relevant stakeholders involved in sustainability. Also, the current economic climate poses the risk that suppliers will prefer to work with less demanding – in terms of sustainability requirements – retailers.

4.5 Unilever⁹ (Food, Personal Care and Home Care)

4.5.1 *Introduction to the company and its activities*

Unilever is a company providing branded products for the Food, Personal Care and Home Care markets in more than 180 countries world-wide. The company's product portfolio is divided in 4 categories: Foods, Refreshments, Personal Care and Home

⁹ Additional information sources used for the purpose of this case study: 'Sustainable Development Overview 2009: Creating a better future every day', 'Inspiring Sustainable Living – Expert Insights into Consumer Behaviour & Unilever's Five Levers for Change' (Unilever, 2010a; Unilever, 2011)

Care. Unilever was established in 1930, although the companies that merged in order to create the company in its current form had been established during the second half of 19th century. At the end of 2010, Unilever employed about 167.000 employees (Unilever website).

Unilever's ambition is to double its sales, mainly, through volume growth and, partly, through acquisitions. 53% of Unilever's sales comes from emerging markets, therefore more and more focus is given on consumers in the developing countries.

However, part of Unilever's core strategy is to decouple growth from environmental impact. The "Unilever Sustainable Living Plan" represents the company's global commitment to its sustainability targets, and looks at the entire supply chain. For Unilever, supply chain includes both services and raw material suppliers, and takes into account the consumer use phase of the product lifecycle.

Unilever has been one of the leaders in integrating sustainability in its operations. Even before developing the "Unilever Sustainable Living Plan", sustainability formed part of the company's principles. Examples include the global leading "Unilever Sustainable Agriculture" initiative (since 1997) and the full integration of sustainability in R&D and the management of the company and its production sites (also driven by cost savings). Also, Unilever has been nominated Food Producers sector leader in the Dow Jones Sustainability Indices for the last 13 years (Unilever).

4.5.2 Strategy and vision

4.5.2.1 Management commitment

Strong management commitment is evident within Unilever's sustainability strategy and vision, and is expressed via the "Unilever Sustainable Living Plan". The CEO's (Paul Polman) personal motivation and vision is a major driver to move the company's sustainability targets to a next level with the Uniliver Sustainable Living Plan. The Committee for Corporate Responsibility and Reputation within Unilever's Board is responsible for reviewing the progress of the Plan. The Unilever Executive is led by the company's CEO and monitors delivery every quarter. Also, a senior executive leads each of the main elements of the Plan and is accountable for achieving the goals by their target dates (Unilever, 2010b).

There is a dedicated Global Sustainability Team that works towards the company's sustainability targets. Other Uniliver sustainability groups are the Sustainable Agriculture Steering Group, the Sustainable Procurement Team, LCA and environmental specialists and research centres. In addition, there is global Unilever Sustainable Development Group (USDG), which is an external independent panel formed by five external specialists in corporate responsibility and sustainability who provide Uniliver with a guide and critical view over their sustainability strategy.

This global effort covers the entire supply chain (involving all brands in all 180 countries), and the whole organisation is committed and acts towards that direction. The sustainability plan covers the company's activities on a global scale, but it is also built based on input from all the regions and categories. Local initiatives are also part of the sustainability agenda, however they are mostly decided at regional level.

4.5.2.2 *Strategy/vision and trends*

Unilever considers itself a leader in sustainability; sustainability is integrated in the company's strategy, and it extends beyond corporate responsibility.

Unilever's ambition to double its sales is planned mainly through volume growth, and partly through acquisitions. Embedding sustainability in business processes is seen as the means to reach the company's ambitious targets for growth, as well as the only viable long-term business model. Besides this, Unilever feels the responsibility to have a social function in society, and use the power of business to create social added value, while minimising environmental impact. Considering itself as one of the leaders in integrating sustainability in the supply chain, Unilever also feels the responsibility to act as an example for other companies that have started or stand at the beginning of such a process. Pressures from the media and NGOs (e.g. Greenpeace's actions against Unilever in 2007 regarding palm oil) constitute a less significant driver, since the real drivers for the company are related to business sense, creating welfare and acting as an example for other companies.

With the development of the "Unilever Sustainable Living Plan", the company aspires to take its sustainability performance to the next level by setting over 50 concrete targets. This plan constitutes a global commitment on behalf of the company with 3 key global objectives by 2020: help improve the health and well-being of more than 1 billion people, reduce the environmental impact of its products, and enhance the livelihoods of hundreds of thousands of people in its supply chain. Decoupling growth and environmental impact is part of Unilever's core strategy, therefore, the company works towards reducing impact across the whole lifecycle of its products. Since sourcing raw materials and the consumer use phase have the largest footprint, halving the environmental impact both at product and consumer use level is one of the company's main goals.

4.5.2.3 *Stakeholder engagement*

Unilever acknowledges the need to act globally and include all relevant stakeholders, when dealing with sustainability issues. For example, Unilever was one of the initiators and founders of "Roundtable on Sustainable Palm Oil" (RSPO), a coalition of businesses and NGOs promoting the use of sustainably-sourced palm oil. Also, Unilever participates in several global partnerships, such as the UN World Food Programme, the World Heart Federation, the Global Alliance for Improved Nutrition, the FDI World Dental Federation, and the Public-Private Partnership for Handwashing with Soap (PPPHW). Acknowledgement of Unilever's contribution from external stakeholders is indicative of the impact that the company has on sustainability issues (e.g. WWF the Netherlands Business Award in 2010). Other external stakeholders, such as Greenpeace, periodically target Unilever's activities regarding sustainability. The reason is that they are aware that their actions can be successful due to Unilever's performance and commitment in terms of sustainability.

4.5.3 ***Policy and practice***

4.5.3.1 *Environmental policy*

Over the last 15 years, Unilever has made significant improvements in its eco-efficiency. Together with NGOs, customers and other partner organisations, Unilever participates in programmes and commitments to address each stage of the

value chain. LCA is one of the techniques that Unilever uses in order to understand the environmental impact of its products (Unilever website). Sourcing of raw materials (especially agricultural raw materials) and the consumer use phase have been shown to have the biggest environmental impact across the product lifecycle, and this is where Unilever's environmental policies and practices mainly aim. Unilever's ambition is to purchase all key crops from sustainable sources by 2020; as an example, the company already uses 100% Certified Sustainable Palm Oil (CSPO) in Europe. Regarding the consumer use phase, improvement efforts focus on developing environment-friendly products and changing consumer behaviour. For example, Unilever has launched a behaviour change campaign (Cleaner Planet Plan) that aims at educating consumers on how to do laundry in a resource-efficient way.

4.5.3.2 *Social policy*

Social sustainability is also part of the "Unilever Sustainable Living Plan", and it addresses issues both in the developing and the developed world.

For example, one of Unilever's commitments is to link more than 500.000 smallholder farmers and small-scale distributors into its supply chain by 2020. This way, Unilever can secure supply of key raw materials, and also improve the livelihoods of these people and their families. Unilever aims at overall development by supporting, educating and including rural people in the supply chain. These actions can contribute to poverty alleviation and tackling malnutrition, which can lead to wealth increase and, therefore, more consumers for Unilever's products.

Other commitments involve the promotion of health and well-being (e.g. DOVE campaign and self-esteem, LifeBuoy programme and importance of handwashing) and improving the nutrition habits of Unilever's customers (e.g. reduction of fat, sugar and/or salt content in food products). The financial crisis in Europe also raises alarming issues for Unilever; poverty becomes a problem again, therefore Unilever needs to adapt to the changing needs of the population.

4.5.4 *Supply chain management*

Considering the environmental impact of its products across their lifecycle, Unilever came to the conclusion that sourcing raw materials and the consumer use phase are together responsible for about 90% of Unilever's Greenhouse Gas (GHG) emissions. Therefore, efforts within supply chain management are mainly focused on improving sustainability performance in these two stages.

4.5.4.1 *Supply chain upstream*

The upstream branch of the supply chain for Unilever includes both service and raw material suppliers. Supply chain management policies mainly focus on raw material suppliers. Unilever has been developing plans towards using sustainably-sourced non-agricultural materials (mainly chemical), although the main focus lies in agricultural raw materials. These materials constitute the core of the business and account for the greatest part of the environmental impact in the upstream supply chain. One of Unilever's main commitments for the future is to use 100% sustainably-sourced agricultural raw materials. The challenge in this commitment is that it involves a rather complex process for about 20% of these raw materials, due

to the small volumes purchased and the company's weak market leverage. Therefore, co-operation with relevant stakeholders is crucial.

Unilever's strategy aims at improving practices within the agricultural sector, in order to help farmers work more efficiently and increase their yields. The instruments and practices Unilever uses in order to achieve its goals are based on working closely with suppliers and supporting them in implementing improvement plans. Second-tier suppliers are also included in this process by stimulating first-tier suppliers to work with farmers towards the same direction. The approach used in each case depends on the situation and the crop targeted. In some cases, when challenging financial structures to fund changes prevail in a specific area, tailored solutions are facilitated from Unilever, such as a loan system (e.g. tomato suppliers in Brazil).

