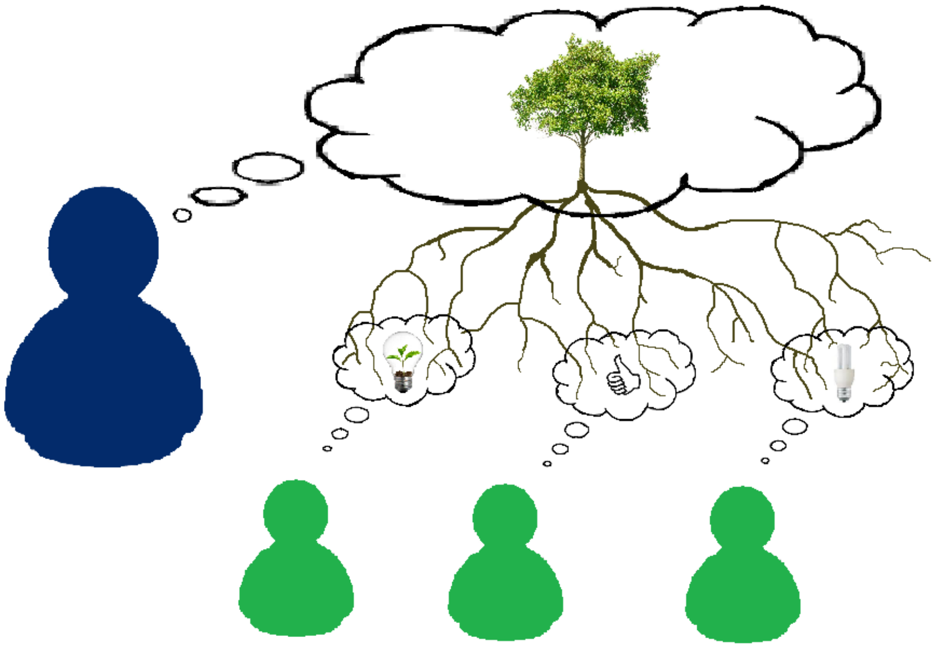

How can long-term environmental goals be managed in projects?

Master of Science Thesis in the Master's Programme International Project Management

VIKTOR RONNERT

Department of Civil and Environmental Engineering
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CHALMERS UNIVERSITY OF TECHNOLOGY
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Master's Thesis 2012:25

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Cover:
Illustration of a greater thought spreading its roots through an organisation, by Viktor Ronnert 2012.

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ABSTRACT

Management models have been developed and tested in practise for an extensive amount of time, new issues have aroused and methods have been refined or new ones have emerged. A novel area to management is the environmental issue that have started to go through the same process of development as previously appeared issues have. Environmental issues' solutions often span over many years of effort and many organisations today are of project structures with projects ranging over fewer years than those environmental solutions. This study is trying to develop a way of thinking within project management to ease those issues. It is done through help from previous research and input from five companies with a project structure. Solutions to each single problem have been elaborated and have been found to have been tested in practice but a joint version where all single issues are brought together have not been found. So a conceptual model is suggested that tries to combine ideas supported by both literature and interviewed companies into a way of thinking. All issues were not yet implemented in the model in a smooth way but hopefully this can be a start to elaborate around the issue.

Key words: Strategy implementation, green management, long-term versus short-term

Hur kan långsiktiga miljömål blir verklighet i projekt?
Examensarbete inom International Project Management
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SAMMANFATTNING

Projektledningsmodeller har under lång tid utvecklats och testats samtidigt som nya utmaningar har tvingat fram förädlingar av tidigare modeller eller framtagandet av helt nya. En ny utmaning som har uppenbarat sig för projektledare är miljöfrågan som nu genomgår samma process som tidigare utmaningar har gjort innan tillsfredställande metoder att tackla dessa har tagits fram. Miljöproblem och dess lösningar sträcker sig ofta över lång tid, längre tid än enskilda projekt vanligtvis varar. Denna studie försöker utveckla ett tankesätt för att komma över dessa problem. Lösningen söks i litteratur och hos fem företag av projektbaserad organisationsstruktur. Lösningar till varje enskilt problem behandlat i litteraturundersökningen har undersökts tidigare och mer eller mindre testade metoder har tagits fram, men någon som kombinerar lösningarna för att hitta ett svar till denna frågeställning om hur långsiktiga miljömål kan blir verklighet genom kortare har inte hittats. I slutet av studien presenteras en tankemodell som försöker kombinera några av de tankar som stödjs både i litteratur och bland de företag som tagit del i studien. Alla tankar om en färdig modell redo att axla problemet har dock inte lyckats kombineras, men ett steg på vägen till att börja undersöka ämnet djupare.

Nyckelord: Implementering av strategi, grön projektledning, långsiktighet kontra kortsiktighet

Contents

Preface

In this study literature from differing fields have been brought together to nurture a new combined field of how long-term environmental goals can be managed in projects. Five companies have been interviewed about how they currently treat the issue in spring 2012. The work is done as a dissertation in the Master's Programme International Project Management, which is a collaboration between Chalmers University of Technology in Gothenburg, Sweden, and Northumbria University in Newcastle, United Kingdom.