One of the tools developed by the company is the "Unilever Sustainable Agricultural Code". It is a detailed guideline for agricultural best practice and consists of 11 indicators. It is also accompanied by online self-auditing software for suppliers and farmers. Support is also provided via external agencies and consultants, organisations and/or local partnerships. For certain commodities, external certification agencies are used, such as Rain Forest Alliance (e.g. for tea and cocoa) and Fair Trade (for Ben & Jerry's ingredients such as cocoa, sugar, vanilla, nuts and fruits).

Unilever has been at the forefront of sustainability for the last 15 years, and implementing these principles within the company's supply chain is an exercise that no company had done before. As a result, there has been difficulty in the commitment of suppliers to Unilever's sustainability targets in the past. Unilever's basic criteria for suppliers include continuous improvement, balance among people, planet and profit and, finally, auditing certifications. Cases of non-compliance are carefully considered, and unless continuous improvement is demonstrated, the supplier is delisted.

4.5.4.2 *Supply chain downstream*

Realising the impact of the consumer use phase was an 'eye-opener' for Unilever; for many products consumers account for 70% of the company's GHG footprint. For the company, this meant that efforts needed to focus on reducing environmental impact of consumer behaviour. Unilever's approach to this challenge has two sides.

On one hand, R&D aims at developing products that help customers reduce their impact, for example detergents that require lower washing temperatures. In addition, different product specifications are introduced, suited at each market's needs, such as fortified foodstuff for developing countries, or fabric conditioners that require one rinse rather than three for water-scarce areas.

At the same time, consumers need to be educated, so that they not only buy the right products, but also use them in the right way. One such example is the "Cleaner Planet Plan" that has been launched, in order to promote doing laundry in a more resource-efficient way (e.g. at lower temperature, using the right quantity of detergent, using shorter wash-cycles). Another aspect of educating consumers covers the great number of people in developing countries that are expected to come out of poverty, and improve their living standards in the coming years. Benefiting from last-mover's advantage, it is important for Unilever to teach them

the right consumer habits from the start and avoid making the same mistakes as in the developed world.

4.5.5 Success factors and main barriers

In the past, the main barrier in implementing the company's strategies and instruments was achieving real commitment. This was especially due to the extra investments that were necessary in the beginning of such a transition (e.g. certification schemes), and it was difficult to have commitment of suppliers. True commitment had been a barrier before 2010, but now the commitments in "Unilever Sustainable Living Plan" have set clear targets and road-maps for the company.

Unilever's success factors in incorporating sustainability in its supply chain can be divided to external and internal factors. External success factors are closely linked to the commitments set out in "Unilever Sustainable Living Plan", such as 100% sustainably-sourced agricultural raw materials by 2020. In this direction, Unilever uses internal guidelines (e.g. Unilever Sustainable Agriculture Code) or external certification schemes (e.g. Fair Trade, Rainforest Alliance) for the supply of agricultural raw materials. Internal success factors include the employee engagement program that aims at full integration of sustainability in all activities. Control of performance and improvements is essential to ensure that action plans are formulated at each level. In this process, representation of all functionalities (areas, brands, factories) also plays an important role.

4.5.6 Conclusions

Sustainability is integrated in Unilever's strategy, extending beyond corporate responsibility. Strong management commitment and the CEO's personal motivation for sustainability provide a framework that facilitates monitoring and reviewing Unilever's progress in terms of its sustainability performance on a global scale. However, input from all the regions and categories is necessary. The company cooperates with other stakeholders, in order to address each stage of the value chain. Unilever's impact along the supply chain considers both services and raw material suppliers in the upstream supply chain, and consumers in the downstream supply chain.

Unilever's main drivers for improving its sustainability performance are the personal motivation of the company's CEO, achieving its growth targets by applying a viable long-term business model, and Unilever's responsibility to create social welfare, minimise environmental impact and act as an example for other companies.

Unilever's strategy for integrating sustainability in its supply chain involves instruments aimed at both supplier management for risks and performance and supply chain management for sustainable products. Unilever's ambition is to double its sales, while decoupling growth from environmental impact by reducing impact across the product lifecycle. To facilitate this, Unilever uses techniques such as product LCA.

In the upstream supply chain, instruments target mainly suppliers of agricultural raw materials, as they constitute the core of Unilever's business. The basic criteria for its suppliers are demonstrating continuous improvement in sustainability performance, balance between people, planet and profit and auditing certifications. In general, the company pursues co-operation with relevant stakeholders in order to

achieve its targets regarding sustainably-sourced agricultural raw materials. Unilever works closely with suppliers, supports their plans to improve practices in the agricultural sector, and stimulates co-operation with farmers (second-tier suppliers). In certain cases, tailored solutions can be provided to suppliers and farmers, such as loaning systems. The “Unilever Sustainable Agricultural Code” provides a detailed guideline for agricultural best practice, and is accompanied by on-line self-auditing software for suppliers. Support via external agencies and consultants, organisations and/or local partnerships can be provided to suppliers, while for certain commodities external certification agencies are used. In the downstream supply chain, Unilever works towards developing products that help consumers reduce their impact, and educating them on buying the right products and using them in the right way.

Unilever’s success in this effort lies in the “Unilever Sustainable Living Plan” which has set clear sustainability targets for the company by 2020. Using internal guidelines or external certification schemes for its suppliers contributes to achieving the company’s commitment to 100% sustainably-sourced agricultural raw materials in the future. Internally, the employee engagement programme, controlling performance and progress of the company’s action plans, and representation of all functionalities have contributed to integrating sustainability in Unilever’s activities. The main barrier that the company has faced in the past in improving its sustainability performance is achieving real commitment within the company and on behalf of its suppliers, especially due to the additional investment that it involved.

5 Conclusions and discussion

The aim of this study was to understand the drivers, processes and instruments by which focal actors implement and improve sustainability within their supply chain, in order to use this knowledge to help companies improve their sustainability performance. To achieve this goal, first literature review was performed in order to define key topics for improving sustainability in the supply chain. Then, the research followed a multiple case study design to increase the in-depth understanding and comparison of drivers, strategies and instruments, success factors and barriers for implementing sustainability in the supply chain of five frontrunners (focal companies) in the field of sustainability. Document analysis of the external public documents of twenty one companies was used to gather data on practical information on sustainability in the supply chain, and to select companies with best practices to be included in the in-depth interviews for the case studies. The twenty one companies were classified in terms of sustainability integration, using the Bob Willard scale described in this report (Hallstedt et al., 2010). Five companies with integrated sustainability strategy (i.e. at level 4 of the Willard scale) were chosen for the case studies. These companies are Philips, IKEA, Unilever, Procter & Gamble (P&G) and Ahold.

The conclusions from this study are summarised in four sub-chapters, each answering the respective research question set in the beginning of the research.

5.1 Focal company and its networks

Why is it important to include the supply chain in improving the sustainability of a company?

5.1.1 Literature findings

Sustainable development can be seen as a framework for companies and their management for transforming their responsibility for environmental, economic and social behaviour into business practices within the legitimacy of our society (Koplin et al., 2007). In the increasing economic globalisation, businesses rely more and more on outsourcing parts of their activities and processes. Companies function and compete, thus, more and more on a supply chain level, in specific networks with their suppliers and service providers. Focus on supply chains is a step towards broader adoption and development of corporate sustainability.

Two main supply chain networks or relationships between companies and members of their supply chain can be distinguished: companies and the suppliers of certain goods and materials on one hand, and, on the other hand, companies and the contractors and sub-contractors providing specific services, such as maintenance, construction, cleaning or catering services. In relation to sustainability, the majority of the literature does not explicitly distinguish between the two networks.

Supply chain is most often ruled or governed by one company or organisation, so called the 'focal' company. These companies take proactive actions to promote better environmental and social performance to their suppliers and contractors. It is expected that those companies will be leading and setting new standards on sustainable business practice. However, far-reaching chain integration is still rather limited.

5.1.2 Case studies

In all five cases studied (Ahold, IKEA, P&G, Philips and Unilever), sustainability is central in the companies' strategy. In terms of improving sustainability performance, all companies consider reducing impact along the entire value chain, and this includes both sourcing of materials and services and consumer use phase. For all companies, suppliers' sustainability performance is central in achieving their sustainability targets. Therefore, specific strategies and instruments are adopted by the companies orientated at their supply chain.

All five companies consider both suppliers of certain goods and materials and contractors providing services as part of their supply chain. In terms of managing the supply chain, some companies differentiate between the two supply chains (Ahold, Philips, Unilever). For example, services providers of Philips are managed centrally, whereas goods and material suppliers are managed at local operating levels. In terms of sustainability issues, in all five cases both supply chains need to comply with the companies' codes of conduct/guidelines. However, depending on the companies' activities, more focus can be placed on certain supplier groups. For example, Unilever's sustainability strategy focuses more on raw material suppliers, and especially agricultural raw materials, since they represent its core business. Similarly, Ahold places greater importance on product suppliers than 'not-for-resale' suppliers in terms of sustainability performance, since the latter ones are excluded from some sustainability targets. In terms of second-tier suppliers and sub-contractors, differences can be observed not only among the companies, but also within the companies, depending on the product category. For example, Unilever and Philips include second-tier suppliers in the sustainability process by requiring and stimulating first-tier suppliers to work with second-tier suppliers. Ahold, for instance, follows different approach depending on the product category and the market structure; in the case of critical commodities or strategic suppliers, Ahold goes back to the source (often farms). The 'Ahold Standards of Engagement' apply to the location where the products are produced, even if that is not the first-tier supplier.

5.2 Drivers

What are the drivers for focal companies to implement sustainability improvements in their supply chain?

5.2.1 Literature findings

The drivers for a focal company to integrate sustainability improvements in its supply chain are identified and analysed. A great deal of literature discusses the companies motivation to take actions for improving sustainability in their supply chain. In general, those drivers can be grouped under two main categories: pressure and incentives from external groups, and organisational culture and top management leadership. The mentioned triggers are interrelated, and boundaries between them are often hard to ascertain.

Pressure and incentives for sustainability in the supply chain encompass legal demands, customer demands, response to stakeholders, competitive advantages, environmental and social pressure groups, and reputational loss. Top management leadership and support are key drivers and success factors for organisational change and implementation of new programmes, and therefore a prerequisite for integration of sustainability in the supply chain of a focal company.

There is no single driver that can be pointed out as the main motivation for a focal company to take actions, in order to implement sustainability improvements in its supply chain. Some pieces of literature point the pressure from stakeholders as a highly relevant trigger, and other authors argue that market forces are much more relevant. There are numerous ways in which addressing social and environmental problems can provide business benefits to the company. Porter (2011) suggests that the connections between societal and economic progress must be identified and expanded based on the premise that both must be addressed using value principles.

Legal demands are the most frequently mentioned drivers for sustainable supply chain management, and all modes of governmental control and policy recommendations, be it from local municipalities, national or multi-national governments, are of great relevance. International platforms, partnerships with or dependence on international organisations can serve as incentives for companies to further implement sustainability in the supply chain.

Our literature review indicates that companies' initiatives to integrate sustainability in their supply chains have not emerged purely as an answer to legal demands and pressure from environmental and social groups, customers, and other stakeholders, but through a process in which such approaches are shaped by market-based business considerations. Considerable differences can, in this regard, be noticed between sectors and industry types (heavily regulated industries, such as the chemical industry, act in a different context than, for example, the clothing and textile sector). The size of the company and its supply chain is another important factor; for example, local supply chains of small companies can not be compared with large, international supply chains of multinational enterprises. With regards to the latter ones, the OECD (2011) recently published its 'Guidelines for Multinational Enterprises', based on the 'Declaration on International Investment and Multinational Enterprises' which was adopted on 25 May 2011 by 42 adhering governments. This 'Guidelines' publication is the only multilaterally agreed on and comprehensive code of responsible business conduct that governments have committed to promote, and aims – amongst others – to regulate to some extent possible unsafe and/or unhealthy practices in the supply chains of multinationals.

5.2.2 Case studies

In all cases studied, high level of top management commitment to the company's sustainability agenda was demonstrated. CEO commitment and/or involvement of the board of management in sustainability-related issues was present in all cases.

The vast majority of the companies (Ahold, IKEA, P&G, Unilever) regarded integrating sustainability in their supply chain as a business opportunity, and a means to achieve their business goals and ensure longevity of the company's operation. Integrating sustainability in the company's supply chain as a means of protecting the company's brand image also constituted a driver for most of the companies (Ahold, IKEA, Philips). Some companies mentioned sense of responsibility towards stakeholders, such as employees, consumers, society and the environment (Ahold, Unilever, IKEA), and acting as an example for other companies (P&G, Unilever) as drivers. Other drivers mentioned were risk management reasons (Ahold), improving efficiency and overall performance of the supply chain, customer requirements (Philips) and the CEO's personal motivation (Unilever). Pressures from external stakeholders (e.g. NGOs, the media, society

and governments) were also mentioned as a driver (Ahold, P&G, Unilever), although for Ahold and Unilever this was mainly the case in the past.

The five frontrunners in the field of sustainability mentioned the same drivers that were identified and discussed in the research literature as their motivation to implement sustainability improvements in their supply chain. What is interesting is that the majority of the companies pointed out external pressure from NGOs, media, society and government as a trigger which was most relevant in the past, but not anymore. Nowadays, focal companies see sustainability improvements in their supply chains as a business case and a means to achieve their business goals and protect their brand image.

5.3 Strategies and Instruments

Which strategies and instruments are used by focal companies to improve the sustainability of their supply chain?

5.3.1 Literature findings

Two main strategies were identified in the literature for focal companies to implement sustainability, and hence OSH, in their supply chains: 'supplier management for risks and performance' and 'supply chain management for sustainable products'. Within the first one, companies are driven by major fear of loss of reputation, in case related problems are raised. Therefore, additional environmental and social criteria are taken up to complement economically based supplier evaluation. Environmental and social standards play a central role in enabling this. Improving suppliers' performance and, at least, assuring minimum performance standards, including long-term trustful partnerships are important objectives within this strategy. The second strategy encompasses product related initiatives undertaken by individual companies or trade/industry bodies. Within this strategy, usually lifecycle-based standards for the environmental and social performance of products are defined and implemented throughout the supply chain. Those two strategies do not exclude each other and are, in many cases, interrelated.

Focal companies apply different instruments to impose sustainability requirements to their suppliers. These actions are often part of a broader sustainable supply chain management (SSCM) approach, and focus – amongst others – on setting expectations for suppliers (through developing declarations or codes of conduct), selection, auditing and monitoring, training of the concerned suppliers and building long-term trustful partnerships. Examples of such instruments are:

- specific purchaser - procurement systems (applying environmental and social standards for selecting suppliers);
- standards and management systems (such as ISO 14001, EMAS SA 8000, OSHAS 18001 or ISO 26000), and related third-party certification which has the advantage that prevents audit fatigue, reduces the number of inspections and related costs;
- codes of conduct (either individual, or joint codes of conducts);
- International Framework Agreements (transnational agreements negotiated between multinational companies and global union federations);

- other industry collaborations and multi-stakeholder partnerships – the report provides some examples of joint initiatives between companies or sector organisations and governmental bodies;
- development of sustainable products (products that have or aim at an improved environmental and social quality), which requires cooperation and even considerable investments in suppliers;
- Life Cycle Management (a product management system aiming to minimise the environmental and socio-economic burdens associated with the company's product or product portfolio during its entire lifecycle and value chain);
- trade and industry initiatives for sustainable products, and product stewardship and responsible care programs.

There is a lack of research evidence on the effectiveness of the abovementioned instruments and arrangements, in order to check how successful these are. Nevertheless, the sustainability literature indicates that the most successful initiatives comprise a combination of approaches, with commitment strategies and consequent interventions that communicate clear rewards from engaging in environmental and social responsible behaviour. The literature also suggests that a common feature in the positive examples of approaches of focal companies in improving sustainability in the supply chain, is that they incorporate clear and fairly extensive arrangements relating to the auditing and monitoring of suppliers, this can be extended to further partnering where joint process improvements are conducted. An effective policy and practice must be in place in order to influence suppliers to implement sustainability practices. In this respect, not only measures related to the education and training of the purchasing staff, but also measures aiming at suppliers play an important role. The increased supplier performance (assuring minimum performance) is an important objective, including long-term trustful partnership.

5.3.2 Case studies

All companies studied had adopted a sustainability strategy that involved both supplier management for risks and performance and supply chain management for sustainable products.

In terms of integrating sustainability in their supply chain, all companies have established dedicated programs that include or target specifically at the company's sustainability strategy ('Reshaping Retail @ Ahold', 'IKEA Sustainability direction 2015', 'Future Friendly' for P&G, Philips' EcoVision, 'Unilever Sustainable living plan'). These programs aim at improving the companies' sustainability performance by setting clear goals for the entire supply chain. In addition, all companies have adopted a lifecycle approach considering the products' impact along the whole value chain, including the sourcing and consumer-use phases. However, Ahold focuses more on sustainable sourcing, and lifecycle approach during product development is still at pilot phase. Some companies apply LCA (predominantly environmental) for their entire portfolio (e.g. P&G), but most of them only for selected product brands.

All companies are involved in social dialogue and co-operation with external stakeholders, such as suppliers, NGOs and local communities, in order to facilitate and promote the integration of sustainability in their upstream supply chain. Ahold endeavours to create strategic partnerships with key suppliers, and Philips and P&G invest in long-term relationships with its suppliers. Also, each company has

relevant codes of conduct in place that the suppliers need to comply with ('Ahold Standards of Engagement', 'IWAY' code of conduct for IKEA's suppliers, P&G's 'Sustainability Guidelines for Supplier Relations', 'Philips General Business Principles' and 'EICC code of conduct' for Philips, 'Unilever Sustainable Agriculture Code'). For example, P&G mentioned that it incorporated the requirements from the code in the contract with its suppliers, and Philips and IKEA evaluate the compliance status of potential new suppliers. Audits by the company itself, or external agencies and/or external certification schemes (e.g. Fairtrade, UTZ certified) are also used in all five cases in order to monitor compliance of suppliers with the companies' codes of conducts and guidelines, and also to identify areas of improvement. Ahold is currently in the process of mapping its supply chain and focuses on creating strategic partnerships with key suppliers. Most companies incorporate sustainability into their purchasing procedures by offering appropriate training to their purchasing personnel (Ahold, P&G, Philips). In addition, training with regards to sustainability issues is offered to suppliers (Ahold, P&G, Philips, Unilever). In cases of non-compliance, all companies offer suppliers help and support in constructing, implementing and monitoring corrective action plans; most companies (P&G, Philips, Unilever) also provide suppliers with self-auditing tools in order to evaluate the status of their compliance and sustainability performance. In all companies, cases of non-compliance are carefully considered, and, in case of minor issues, suppliers receive help in order to show continuous improvement, whereas in cases of so called 'deal-breakers' and refusal to co-operate the supplier is delisted.