I appreciate the support and guidance from my supervisor associate professor Pernilla Gluch who also eased the contact with several participating companies. Further I would like to thank the staff at Chalmers Library for their expertise in searching literature along with fellow students who I have elaborated ideas with. Finally the research would not have been nearly as interesting without the companies and interviewees who accepted to take part in this study.

Göteborg May 2012

Viktor Ronnert

Abbreviations

BSC – Balanced Scorecard

CER - Corporate Environmental Responsibility

EMS – Environmental Management Systems

LCA – Life Cycle Assessment

OSM – Office of Strategy Management

PDCA – Plan Do Check Act

PDSA – Plan Do Study Act

PMS – Performance Measurement System

REP - Refunded Emission Payment

SaP – Strategy as Practice

SBSC – Sustainable Balanced Scorecard

SMART - Specific, Measurable, Attainable, Relevant, Time-oriented

TEP – Tradable Emission Payment

1 Introduction

1.1 Background

The number of reports on climate and environmental changes increases and are from varying information channels. One of those are the Intergovernmental Panel on Climate Change (IPCC 2007) that identifies current issues linked to its sources, another is the newspaper The Guardian (2012) that has its own section about the environment and in the foreword of the book by Lazlo (2008) Unilever's Group Chief Executive Officer Patrick J. Cescau writes that "there can be few people who doubt that social and environmental sustainability will define business drivers in the first part of the 21st century". Awareness of the issues rises and business opportunities rise with it. So businesses can be doing good themselves by doing good for the environment (Laszlo, 2008). In Sweden a vast majority of people and companies thinks that the aspects of environmental sustainability will be of great or very great importance in the near future (PWC, 2012).

1.2 Today's situation

Incorporating environmental sustainability into companies is a rather novel area (Kurdland and Zell, 2011). In for example organisational structures such as matrix organisations or project based organisations, the ways of working, and even standardisations of, those have been evaluated and refined for an extensive amount of time. The environmental management might be going through the same process of being refined. Many companies work in a project structure and projects are often defined as work within specified time limits (PMBOK, 2004). However environmental changes are often tracked over much longer time periods, with climate change for example current data is compared with data all the way from 1850 (IPCC, 2007). In the extended version of the Kyoto Protocol, aims are discussed for 2020 (Corfee-Morlot and Höhne, 2003), which normally is longer than 'a several years' that PMBOK (2004) gives as an example of upper time limit to a project. All organisations experience some tension between short-term and long-term decisions (Dodd and Favaro, 2006) as environmental goals are set for the future, ranging longer than single projects. Companies participating in this study have environmental goals ranging from 1-5 years and projects on average lasting 3-8 month. That means on a rough average those companies have 6 project periods (estimated: 3 year goals divided by 6 month projects) that will have to underpin its environmental goals, see Figure 4.1.

To implement or extend companies' current environmental approach requires a change of some kind and will challenge the status quo (Kurdland and Zell, 2011). Previously researched areas can add up to this study's research topic, maybe not entirely but as stepping stones into it. Those would be strategy implementation, environmental aspects for managements, green management in projects and the tension between long-term and short-term focus. The first one is change and implementation of strategy to reach goals, which has been dealt with before in both academia and observed in practice by for instance Kaplan and Norton (2004). To rearrange an organisation for meeting its strategy has been rejected as to be a source of new issues even though the focused issues might be solved. To align a strategy and goals with the existing organisational structure has been shown to be more efficient. One tool for that is the BSC (Balanced Scorecard) that aims on involving chosen prioritised strategies in the reporting process, therefore managers throughout the organisation all together focus on the same targets. (Kaplan and Norton, 2004). Continuing with the environmental aspects for managements there have also been studies on how the BSC can be made green and address environmental goals within the management, one of those is done by Länsilouto and Järvenpää (2010). Also environmental reports which for example sustainability reports partly is, have similarities with the BSC in a way that it shines light on what should be focused on. With the BSC, focus are set by the organisation itself (Kaplan and Norton, 2005) while the sustainability report's focus is much inherited by a third party's guidelines and are written less frequent (Global Reporting Initiative, 2012). The varieties of EMS (Environmental Management System) are many (Maltzman and Shirley, 2011), but the parts of sustainability maintains as rather novel areas (Kurdland and Zell, 2011). Sustainable actions can be argued as traditional management actions or vice versa, such an action can be of risk management character where the same action can be motivated through both environmental and economic arguments (Yilmaz and Flouris, 2009). Finally it is the subject of tension between long-term goals and short-term profit (Dodd and Favaro, 2006) that has contributed to this collective of subjects boiled down to a new one. That is in short why this study will elaborate around that new topic and try to suggest a way of thinking that can inspire a new direction of research, which can show how long-term goals can be realised in projects.