In the downstream supply chain, the companies under study focus on reducing impact during the consumer-use and end-of-life phase of the companies' products. In most cases, the companies work towards the development of sustainable products that reduce impact during use phase, such as energy-, water- and waste-efficient solutions (Philips, Unilever, P&G, IKEA). Ahold focuses mainly on the development of sustainably-sourced products and waste-management, which can be explained by the nature of its products. The majority of the companies (Ahold, IKEA, P&G, Unilever) also uses marketing campaigns and/or appropriate product labelling in order to communicate sustainability issues to consumers and educate them, aiming at consumer behaviour change. Such efforts are also undertaken in collaboration with NGOs. Some companies have also established waste-returning and/or recycling schemes for products and product packaging (Ahold, IKEA, Philips). Finally, one company (IKEA) endeavours to make transportation of its products and customers more sustainable by designing smart packing solutions and stimulating use of public transport to and from its retail locations.

The conclusions drawn from the literature review are corroborated by the companies' practices. Focal companies apply a combination of strategies and approaches which is shaped by the type of industry or sector and the type of the supply chain. Companies have developed specific (individual or sector based) instruments in order to impose sustainability requirements to their suppliers. Among others, social dialogue with stakeholders (including supply chain members) plays a central role in achieving integrated sustainability strategy within the supply chain. Last, but not least, building strategic partnerships with suppliers was mentioned as one of the most successful approaches.

5.4 Success factors and barriers

What are the main barriers/successes in improving sustainability in the supply chain?

5.4.1 Literature findings

Communication within the supply chain is a paramount structure characteristic and main supporting factor, while monitoring, evaluation, reporting and sanctions are the ones more often quoted in literature. Other mentioned supporting factors are management systems, training education of purchasing employees and suppliers, and integration into the corporate policy. According to Seuring and Muller, this implies higher costs, although joint efforts of all supply chain partners can help control costs (S. Seuring & Muller, 2008). Top management commitment is a primary factor influencing the adoption of sustainability management.

The main barriers for implementing sustainability improvements in the supply chain are higher costs, coordination effort and complexity, and insufficient or missing communication in the supply chain.

5.4.2 Case studies

Among the factors that have contributed to the companies' successful integration of sustainability in their supply chain, the most commonly encountered is top management commitment (for all companies), as well as commitment of employees of all levels and integration of sustainability throughout the whole company structure (Ahold, P&G, Philips, Unilever). In addition, consistency in carrying the message within the whole organisation was important for one company (Ahold). Similarly, creative culture within the company contributed to IKEA's success. In terms of external communication, marketing campaigns aimed at consumer behaviour change were mentioned by P&G, while Ahold included managing expectations through clear communication with stakeholders in its success factors. One of the companies (Unilever) acknowledged the importance of establishing a sustainability program that set clear targets for the company and its stakeholders. With regards to managing the supply chain itself, one company (P&G) mentioned that owning the biggest part of it offered better control. For another company (Ahold), increasing transparency and gaining a better understanding of the supply chain by mapping its suppliers was an advantage.

In terms of barriers that arose during the companies' effort to integrate sustainability in their supply chain, they can be separated in external and internal barriers. In terms of external barriers, most companies mentioned achieving commitment to the company's sustainability-related requirements on behalf of their suppliers (Ahold, Philips, Unilever). In this respect, Ahold also referred to the diversity of requirements that different retailers request from suppliers as a barrier to achieving supplier compliance with Ahold's sustainability standards. In addition, the current economic climate (early 2012) poses the risk of suppliers orientating towards less demanding customers and markets in terms of sustainability requirements. IKEA also mentioned the search for alternative, more sustainable materials as one of the barriers encountered. As for internal barriers, as a frontrunner in sustainability, Unilever initially encountered difficulty in attaining commitment within the organisation, mainly due to the extra investment required in the beginning of this

process. Similarly, IKEA mentioned the culture turnover of the sales perspective that was necessary as an initial barrier. One company (P&G) mentioned that no significant barriers were encountered during this process.

6 Recommendations

6.1 For companies

Based on literature findings and practical examples, the following recommendations and lessons learned for companies can be drawn:

- Nowadays, companies increasingly rely on outsourcing of parts of their activities and processes, and they function and compete on a supply chain level, in specific networks with their suppliers and service providers. The supply chain sustainability performance is central in achieving the companies' sustainability targets.
- Implementation and further embedding of sustainability within the organisation requires commitment at all company levels, from top management positions to the production floor. This requires the integration of sustainability in all operations, management, business practices and culture.
- Far-reaching supply chain integration is still rather limited. Second-tier suppliers can be included in the sustainability process by requiring and stimulating first-tier suppliers to work with their respective suppliers. In some cases (retailers), pursuing direct contact with second-tier suppliers (producers) is advised.
- The main drivers for integrating sustainability in the supply chain encompass legal demands, customers' demands, response to stakeholders, competitive advantages, environmental and social pressure groups and reputational loss. The top management leadership and support is a key driver and success factor for organisational change and implementation of new programs, and therefore a prerequisite for integration of sustainability in the supply chain of a company. External pressure from NGOs, media, society and government are triggers which are most relevant in the beginning of this process, and more related to the past. Nowadays, companies should perceive sustainability improvements in their supply chains as a business case and a means to achieve their business goals and protect their brand image.
- Combination of strategies and approaches shaped by the type of industry or sector and the type of the supply chain seems to be most effective for the integration of sustainability in the supply chain. Companies have developed specific (individual or sector-based) instruments in order to impose sustainability requirements on their suppliers. An effective policy and practice must be in place, in order to influence suppliers to implement sustainability practices. In this respect, not only measures related to the education and training of the purchasing staff, but also measures aiming at suppliers play an important role (auditing and monitoring, sanctions and incentives). The social dialogue with stakeholders (including supply chain members) plays a central role for achieving integrated sustainability strategy within the supply chain. Last, but not least, building strategic partnerships with suppliers is one of the most successful approaches.
- Communication within the supply chain is a paramount structure characteristic and a main supporting factor for integration of sustainability into the supply chain. In addition, developing an effective system for monitoring, evaluation, reporting and sanctions for suppliers is important. Other supporting factors are

management systems, training education of purchasing employees and suppliers, and integration into the corporate policy. Increasing transparency and gaining a better understanding of the supply chain is another success factor. Top management commitment is a primary factor influencing the adoption of sustainability management.

- The main barriers for implementing sustainability improvements in the supply chain are higher costs, coordination effort and complexity, and insufficient or missing communication in the supply chain. However, joint efforts of all supply chain partners might help to control costs. The diversity of requirements that different clients request from suppliers can be a barrier to achieving supplier compliance with the company's sustainability standards.

6.2 For further TNO research

The following recommendations for TNO for further research can be made:

- To contribute to the existing gap in the research literature, by undertaking a systematic evaluation of the effectiveness of the instruments and arrangements discussed in this paper, in order to check how successful they are.
- To communicate and stress the need for companies to involve the supply chain in their sustainability efforts, in order to make a step towards higher level of sustainability integration and to achieve their business and sustainability targets within today's global and national economies.
- To develop tools and guidelines or/and tailor-made existing tools, in order to assist companies with the integration of sustainability in their supply chain. Among others, tools and guidelines for supply chain communication and integration, mapping of the supply chain, tools for supply chain and stakeholders dialogue and collective learning are of great importance.

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A Checklist for documents analysis of companies' websites and public documentation

Indicators	Questions
A Strategy and Vision	
1 Board of Directors' responsibilities	1. Is there a formal member of the Executive Board or a commission within the Board with responsibility for supply-chain related sustainability issues? Does the Board have proven expertise in sustainability and supply chain issues?
2 Trends and challenges	1. Did company make a trend analysis? (The trend analysis charts the main trends for the key markets on which the company operates and which therefore are paramount in determining the company's capacity to create value or prevent value from being lost). 2. Was the trend analysis made at supply chain level? (meaning trends were analysed that profoundly affect or may affect any or all of the links in the supply chain)
3 Stakeholders engagement	1. Does company actively engaged with supply chain stakeholders? 2. Are the key stakeholders identified? Who are they? Is there overview of the key sustainability issues per stakeholder? 3. Are the key issues considered in the company strategy? How?
4 Strategy	1. Does the company incorporate the identified trends into its strategy? 2. What are the company's strategic aims in general? What developments / changes are planned for the coming 3-5 years and in a long term? What threats or opportunities are approaching the company? 3. What is the role of sustainability in this/ how important is sustainability to reach the strategic aims? 4. What is the company's strategy towards sustainability at international, corporate and local level (centralised or decentralised)? 5. Does the company's strategy aim at the entire supply chain? How?

5 Core sustainability values/standards of a company	1. What are the company's sustainability values/standards? 2. Are those standards considered in the choice of partners, among whom suppliers, purchasers and customers? How?
B Policy and practice	
Suppliers policy	
6 Policy and management systems for suppliers	1.Does the company have supplier policy and corresponding management system? Do they include sustainability aspects? Please describe.
7 Defining supplier (indirect suppliers), purchasers, customers policy	1. Is the company's supply chain identified? Please describe the supply chain (producers, manufacturers, transporters, distributors, customers, consumers). What is the place of the company within the supply chain?
	2.Are the second tier suppliers also identified?
8 Content of the Code of conduct and Supplier Code	1. What are the subjects included in the company's Code of Conduct? (human rights policy, employment rights and decently work, social policy, environmental policy, environmental management monitoring system)
	2. Does Supplier Code exist? If not does the company make it clear that similar standards that are incorporated in its own Code of conduct apply to the suppliers?
9 Supervision method	1. Does the company have a method to monitor which suppliers comply with the Code of conduct? What does the method look like?
10 Non compliance policy	1. How do the company respond to non-compliance policy with the code of conduct? Is this publicly available?
11 Identifying high-risk suppliers	1. Does the company have a policy to identify high-risk suppliers? Please describe (An example is a policy including economic criteria -suppliers operating above a certain sum or suppliers of an essential part of a product. The policy contains at least a country analysis, charting countries with which no business should be conducted or for which certain additional conditions must be set.)
Hazardous substances policy (applied to the supply chain)	
12 Knowledge	1. Does the company know what chemicals are handled at the company and through the supply chain?

13 Policy and management	1. What is the company's policy and management of hazardous substances? How does it apply to the supply chain?.
14 Legislation (REACH , CLP)	1. What is the company approach to REACH and other substances legislation? How does it apply to the supply chain?
	2. Do you see any elements of the new EU legislation on chemical, environment, safety and health as a trigger for your companies to integrate sustainability into the supply chain? If yes, which elements? Please explain.
	<p>3. With the implementation of REACH –the new EU chemicals legislation more information is becoming available on the hazardous properties of substances; more knowledge will become available on exposure, as well as on exposure to workers, environment and consumers and on the working with chemical within the product supply chains; the companies will communicate more within companies, between companies (supply chains) and with other stakeholders like government, NGO's.</p> <p>a. Do you see those developments as a step forward towards sustainability within your company and supply chain?</p> <p>b. Are there other developments as a result of REACH implementation you see as a step towards sustainability?</p> <p>c. Are you going to use the created knowledge and build communication paths and the other REACH developments for your sustainability aims? How?</p>
Sustainability aspects/criteria (applied to the supply chain)	

<p>15 Environmental policy</p>	<p>1. What are the key environmental issues the company has focused on?</p> <p>a. Environmental technical aspects</p> <ul style="list-style-type: none"> • CO2 emissions • air pollution • water pollution • waste generation and treatment • noise, smell and dust • soil pollution • material use • BAT • OHS <p>b. Environmental management monitoring system</p> <ul style="list-style-type: none"> • Elements: consumption of natural resources, energy and water, emissions to air and water, noise, smell and dust, soil pollution, use of hazardous substances, waste, packing, transport, recycling, compliance with legislation. • contracted service providers with a certified environmental management system • research and development funds applied to projects with environmental significance, • comments and inquiries (e.g. from community) on environmental aspects • environmental improvement suggestions from employees
	<p>2. Are those aspects considered in the choice of partners, among whom suppliers, purchasers and customers? How?</p>
	<p>3. What is the company environmental performance? How does it measured? How did you achieve those results?</p>
	<p>4. What are the planned environmental improvements for the future? How this is linked with the supply chain?</p>
	<p>5. What are the difficulties/needs for implementing further environmental improvements in the supply chain?</p>
<p>16 Social policy (occupational health and safety)</p>	<p>1. What are the key social issues the company has focused on?</p>
	<p>2. Are those aspects considered in the choice of partners, among whom suppliers, purchasers and customers? How?</p>

	<p>3. What are the labour practices (occupational health, process safety, diversity) in the company?</p> <ul style="list-style-type: none"> • What are the major health and safety concerns of the organisation? How are occupational, process safety, health and security risk managed within the organisation? Is there an integrated approach for managing, occupational, process safety, health and security risks? • How healthy, vital and safe is the workforce? Are employees able to do their work well? To perform well in continuity? Are they resilient and flexible to adapt on developments/ changes? • To which extend are health, vitality and safety on the personal agenda? Are health, safety and vitality included in personal development plans or regular training? • How well is the (physical and social) environment in the company organised? Do employees work in circumstances in which they can perform in a health and safe way? • Are and how is the performance measured for health, safety and vitality of the workforce? Which methods are used to investigate and learn from incidents, illness or security breaches? To what extend is the company ready to respond to emergencies and to protect and support the employees? • What is included in the yearly improvement plans for health, safety and vitality? What is your benchmark for your improvement plans? • In which way are suppliers, contractors and clients involved with the company policies? How does the company ensure proper skills and experience? • How does the company ensure competence and adherence to procedures? Is it clear who is responsible for what and what is expected from workers? • Has the working environment been designed with human factors in mind? What are your strategies to maintain all your materials and machines? What happens if changes are necessary in the production process? • How does management involve and communicate with the workforce about health and safety? Do employees discuss health and safety while being at work? • What is the status of the health, safety, security and human resources department compared to your primary process departments? Has health and safety been integrated within the primary processes within the company? Is line management interested in these topics? • What is your approach to diversity (cultural, sexual, etc)?
	<p>4. What is the company's policy and practice related to the human rights?</p> <ul style="list-style-type: none"> • good employership • social enterprises • low skilled and risky work • psychosocial risk management • child labour • compliance issues

	5. What is the company's policy and practice related to the broader social issues affecting consumers, communities, and other stakeholders (e.g., bribery and corruption, community relations)?
	6. What is the collaboration with the stakeholders (government, employees, financial bodies – banks, insurance, chain actors-suppliers, clients, consumers, local community, associations- employers, sector, labour unions, consumer associations, NGOs, media)?
C Management	
Management 'General'	
17 Product life cycle R&D	1. Does the company make investments in production and consumption processes in such a way as to optimise the use of materials for new products and to minimise their effect on the environment?
18. Cooperation agreement	1. What is the role of the company in the development of strategic cooperation agreements for sustainable solutions within the supply chain (initiator, follower or doesn't take part)?
19 Working with the supply chain	1. How does the company work with the supply chain? What is the company image throughout the supply chain? What is the importance of the sustainability in its work with the supply chain?
	2. What are the drivers and incentives for the company to promote sustainability within the supply chain? What are the benefits for it? What does it cost?
	3. Does the company have influence over the members of the supply chain? Which supply chain members? How? What kind of tools and methods the company uses? (Look at the different functions within the business: product design and development, procurement, logistics, manufacturing, marketing, public affairs)
	4. Do the supply chain members influence the company? Which supply chain members have influence on the company? How? What kind of tools and methods do they use?
	5. What kind of sustainability practices the company apply in the beginning of the supply chain in case of production in low cost countries? (if relevant)
	6. What are the main difficulties in your efforts to sustain the supply chain (if relevant)?
20 Need of further reserch and development	1. Does the company consider a need of further R&D in order to incorporate the sustainability into the supply (chain) management?

Management 'Upstream'	
21 Supplier supervision	1.Does company supervise the companies identified as high risk suppliers in order to verify supplier compliance with the Supplier Code? All/ part of them? How often?
	2.Who is carrying out this supervision - external supervising institutions, company itself, etc?
	3. Does the company publish the supervision results? How ?(for example number of companies that didn't pass supervision, gives examples, measures that have been taken, etc.)
22 Educating suppliers	1. Does the company provide education concerning sustainability issues for all suppliers? How often? How it is organised?
	2. What are the teaching methods for sustainability learning applied to the suppliers?
	3. What is the education coverage of the suppliers? (25, 50, 75 %)
23 Communication between company and suppliers	1. What is the percentage of the supplier that have stated their compliance with the Supplier Code?
	2. How the communication between the company and the suppliers is organised?
Management 'Midstream/company level'	
24 Educating purchasers	1. Does the company provide education concerning sustainability issues for its purchasers? How often? How it is organised?
	2. Are purchasers aware of the suppliers supervision policy? How it is organised?
	3. Are the purchasers required to integrate sustainability criteria (based on the code of conduct) in their purchasing procedures and the selection of suppliers?
Management 'Downstream'	
25 Responsible marketing	1. Does the company steer its marketing towards sustainability? How?

	2. Is the sustainability included in the communication policy of the company? Does the company make buyers aware of the necessity of sustainable enterprise and consumption? Does the company make it clear that the sustainability is a structural element in its marketing?
26 Product life cycle /Recycling	1. Does the company have recycling policy implemented? What are the main elements in this policy? Does it stimulate taking back products which have entered the end-of-life stage?
	2. How the company supervises this process? Does the company communicate the results of this supervision?
	3. Is the company involved in sector initiatives to draw up recycling policy?
27 Product life cycle/ Sales attuned to emerging markets	1. Does the company recognise the emerging markets as a potential opportunities?
	2. Does the company adjust its products to the demands of those markets?