Some are not totally satisfied with the character and direction environmental research within management and organisations has taken. For example Ählström, Macquet and Richter (2009) claims that many suggested solutions and recommendations only result in marginal improvements. They continue by suggesting that the will to accept marginal improvements by environmental ideologist are well described by Habermas: "the immunising power of ideologies, which stifle the demands for justification raised by discursive examination, goes back to blockages in communication, independently of the changing semantic contents" (Habermas 1977, cited in Ählström, Macquet and Richter, 2009, p.344). Therefore they want more ground breaking and effective methods to address environmental issues within organisations.

1.3 Objectives and research question

This study is based on a literature review and a study of five companies with project based organisational structure through interviews with employees. The objective is to compare those viewpoints. Theory and practice are compared in order to suggest how established management tools can be used for this novel management area. In the end a conceptual model is presented that combines things found in practise and had support in literature. This conceptual model also aims to answer the research question: How can long-term environmental goals be managed in projects? A final hope is that the report could nurture a fruitful discussion in either practice or academia that could lead to further exploration within the area.

2 Literature Review

This section presents literature regarding the research topic. It focuses on four different literature areas that are combined into this research's literature review. Those four areas are environmental aspects in projects, the tension between long-term and short-term focus, green management and strategy implementation. It is then rounded off with some literature reflections.

2.1 Environmental aspects in project organisations

Many organisations' projects are not directly connected to their environmental goals. So Ankrah et al (2009) and Gluch and Räisänen (2012) suggests that further elaboration is needed on how alignment between the project structure and environmental performance can be made more effective. Gluch and Räisänen (2012) describe a scenario where very few environmental managers could support up to 100 projects at a time. That number of projects made the environmental manager merely a guest in each project and as a result left non-integrated in the decision-making. It also made the environmental issues non-prioritised and the distance between responsibilities created a defending attitude towards environmental implementation. Concerning agreed goals and frames granted the client for addressing environmental issues, they were often set high in a negotiation stage but ambitions often drop to a level considered easier to work with at the moment of executing the project. It also showed that environmental issues were governed in a top-down approach. But executed by someone who is not in the projects' direct community, nor did they have any decision-making mandate. With that structure each project tends to develop self-regulating environmental rules instead of the ones negotiated (Gluch and Räisänen, 2012).

2.2 Long-term versus short-term focus

Organisations are often faced with the option of focusing on doing well in the present while at the same time work for a strong future. Managers have to work in the same direction as the organisation and are then also pressured with the long and short-term tension. Multiple year plans are valued on their net present value while resources to run them trough are prioritised based on resources' pay back rate. In other words long-term plans are noticed and recognised, but pressure is put on short-term results. Further do owners desire yields and stock market gains, but owners could change quickly in the day-to-day trade on stock markets. Short-term earnings can often be realised but in a way borrowing from the future and long-term profits when focus is turned too much towards short-term profits. As resources building the short-term success are partly taken from the ones preparing for the future. Quick profit can be made on business models that have become obsolete, but it will not be long lasting if long-term focus is completely lost. An example is the telecommunication industry's change from 2G (second generation) to 3G (third generation). Investments in 2G became obsolete but had to be maintained for the existing costumers while the future was within 3G investments. To sum up, sustainable earnings can be seen as investments that do not borrow from other time frames and are based on assets that have future capabilities (Dodd and Favaro, 2006).

When only small investments for a continuous future business are required, less is the tension between long and short-term planning. It becomes clear in the example when an organisation has small earnings and shows low short-term profits while investing extensively in the future. Tensions would expect to grow between whether to be short-term or long-term oriented as by not surviving the present brings no future either. Another organisation with high percentage earnings without much investment needed for continuous future business should have less tension between long and short-term interests (Dodd and Favaro, 2006). Yilmaz and Flouris (2009) also notes that by becoming graspers of environmental sustainability instead of just accepting the regulating changes, organisations can move from a short-term focus visualised by risk avoidance and regulation, and convert towards long-term development of their brand visualised by competitiveness and operational advantages. Because of that sustainability has long-term perspectives. Managers who do not ask themselves where a strategy or plan will take them in a number of years but instead how it will take them there. Those will stimulate the options for long-term achievements that reduce the short-term damages. Another way to reduce the gap could be to introduce a third time frame, one between long and short-term. The middle term would ease to link the long and short-term thinking together (Dodd and Favaro, 2006).

2.3 Drivers for green emphasises

2.3.1 External and internal pressure

External pressure can be from shareholders, customers, non-governmental organisations and society. Pressure from one of those groups might not have a big effect on companies strive towards environmental sustainability but if they put pressure together the impact can be better noticed. In the way companies are pressured by those groups they do not understand it as a major driver but in the future they might (Dummett, 2006).

Internal pressure can be enforced by employees that may have a commitment to being a good corporate citizen. By making such an employee a ‘champion’ within the organisation they can drive the social and environmental change within the company (Dummett, 2006).