B Interview topic list

Background of the project

Sustainability has become a main strategic aim of many companies. Increasing globalisation and continued outsourcing and sub-contracting cause companies to compete at the supply chain level. Therefore the sustainability require actions well beyond the boundaries of a single company. The sustainability of the chain is dependent on the sustainability of the individual companies. However, 'focal' companies of supply chains might be held responsible for the sustainability performance of their suppliers. Focal companies are those companies that usually (1) rule or govern the supply chain, (2) provide the direct contact to the customer, and (3) design the product or service offered. In the literature five stages of sustainability integration within companies can be distinguished: pre-compliance, compliance, beyond compliance, integrated strategy and purpose and passion. The Dow Jones Sustainability Index indicates that more companies are moving towards level 4 of sustainability. We have performed a literature review and internet research to define the main drivers, strategies and instruments used by focal companies in order to integrate sustainability within their supply chains. As a result of an internet research on websites of focal companies we have classified your company in stage four of sustainability and therefore we would to invite you for an interview.

The aim of the interview is to proof the literature findings and to compliment the results from the internet research. The following topics will be covered during the interview.

Questions related to literature findings

1. Focal company's networks:
 - Company and its suppliers and customers – primary flow of goods and materials
 - Company and its (sub-) contractors – flow of people and their services
2. Drivers for a focal company to incorporate sustainability improvements in the supply chain.
3. Strategies for a focal companies to incorporate sustainability improvements in the supply chain:
 - 'Supplier management for risks and performance'.
 - 'Supply chain management for sustainable products'.
4. Instruments used by focal companies to implement sustainability in the supply chain.
5. Barriers for implementing sustainable supply chains.
6. Success factors for implementing sustainable supply chains.

Questions to compliment the internet review

1. Strategy and Vision
 - 1.1. Management commitment
 - 1.2. Strategy/vision and trends
 - 1.3. Stakeholders engagement

2. Policy and practice
 - 2.1. Environmental policy (applied to the supply chain)
 - 2.2. Hazardous substances policy (applied to the supply chain)
 - 2.3. Social policy (applied to the supply chain)
3. Supply chain management and policy
 - 3.1. Supply chain upstream
 - Management
 - Supplier supervision
 - Educating suppliers
 - Communication between company and suppliers
 - 3.2. Midstream/company level'- purchasers
 - 3.3. Supply chain downstream

C Matrix analysis case studies

Matrix analysis for case study: Ahold

	Public documentation	Interview	Case-study report
Supply chain	-	Suppliers and contractors (not-for-resale suppliers) included Contractors excluded from some sustainability targets	Suppliers and contractors (not-for-resale suppliers) included Contractors excluded from some sustainability targets
Drivers	- 'Healthier and more sustainable future for generations to come'/'Responsible retailer' - Securing longevity of Ahold's business	- Suppliers very important stakeholders - Risk management - Reputational damage - Ensuring supply of high-quality products/maintaining quality of business - Makes business sense - External pressures mainly in the past, not now	- 'Responsible retailer' - Suppliers very important stakeholders - Risk management - Reputational damage - Improving efficiency and overall performance of supply chain - Ensuring supply of high-quality products/maintaining quality of business - Makes business sense/Securing longevity of Ahold's business - External pressures mainly in the past, not now
Strategies	- Responsible retailing: one of the 6 strategic pillars for 2010-2015 - CR strategy: sustainable trade one of the 5 priority areas (source safe and responsible products and reduce footprint of its sourcing activities)	Trend analysis: 5 priority areas for CR strategy (healthy living, sustainable trade, climate action, community engagement and employees) Set clear, measurable goals	- Responsible retailing: 1 of 6 strategic pillars for 2010-2015 - Sustainable trade: source safe and responsible products and reduce footprint of supply chain - Setting clear, measurable goals

<p>Instruments (upstream supply chain)</p>	<ul style="list-style-type: none"> - Developing and maintaining strong relationships with suppliers of own-brand products: ensuring compliance with requirements (legal and beyond) - 'Ahold Standards of Engagement' - 'Critical commodities': 3rd party certifications - Mapping of supply chain - Termination of contracts with suppliers in case of non-compliance with the standards - Minor non-compliance issues: corrective action plan is made 	<ul style="list-style-type: none"> - Strategic partnerships with own-brand suppliers (esp. foodstuff): long-term contracts - Mapping of own-brand suppliers: at early stage/issues due to complexity of supply chain - 'Ahold Standards of Engagement': social requirements for all suppliers and contractors (sub-contractors & 2nd tier suppliers) - 3rd party certifications for 'critical commodities' - Creating benchmark standards together with other retailers and stakeholders - Communication with suppliers via purchasing personnel, quality department decides on compliance status of suppliers: objectivity and transparency - Supplier training & support: in collaboration with stakeholders, and using internal expertise - Non-compliance: minor issues (improvement plans) & 'deal-breakers' (suspension, improvement, re-evaluation) - Results from compliance audits published 	<ul style="list-style-type: none"> - Strategic partnerships - Mapping of own-brand suppliers - 'Ahold Standards of Engagement' and 3rd-party certification schemes for 'critical commodities' - Compliance audits evaluated by quality departments for objectivity and transparency - Sustainability training of purchasing and quality personnel - Supplier training and support - Non-compliance issues: minor and 'deal-breakers' - Publishing of audit results and cases of non-compliance
<p>Instruments (downstream supply chain)</p>	<ul style="list-style-type: none"> - Providing more sustainable products to the customers by: <ol style="list-style-type: none"> 1. Improving sustainability of product ingredients 2. Reducing environmental impact of packaging Waste management programs: zero landfill target, reduction of plastic shopping bags by not giving them away for free 	<ul style="list-style-type: none"> - Communication to customers: not very detailed Research on how to engage customers Via the group's free-of-charge publications - Providing sustainable solutions to customers and communicating these options in a clear manner (waste-efficient packaging, recycling logos and instructions on products) - Zero landfill target for stores and distribution centres: e.g. 35% discount stickers on products, use of less plastic bags at check-out points - Recycling/Return schemes organised locally, also depending local legal frameworks and government decisions 	<ul style="list-style-type: none"> - Communication to customers: via publications and appropriate labeling of products - Research on how to engage customers - Sustainable product solutions (more sustainable ingredients, waste-efficient packaging, reducing environmental impact of supply chain) - Zero landfill target for stores and distribution centres: e.g. 35% discount stickers on products, use of less plastic bags at check-out points - Recycling/Return schemes organised locally, also depending local legal frameworks and government decisions

Barriers	-	<ul style="list-style-type: none"> - Duplication and/or diversity in requirements from different retailers - Involving all relevant stakeholders (especially for sub-contractors and 2nd-tier suppliers) - Current economic climate: risk of suppliers turning to less demanding customers/markets 	<ul style="list-style-type: none"> - Duplication and/or diversity in requirements from different retailers - Involving all relevant stakeholders (especially for sub-contractors and 2nd-tier suppliers) - Current economic climate: risk of suppliers turning to less demanding customers/markets
Successes	-	<ul style="list-style-type: none"> - Transparency (knowing the company's supply chain – mapping of suppliers) - Commitment within the whole organisation - Consistency in carrying the sustainability message within the whole organisation - Managing expectations though clear communication with stakeholders. 	<ul style="list-style-type: none"> - Transparency (knowing the company's supply chain – mapping of suppliers) - Commitment within the whole organisation - Consistency in carrying the sustainability message within the whole organisation - Managing expectations though clear communication with stakeholders.

Matrix analysis for case study: IKEA

	Public documentation	Interview	Case-study report
Supply chain	from product development until end-of-life of product	suppliers, sub-suppliers, contractors and co-workers are considered part of the supply chain	Throughout the product supply chain (includes suppliers, sub-suppliers, contractors and co-workers)
Drivers	<ol style="list-style-type: none"> 1. business opportunity 2. condition for being a good company 	Sustainability integrated part of IKEA's business (key driver) Impact of products on workers and consumers	Business opportunity Being a good company Impact of products on workers and consumers (the IKEA brand)
Strategies	"Create a better everyday life for the many people" Never ending list of improvements for a more sustainable IKEA Sustainability: cornerstone in IKEA's 5-year strategy (2010-5) 'IKEA Sustainability Direction 2015' priorities for 2010-5 (more sustainable products, low carbon society, waste into resources, water footprint and social responsibility)	better existence for the many: broad spectrum of high-quality products for a low price - building long-term relationships with customers (trust)/integrated solutions and market-specific solutions - involving strategic partners in the development of IKEA (result e.g. low price) Trends, e.g. transparency on the origin of products, concerns on health-related issues, consumer inquiries for materials in products - co-operation with FSC, WNF and Milieu Defensie to increase knowledge & avoid surprises	Sustainability 1 of the 4 cornerstones in IKEA's 5 year strategy Priorities set in 'IKEA Sustainability Direction 2015': focus on more sustainable products, low carbon society, waste into resources, water footprint and social responsibility