2.3.2 Environmental drivers

Corporate Environmental Responsibility (CER) has a number of key influences of which inspires leaders to change their company’s behaviour. Some of the major influences are government’s legislation or threat of such, market advantage, protection or enhancements of reputation and brands, a ‘champion’ within the organisation, pressure from shareholders and consumers, and also society’s expectations (Dummett, 2006).

2.3.3 Environmental responsibility

To protect or enhance reputation of a brand is a part of the bigger picture of reputation and being a responsible company. What a company promises is also a part of the big picture as it affects a company’s reputation weather it complies with those promises or not (Dummett, 2006). Furthermore it is discussed whether a company partly inherits suppliers and consumers environmental impact as well as they make an active choice to enter into a business agreement with that company. Preventing bad publications connected to your company would then also include choosing where your company is in a sales and buying chain (Lenzen and Murray, 2010).

Greenwashing is an expression for the case where someone falsely claims to be environmental friendly. Consumers’ demand for environmental friendly products or services is growing and with that comes profit possibilities by being seen as green. A report by the advertising consultancy TerraChoice shows that out of 2219 investigated products in the USA, 98% were guilty of greenwashing. Regulations on how to use expressions like sustainable, biodegradable and carbon neutral are vague so even though no crime have been committed, it can be accused of greenwashing by third party interests or the public. Some companies that do their business on labelling are of different quality, some are serious in their requirements while others are seen as labellers just for money and not for the sake of providing an environmental friendly option (Dahl, 2010). The biggest danger with greenwashing is if the public loses hope in green marketing and labelling so that the environmental friendly struggle and the whole environmental movement have lost an incredibly powerful tool (Dahl, 2010).

2.3.4 Value environmental gains

To monetise the gains from turning more environmental friendly could be realised in some cases such as in the case of energy and waste reduction (Dummett, 2006). But most valuable in turning more environmental friendly is considered to be the positive brand recognition, which is hard to give a concrete value in numbers. For some industries it can also be a preventive act to not lose their licence to operate (Haanaes et al, 2011).

Current financial accounting systems are not suited for valuing everything, some subjects are intangible but still realised to bring value (Chen, 2010). Chen (2010) identifies five incentives that are hard to monetise, but are in favour of green marketing and brings value to the company. Those are compliance with environmental pressure, obtaining competitive advantage, improving the corporate image, seeking new markets or opportunities, and enhancing product value. A brand image is associated with specific attributes of the brand and its perceptions from consumers. It is shown that a positive environmental brand image enhance environmental concerned consumers' satisfaction. It also lowers the risk of environmental related protests and punishments. Deloitte (2007) also anticipate increasing regulation together with both costumer's and employee's values change it shows that sustainability concerns is a moral imperative. On the other hand exaggerating the green value can cause the loss of trust, which is a major part of a positive environmental brand image (Chen, 2010).

Länsilouto and Järvenpää (2010) write about financial driven Finnish companies that began to address environmental issues due to external pressure. The fear of being left out from something important, a need to follow fashion, attract customers and improve costumer orientation were drivers for achieving a certificate such as ISO 14001. Even though the financial driven culture thought of the environmental initiatives only as increasing costs. After implementing an EMS (Environmental Management System) as a step towards the environmental certification, for financial reasons, among other positive effects it was discovered to decrease costs and increased profitability. Thus the financial driven culture turned from being a barrier to a facilitator for green management.

2.3.5 Governmental legislation and policies

A quantitative study by Emtairah et al., (2002) referred to by Dummet (2006) implies that governmental legislation or the threat of legislation is the strongest driver for CER. Sterner (2003) believes in market based policy instruments put in place by society's policy makers. Different kinds of policy instruments can tackle different environmental issues. TEP (Tradable Emission Permits) is one such market-based policy. It hands out amounts of emission permits distributed to companies that then have to converge to the amounts given or start trading with other companies to buy more or sell unused permits. Sterner (2003) also mentions that combinations of policies are a fertile area. Such as Refunded Emission Payment (REP) that combines ideas from the tax system and the TEP. REP could charge for emissions similar to taxes and reward low emissions by refunding what is collected to another measure such as abatement or use of clean technology, which would profit companies like in the TEP policy. Both REP and in some sense TEP create new possibilities to add company value by either cut costs and avoiding emission expenses or even get an income from a competitor that has to pay for their higher emission.

2.3.6 Market advantage

Many companies look towards a future where sustainability will be mainstream and a part of everyone’s strategy. For the moment companies that cautiously adopt a sustainable way of working are far ahead of those who only embrace the winds of sustainability (Haanaes et al, 2011). It is a way to differentiating yourself in the market place (Dummett, 2006). Adopting sustainability will be a part of risk management as preparing for regulatory requirements, keep up a competitive position as customer expectation changes, and even satisfy driven employees’ will to work sustainable or for a modern sustainable company. Companies that turn sustainable across all entities will drive short-term profitability and long-term stakeholder value. At the same time contributing to a better society creates a win-win situation (Deloitte, 2007).