Instruments (upstream supply chain)	IWAY Random checks by 3rd party Regular supplier audits by IKEA inspectors (announced or not) Sub-suppliers subject to the same Support suppliers to be more sustainable	Suppliers, sub-suppliers, contractors need to follow code of conduct Audits by IKEA and 3rd party auditors (more objective) New suppliers: 12 requirements before tendering, followed by audit Non-compliance: co-operation with supplier to improve product quality, develop different products, improve their sustainability performance prompt payment, financial and expertise support and on-site help by IKEA experts in return for the strict requirements	IWAY code of conduct for suppliers, sub-suppliers and contractors Audits by IKEA and 3rd party auditors Non-compliance: co-operation with suppliers to improve product quality, develop different products and improve sustainability performance Compliance of new suppliers before entering tendering process
Instruments (downstream supply chain)	Tips for sustainability to consumers collection points at stores for returning/recycling products and packaging	Communication to customers (LED lamp, 'Sustainable Home') Every product needs to be sustainable Sustainable transportation of products and customers Recycling schemes Returned products: used to improve quality and service advice	Communication to customers regarding sustainability Development of sustainable products Sustainable transportation of products and customers Recycling schemes
Barriers	-	culture turnover of sales perspective Looking for alternative materials to eg. wood	culture turnover of sales perspective Looking for alternative materials to eg. wood
Successes	-	IKEA's creative company culture	IKEA's creative company culture

Matrix analysis for case study: P&G

	Public documentation	Interview	Case-study report
Supply chain			
Drivers			Main drivers: leadership sales, profit and value creation, while improving people's lives 'now and for generations to come' Governmental & societal influences P&G's responsibility as a leader in sustainability

Strategies			P&G's strategy aims at improving consumers' lives 'for now and the generations to come' while achieving leadership sales, profit and value creation Employees, shareholders and the communities in which they live and work can also prosper
Instruments (upstream supply chain)			Building longer-lasting relationships 'Sustainability Guidelines for Supplier Relations' Most effective: incorporate guidelines in the contract & perform audits (identify areas of improvement) Communication between P&G and suppliers. Training of purchasing personnel (supplier guidelines, supplier assessments, integration of sustainability into the purchasing procedure) Training of suppliers: special website dedicated to suppliers and support (mainly direct suppliers) Training and check of sustainability improvement plan Non-compliance with sustainability criteria: disqualified for new and ongoing supply agreements
Instruments (downstream supply chain)			<ul style="list-style-type: none"> - Reducing customer waste: reducing the amount of packaging and making packaging easier to enter the waste streams (e.g. packaging made from one material) - P&G Future Friendly program and co-operation with NGO's: consumer behaviour change, promotion of environmental responsibility & consumer conservation education
Barriers			No significant barriers
Successes			<ul style="list-style-type: none"> - Owning a large part of the supply chain offers better control - Employees' contribution to sustainability performance: integrating sustainability throughout the whole business and part of personal evaluation and working development plan - Marketing campaigns to target sustainability performance downstream in the supply chain

Matrix analysis for case study: Philips

	Public documentation	Interview	Case-study report
Supply chain	-	<ul style="list-style-type: none"> - Suppliers and sub-contractors. - Differentiation between services (managed centrally) and material chain (at local operating levels) - Both chains compliant with company's Code of Conduct 10.000 1st tier suppliers in the material chain & 30.000 in the services chain: 1.000 suppliers for 80% of the supplying activities 	<ul style="list-style-type: none"> - Suppliers and sub-contractors. - Differentiation between services (managed centrally) and material chain (at local operating levels) - Both chains compliant with company's Code of Conduct
Drivers	-	<ol style="list-style-type: none"> 1. protecting brand image 2. meeting sustainability standards required by big customers (e.g. Walmart) 	<ol style="list-style-type: none"> 1. protecting brand image 2. meeting sustainability standards required by big customers (e.g. Walmart)
Strategies	<p>Health & well-being of individuals and communities Environmental performance of products and processes Drive sustainability in the supply chain EcoVision 4 (2007-2012) and EcoVision 5 (2010-2015): goals/commitments - now combined to form EcoVision</p>	<p>Health & well-being of individuals and communities Environmental performance of products and processes Drive sustainability in the supply chain EcoVision 4 (2007-2012) and EcoVision 5 (2010-2015): goals/commitments</p>	<p>Health & well-being of individuals and communities Environmental performance of products and processes Drive sustainability in the supply chain EcoVision program (up to 2015): goals/commitments</p>
Instruments (upstream supply chain)	<ol style="list-style-type: none"> 1. 'BOM check' 2. Ask for commitment to sustainability (Philips GBP and EICC code of conduct) 3. Audits (EICC) 4. Philips Supplier Sustainability Involvement Program (5 pillars) 	<ol style="list-style-type: none"> 1. 'BOM check' 2. Risk assessment based on the country of production (Maple croft indices) 3. Audits (EICC audit check list) --> corrective action plan --> resolution audit (--> termination of the business relation if not compliant) 4. Training, capability programs & self-assessment questionnaire prior to sustainability assessment audits 5. Training of buyers 6. Social dialogue with stakeholders 	<ol style="list-style-type: none"> 1. 'BOM check' 2. Ask for commitment to sustainability (Philips GBP and EICC code of conduct) 2. Risk assessment based on the country of production (Maple croft indices) 3. Audits (EICC audit check list) --> corrective action plan --> resolution audit (--> termination of the business relation if not compliant) 4. Training, capability programs & self-assessment questionnaire prior to sustainability assessment audits 5. Training of buyers 6. Social dialogue with stakeholders 4. Philips Supplier Sustainability Involvement Program (5 pillars)

Instruments (downstream supply chain)	energy-efficient solutions end-of-life collection and recycling compliance schemes support development of WEEE	-	energy-efficient solutions end-of-life collection and recycling compliance schemes support development of WEEE
Barriers	-	- commitment upstream in the supply chain - proving sustainability can lead to profitability	- commitment upstream in the supply chain - proving sustainability can lead to profitability
Successes	-	commitment to sustainability & presence of strong and passionate ambassadors within the company	commitment to sustainability & presence of strong and passionate ambassadors within the company

Matrix analysis for case study: Unilever

	Public documentation	Interview	Case-study report
Supply chain	-	Upstream: Includes both services & RM suppliers (focus on agricultural RM) Downstream: Customer behaviour	Upstream: Includes both services & RM suppliers (focus on agricultural RM) Downstream: Customer behaviour
Drivers	A means to Unilever's ambitious targets	Vision of CEO Seen as the only viable long-term business model/makes business sense Responsibility to use power of business for social welfare & min. environmental impact Act as an example for other companies Pressures from media and NGOs insignificant driver	Vision of CEO Only viable long-term business model/means to Unilever's ambitious targets Responsibility to use power of business for social welfare & min. environmental impact Act as an example for other companies Pressures from media and NGOs insignificant driver
Strategies	Impact goes beyond factory gates "Unilever Sustainable Living Plan": 50 concrete targets 3 objectives (1) Help more than a billion people improve their health and well-being; (2) Halve the environmental impact of products; (3) Enhance livelihoods of hundreds of thousands of people in the supply chain Sourcing RM and consumer-use phase: largest footprint Reduce impact across whole lifecycle	Sustainability integrated in Unilever's strategy, beyond corporate responsibility "Unilever Sustainable Living Plan": global commitment, 3 key global objectives by 2020 1. improve health & well-being 2. reduce environmental impact 3. enhance livelihoods Ambition to 2x sales, but also decouple growth from env. impact (halve impact at sourcing RM and consumer use level)	Sustainability integrated in Unilever's strategy, beyond corporate responsibility "Unilever Sustainable Living Plan": global commitment, 3 key global objectives by 2020 1. improve health & well-being 2. reduce environmental impact 3. enhance livelihoods Ambition to 2x sales, but also decouple growth from env. impact (reduce impact across lifecycle and halve impact at sourcing RM and consumer use level: largest footprint)

<p>Instruments (upstream supply chain)</p>	<p>2 big challenges: 1) complex to sustainably source 20% of agricultural RM: success depends on working with others, 2) sustainably-sourced non-agricultural RM Unilever Sustainable Agriculture Code – a detailed guideline for agricultural best practice and consists of 11 indicators. Measuring sustainable sourcing in two ways: Certification and Self-verification</p>	<p>Focus on RM suppliers: sustainably-sourced non-agricultural and agricultural (core of business) RM Co-operation with stakeholders 1. Improve practices in agricultural sector (more efficient work & increase yield for farmers): work with suppliers & support improvement plans, stimulate co-operation with farmers (2nd tier) approach depends on situation & crop - tailored solutions can be facilitated from Unilever (loan system - tomato suppliers in Brazil) 2. "Unilever Sustainable Agricultural Code": with online self-auditing software for suppliers and farmers 3. Support via external agencies and consultants, organizations and/or local partnerships 4. external certification agencies Basic criteria: continuous improvement, balance in 3P's & auditing certifications If no improvement: supplier delisted</p>	<p>Focus on RM suppliers: sustainably-sourced non-agricultural and agricultural (core of business) RM Co-operation with stakeholders 1. Improve practices in agricultural sector: work with suppliers & support improvement plans, stimulate co-operation with farmers (2nd tier) / tailored solutions e.g. loan system - tomato suppliers in Brazil) 2. "Unilever Sustainable Agricultural Code": with online self-auditing software for suppliers and farmers 3. Support via external agencies and consultants, organizations and/or local partnerships 4. external certification agencies Basic criteria: continuous improvement, balance in 3P's & auditing certifications If no improvement: supplier delisted</p>
<p>Instruments (downstream supply chain)</p>	<p>Consumers responsible for 70% of GHG footprint Cleaner Planet Plan</p>	<p>1. develop products that help customers reduce their impact & suitable specs per market 2. Education of consumers: buy the right products & use them in the right way, focus on developing world - last mover's advantage</p>	<p>Consumers: largest part of impact 1. develop products that help customers reduce their impact & suitable specs per market 2. Education of consumers: buy the right products & use them in the right way, focus on developing world - last mover's advantage</p>
<p>Barriers</p>	<p>-</p>	<p>In the past: achieving real commitment within the company due to extra investments and commitment of suppliers</p>	<p>In the past: achieving real commitment within the company due to extra investments and commitment of suppliers</p>