2.3.7 Longitudinal evolution, a look in the review mirror

Holt (2011) does a follow up on Bennet’s study “Ecopreneuring the Complete Guide to Small Business Opportunities From the Environmental Revolution” from 1991, where he presents case studies of companies that adopted the sustainability agenda of that time. Holt (2011) tries to track down the corporations with environmental entrepreneurs grouped as “ecoprenures” in order to find whether they still operated or not, if they have been profitable or not. Out of the 94 companies in Bennet’s study 33% were not found still operating by Holt (2011), most of them were not found in track records at all, thus assumed to be out of business, and four were tracked as bankrupt. Another 11% were not in independent operation any longer as they were part of a bigger enterprise through acquisition. In contrast Holt (2011) referees to studies that suggest that 56% of most medium or small enterprises of all kinds run out of business in the same time span, 1991-2011. The advantages of ecoprenuring enterprises could among many things be due to tax reliefs for renewable energy, subsidies or that they simply had a niche. But 67% of ecoprenures compared to 44% of overall general businesses remained operating in equal time spans (Holt, 2011).

2.4 Implementation and tools

2.4.1 Green management in projects

Projects can be green in different ways, it can be green in general, green by its product’s impact, green due to the project’s impact or it can be green by definition, as further visualised in the upper part of Figure 2.5. The more a project moves towards Green in General, Figure 2.5, the more influence a manager can have on its environmental impact. With focus within the project mainly on other areas than sustainability, green elements of simpler kind can be implemented by the project manager alone and then give the project a greener appearance than it would have been without those implemented elements. When a project moves in the other direction and becomes Green by Definition, Figure 2.5, the frames are already set to be beneficial for the environmental and depend more on technical solutions than the project manager's initiatives. So the possibility to take a major step towards greening the project due to actions as a project manager is easier in projects characterised as Green in General (Maltzman and Shirley, 2011).

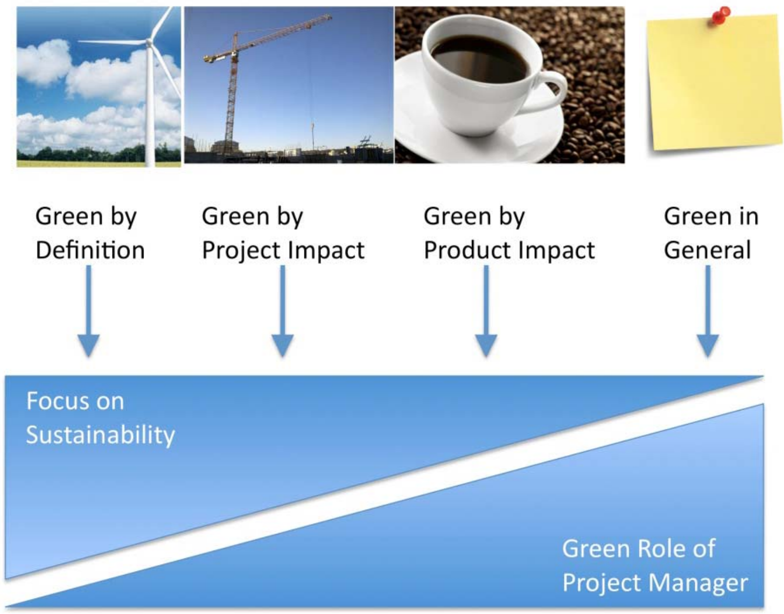

Figure 2.5 - A manager's possible positive sustainability influence on a project by its characteristics (Maltzman and Shirley, 2011)

Kurdland and Zell (2011) present ten steps for a manager to introduce or drive environmental sustainability in an organisation.

1 – *Managers should establish their company's green values*: Environmental driven managers often have personal core values and mental models of environmental friendly organisations. The company's core value should also be clearly stated to become a part of the organisation's culture.

2 – *Managers should formulate and execute goals*: Goals should be formulated and targeted in order to convert the organisation to facilitate an environmental friendly operation, product and service.

3 – *Managers should establish environmental metrics to ensure compliance*: Through using a life cycle approach to find where the organisation's biggest environmental hazard is taking place, the organisation's focus should be received. Then pick a just way to measure progress and if possible use an independent reliable data source. It is also of great importance to understand and address regulatory requirements or even to exceed them.

4 - *Managers should make the business case to go green*: It tends to be a higher burden of proof for sustainability incentives than other business incentives such as research and development. Therefore it is crucial to make the sustainability incentives a business. Profit could be shown in numbers of return on investment, rate of return or in terms of operational improvements. In many cases the numbers can become even more prominent if governmental subsidies or rebate programs can partially finance it. Some initiatives might not be able to motivate by direct financial return but could then be of strategic importance instead.

5 – *Managers should overcome resistance to change*: Turning sustainable is an organisational transformation and will likely meet resistance to change. Resistance can have its roots in disagreement of there being an issue with the environment, some might see their work too important to start interrupting with a green change, it is too much added work, too costly, too inconvenient or just uncomfortable to change. Many tools can be used to overcome those hurdles that together are strong. A passionate leadership, tailored messages for the receiver, educate the issue, led by example and make it easy and to provide incentives are all useful tools to drive change.

6 – *Managers should reinforce sustainability practices and values inside the organisation*: A way of reinforcing and creating a constant awareness of greening the organisation is to create titled positions in sustainability, to give incentives, make it a part of the general decision-making, train and consult internally to increase the level of environmental knowledge.

7 – *Managers should seek buy-in from suppliers*: For greening the whole chain of which your organisation is a part, suppliers are a big part. Many methods for greening your own organisation can be suggested and reused, and then your market power can be added on top of that.

8 – *Managers should engage with customers and competitors*: For the business case to work costumers have to pay for the environmental products or services and in order to continuously improve the environmental efforts and make costumers benefit from it, a creative dialogue with competitors can be beneficial and gain the whole industry.

9 – *Managers should engage with non-governmental organisations, regulators and the public*: The organisation should work with actors around them to ensure that the surroundings and future conditions make it possible for future businesses. Regulations and standards can be steered with both non-governmental and governmental organisations while the public in the end are the ones who will make changes feasible.

10 – *Managers should stay visible*: Sustainability managers become the face for green in a company, so to give speeches, attend conferences, collaborate across industries and participating in university boards keeps the organisations name connected with sustainability.

Managers who will take on this sustainability approach will face a challenge. Traditional skills of a manager to establish goals, staffing the organisation, reinforce values and practices, and ensuring compliance has to be combined with new ones. The novelty of sustainability requires too challenge the status quo and passionately influence changes for a green vision and sustainable initiatives. A manager would have to take all those steps in order to optimise the management's positive uplift in greening the organisation (Kurdland and Zell, 2011).

2.4.2 Strategy implementation

An organisation's strategy is its long-term direction and should cover goals as well as show the advantages it brings to the overall goals (Johnson, Whittington and Scholes, 2011). How the organisation intends to create value for its stakeholders and choosing the value proposition is a central element of a strategy (Kaplan and Norton, 2004). Managers then implement it throughout the organisation, together with strategic specialists, planners and strategy consultants. Important corner stones that have to be in place in order to successfully implement a chosen strategy are financial support and acceptance from owners and top management. Other important success criteria are whether the strategy is feasible and works in practice. For that to be true the strategy need its required resources and that capabilities are within the organisation, or could be either acquired or organically developed. Furthermore no change or strategy will be successful without being delivered skilfully by and with the organisations people's knowledge (Johnson, Whittington and Scholes, 2011).

Kaplan and Norton (2006) argue that implementing strategy is best done by aligning the strategy with its organisation. Attempts to reorganise an organisation to better fit the strategy might solve the focused problems but are also likely to create new ones. Accumulative gains from reorganising are therefore lost or less than expected. To instead aligning strategy with the organisation has shown better results. Kaplan and Norton (2006) recommend the BSC (Balanced Scorecard) for that purpose. The BSC guides a manager what to focus and report on, therefore aligns the organisation to work along with the strategy because the BSC is created with that in mind. Advantages are that progress is reported so the processes can be improved and further aligned with the goals while reaching them. So it improves the focus, surfacing the strategy's values and does so even in a vast spread of geographical location and area of expertise.

2.4.2.1 Balanced Scorecard (BSC)

The BSC intends to make managers focus on a broad set of targets instead of focusing on a personal set that might be the case without the BSC. Typically the BSC relates to four perspectives, the financial, customer, internal and, the innovation and learning perspective. The financial one might refer to profit margins and cash flows. The customer perspective focuses on what brings benefits to the customer such as delivery time and service. Internal perspectives take such as operational effectiveness and reduction in waste levels into account. The last one, innovation and learning, shines light on the long-term perspectives of which could be investments and training (Johnson, Whittington and Scholes, 2011). In its basic performance the BSC has four focus areas but can be customised for an organisation's or department's objectives. With the customisation each department aligns with the relevant strategy, it considers their own set of aims but also open minds to contribute to others as well when local aims are thought of in a broader perspective. As a result the organisation's strategy becomes clearer, of greater structure and more focused (Ye and Seal, 2009).

An effective use of invested capital is starting to go from a sole determinant for competitive advantages towards a broadening view including more soft factors such as intellectual capital, knowledge creation and excellent costumer orientation. In other words non-monetary success factors. Those assumptions are what the BSC is based on and if a firm desires to improve its sustainability performance it requires an improvement in all three dimensions of sustainability simultaneously, so integration can be a major obstacle. Those three pillars of sustainability are economic, environmental and social performance. Furthermore, if environmental and social improvement has stable financial support they will see its way through crisis as well. Sustainability improvements could lead to successful business operations but might not always add to the competitive advantages. But as the BSC has a top-down approach it makes it more likely to be implemented anyway, as top management can put pressure on the implementation, with their eyes on soft factors as well as financial factors. If sustainability is desired in the BSC there are three ways of introducing it. Those are to integrate sustainability measurements into the existing four perspectives, to add a fifth sustainability perspective or to add a separate BSC addressing sustainability. Which way to go is recommended to find out during the process of creating the BSC, the issues to address or the current organisational structure might suggest a certain way over the other. Figure 2.2 shows a step-by-step example of how a Sustainable BSC (SBSC) can be created (Figge et al., 2002).