<p>Successes</p>	<p>-</p>	<p>“Unilever Sustainable Living Plan”: clear targets External: closely linked to the commitments in the “Plan”, e.g. 100% sustainably-sourced agricultural RM by 2020: internal guidelines (e.g. Unilever Sustainable Agriculture Code) or external certification schemes Internal: 1. employee engagement program (aims at full integration of sustainability in all activities), 2. control of the performance and improvements essential to ensure that action plans are formulated on each level, 3. representation of all functionalities (areas, brands, factories)</p>	<p>“Unilever Sustainable Living Plan”: clear targets External: closely linked to the commitments in the “Plan”, e.g. 100% sustainably-sourced agricultural RM by 2020: internal guidelines (e.g. Unilever Sustainable Agriculture Code) or external certification schemes Internal: 1. employee engagement program (aims at full integration of sustainability in all activities), 2. control of the performance and improvements essential to ensure that action plans are formulated on each level, 3. representation of all functionalities (areas, brands, factories)</p>
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Matrix analysis for general conclusions

	Conclusions from case studies	Conclusions from literature review
<p>Management commitment</p>	<p>Management commitment (Chief Sustainability Officer for IKEA, Global Sustainability Board and CEO for P&G, Unilever CEO & Sustainable Development Group, Philips Sustainability Board chaired by a member from the board of management, Ahold CR department reports to the CEB Chief Corporate Governance Counsel and member of the Board)</p>	
<p>Supply chain</p>	<p>(Ahold, IKEA, P&G, Philips, Unilever: sustainability central in the companies’ strategy/reducing impact along the entire value chain (also sourcing of materials & services, & consumer use phase): suppliers’ sustainability performance central Suppliers of certain goods and products and contractors: part of supply chain (all companies) Management of supply chain: differentiation between the two supply chains (Ahold, Philips, Unilever) Compliance with code of conduct/guidelines (all companies) More focus on certain supplier groups for some companies (e.g. Unilever and Ahold) 2nd tier suppliers and sub-contractors: differences among companies and within companies (depending on the product category)</p>	

<p>Drivers</p>	<p>Brand image 3/5 (Philips, IKEA, Ahold) Risk management 1/5 (Ahold) Customer requirements 1/5 (Philips) CEO's motivation 1/5 (Unilever) Means to achieving the company's business/growth goals – Business opportunity 4/5 (Unilever, IKEA, P&G, Ahold) Responsibility towards society and the environment 2/5 (Ahold, Unilever) Act as an example for other companies 2/5 (Unilever, P&G) External pressures (from NGOs, media, society, governments) 3/5 (Unilever, P&G, Ahold (in the past)) Improving efficiency and overall performance of supply chain 1/5 (Ahold)</p>	<p>Legal demands Customers' demands Response to stakeholders Competitive advantages Environmental and social pressure groups Reputational loss Top management leadership Organisational culture Governmental control and policy recommendations International platforms, partnerships with or dependence on international organisations</p>
<p>Strategies</p>	<p>both supplier management for risks and performance and supply chain management for sustainable products</p>	<p>supplier management for risks and performance and supply chain management for sustainable products interrelated</p>
<p>Instruments (up- & downstream supply chain)</p>	<p>Dedicated programs to improve sustainability performance/setting clear goals (up- and/or downstream) 5/5 (EcoVision for Philips, IKEA Sustainability direction 2015, Unilever Sustainable living plan, Future Friendly for P&G, Ahold's strategic pillars and CR priority areas) Lifecycle approach/consider impact (IKEA, P&G, Philips, Unilever) Ahold focuses more on sustainable sourcing/lifecycle approach at pilot phase</p>	<ul style="list-style-type: none"> • specific purchaser - procurement systems (applying environmental and social standards for selecting suppliers) • standards and management systems (such as ISO 14001, EMAS SA 8000, OSHAS 18001 or ISO 26000) and related third party certification • codes of conduct (either individual or joint codes of conducts) • International Framework Agreements • other industry collaborations and multi-stakeholder partnerships. • development of sustainable products • Life Cycle Management • Trade and industry initiatives for sustainable products and product Stewardship and responsible care programs.

<p>Instruments (upstream supply chain)</p>	<p>Social dialogue/co-operation with stakeholders (suppliers, NGOs, local partnerships etc.), 5/5 (Philips, Unilever, P&G, IKEA only suppliers?, Ahold) Strategic partnerships with suppliers 1/5 (Ahold) Mapping suppliers 1/5 (Ahold) Code of Conducts 5/5 (Philips, Unilever, IKEA, Philips, Ahold) Purchasers training 3/5 (Philips, P&G, Ahold) Suppliers training 4/5 (Philips, Unilever, P&G, Ahold) Audits (by the company or external agencies) 5/5 (Philips, Unilever, IKEA, P&G, Ahold) Self-assessment questionnaires/software 2/5 (Philips, Unilever) Support in improvement plan/Corrective action plans 5/5 (Philips, Unilever, IKEA, P&G, Ahold) Incorporation in the contracts 1/4 (P&G) Compliance of potential new suppliers 2/5 (Philips, IKEA) Stimulate co-operation of suppliers with 2nd tier suppliers (Unilever, Ahold)</p>	
<p>Instruments (downstream supply chain)</p>	<p>Development of sustainable products that reduce impact during use phase (Philips, Unilever, P&G, IKEA) Development of sustainably-sourced products, waste-efficient packaging (Ahold) Recycling/return schemes (Philips, IKEA, Ahold) Sustainable transportation of products & customers (IKEA) Communication/Education of consumers and behavior change (also in collaboration with NGOs): marketing campaigns (Unilever, IKEA, P&G, Ahold)</p>	
<p>Barriers</p>	<p>Did not encounter significant barriers (P&G) Culture turnover of sales perspective (IKEA) Looking for alternative materials (IKEA) Achieving commitment within the company due to extra investments (Unilever) Commitment of suppliers (Unilever, Philips, Ahold) Current economic climate: risk of suppliers turning to less demanding customers/markets (Ahold) Duplication and/or diversity in requirements from different retailers (Ahold)</p>	<p>higher costs coordination effort and complexity insufficient or missing communication in the supply chain</p>

<p>Success factors</p>	<p>Management commitment (Chief Sustainability Officer for IKEA, Global Sustainability Board and CEO for P&G, Unilever CEO & Sustainable Development Group, Philips Sustainability Board, Ahold CR dept reports to the CEB Chief Corporate Governance Counsel and member of the Board) Commitment to sustainability within the company (Philips, Ahold) Consistency in carrying the sustainability message within the whole organisation 1/5 (Ahold) Setting clear sustainability targets via strategy plans and guidelines (Unilever) Engagement of employees at all levels (Unilever, P&G) Creative culture within company (IKEA) Owning/controlling the biggest part of the supply chain (P&G) Mapping of suppliers/Understanding supply chain (Ahold) Marketing campaigns aimed at consumers (P&G) Managing expectations through clear communication with stakeholders (Ahold)</p>	<p>communication within the supply chain monitoring, evaluation, reporting and sanctions management systems training, education of purchasing employees and suppliers integration into the corporate policy joint efforts of all supply chain partners can help to control costs top management commitment</p>
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D Interviews

Company	Contact person(s)/Date
Koninklijke Ahold N.V.	Karin Bogaers Advisor Product Integrity 07.03.2012
IKEA Nederland B.V.	Paul Rotteveel Sustainability Manager IKEA Nederland 20.12.2011
Procter & Gamble	Ronald van de Straat Externe relaties Benelux 12.12.2011
Phillips International B.V.	1. Emile Cornelissen Philips Supply management, Senior Director & Program manager Supplier Sustainability 2. Boukje Teeuwes Supplier Sustainability manager purchasing 19.12.2011
Unilever	Anniek Mauser Head of Sustainability Benelux 26.01.2012

E Internet review

Number	Company
1.	PPG/Sigma (chemicals industry)
2.	DAF (heavy-duty commercial vehicles)
3.	Crucell (biotechnology)
4.	DOW (chemicals industry)
5.	Oce (electronic industry)
6.	BAM (construction industry)
7.	Sika (construction industry)
8.	Waternet (diverse industry)
9.	AkzoNobel (chemicals industry)
10.	DSM (chemicals industry)
11.	BASF (chemicals industry)
12.	Rhodia (chemicals industry)
13.	Philips (electronic industry)
14.	Nokia (electronic industry)
15.	Siemens (electronic industry)
16.	Ahold (retail/consumer goods/food industry)
17.	Unilever (food, personal care and home care industry)
18.	Procter & Gamble (beauty, grooming and household care products)
19.	Ikea (home furnishing and food services)
20.	L'Oréal (household & personal products)
21.	TNT (mailing services)