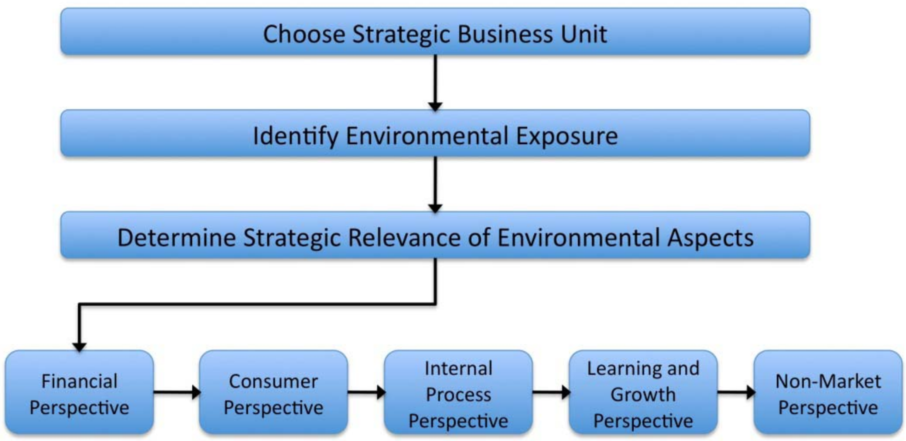

Figure 2.2 - The process of creating a Sustainable BSC (Figge et al., 2002)

2.4.2.2 Office of Strategy Management (OSM)

Kaplan and Norton (2005) refers to a study of 1854 large corporations that showed that seven out of eight companies had problems to deliver a profitable growth of 5.5%, between the years 1988 and 1989. They presented a picture where strategy is planed but not delivered. Their research revealed that, 95% of employees did not know of or understand their strategy, 60% of budgets did not link to strategic priorities, 67% of IT and HR departments were not aligned with the company's strategy and 70-90% of compensations packages to managers in varying levels were not connected to either failure or success of strategy implementation. What Kaplan and Norton (2005) suggested was to implement a new business unit called OSM (Office of Strategy Management) that take care of communicating and pushing to make sure the strategy implementation becomes reality, see Figure 2.1. By being a communicator they suggested that the OSM also gathers progress reports and should present it to top management regularly where the strategy implementation can be evaluated and improved. The companies Kaplan and Norton (2005) studied and did start an OSM showed increased strategy implementation and showed a different attitude towards working with its strategy. (Kaplan and Norton, 2005).

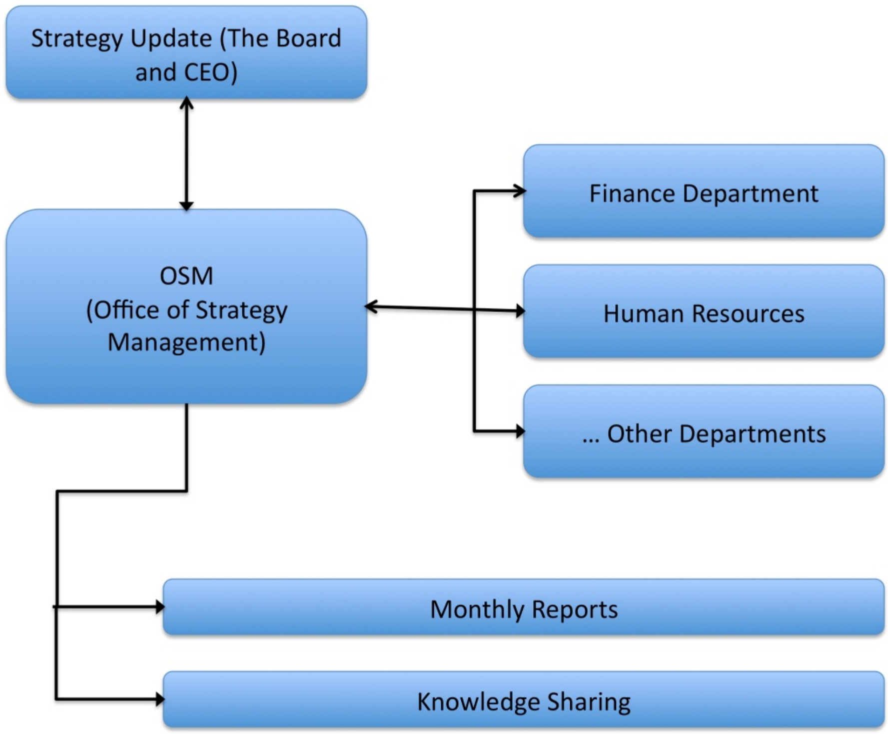

Figure 2.1 – An organisation with an OSM as suggested by Kaplan and Norton (2005).

2.4.2.3 Strategy as Practice (SaP)

Another way to look at strategy implementation is SaP that focuses on what people in an organisation actually do to implement a strategy instead of something an organisation have as a tool and can show the world what they have. It tries to find ways that methods and plans for strategies can be translated into every day work and what implications that might have (Jarzabkowski and Spee, 2009). It looks at strategy as an on-going transformation within a social context of an organisation. Observing how strategy really is implemented and how employees grasp and use the strategic message is hardly done through questionnaires or interviews as the models might create a mental static picture of how the strategy is planned to be implemented (Sage, Dainty and Brookes, 2012). Instead how SaP is within an organisation has to be observed to better find out how the strategy really has been implemented. So SaP goes a bit deeper than the models to help each practitioner actually do the strategy (Jarzabkowski and Spee, 2009).

2.4.3 Environmental Management Systems (EMS)

Classical management tools and systems can be tailored for the purpose they are to be used for. For example PDCA (Plan-Do-Check-Act) is a four-step cycle for improving quality, it has its varieties and different names due to who implement it, for example one variation is PDSA (Plan-Do-Study-Act). If an environmental aspect would be put in the cycle it could have turned into an EPDSA (Environmental aspects- Plan-Do-Check-Act) (PMBOK, 2004).

ISO 14001 is a comprehensive EMS from which companies by using it can get a certificate issued by the International Organisation for Standardisation. It is a series of recommendations, not requirements, to align the company's own environmental goals with the company and not focusing on its environmental impact, but its strength is that it focuses on continuous improvements, see Figure 2.3. ISO 14001 suggests that a successful EMS should be (Howe, 1997):

- appropriate to the nature and scale of the organization's activities, products, and services
- including a commitment to continual improvement and prevention of pollution
- including a commitment to comply with relevant environmental legislation and regulations
- providing the framework for setting and reviewing environmental objectives and targets
- documented, implemented, maintained, and communicated to all employees
- available to the public

Pojasek (2007) talks about the ISO 14001 as the globally best-known EMS but that many companies just want the certificate on the wall as they are expected so from the public. That is the minimalistic point of view but Pojasek (2007) continues to argue that it has to be used more extensively and move beyond the confines of ISO 14001 in order to start bringing value to the company instead of being something for show. ISO 14001 is a broad and flexible EMS that requires continuous improvement but to bring value. Pojasek (2007) recommends taking the three steps, improvement, infusion and implementation. The effort of improving an EMS will be more beneficial when it is spread and actually used by the whole organisation.

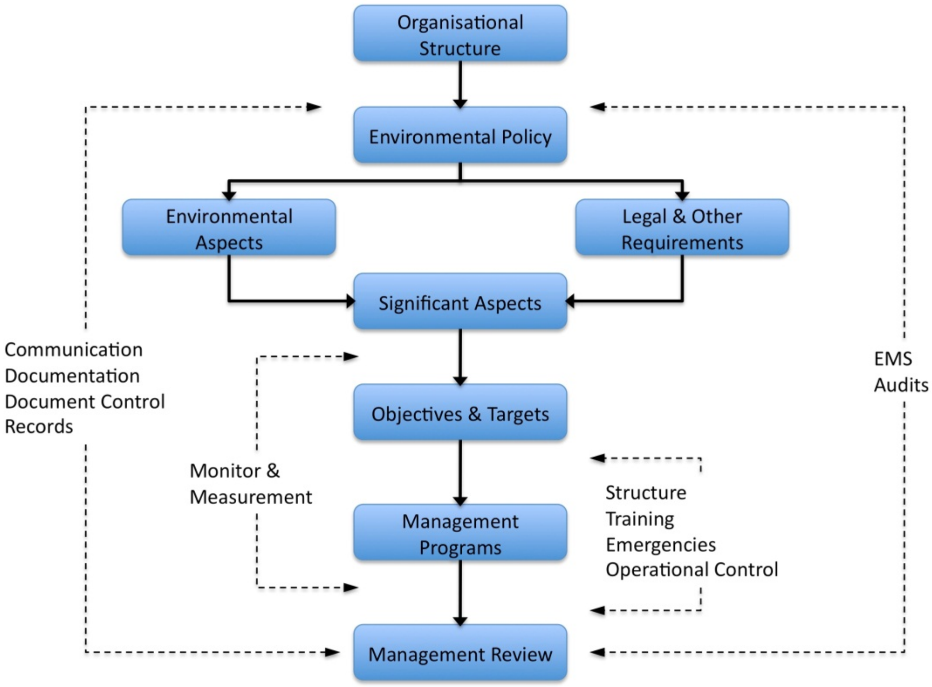

Figure 2.3 – ISO 14001 framework

2.4.4 Sustainability report

The Global Reporting Initiative (2012) is a non-profit organisation that provides guidelines on how to report sustainability, so that sustainability can be reported similarly to for example finance reports. In its third generation of guidelines it shows a recommended framework on how and what the report could be presenting, but it is flexible due to what and how much an organisation desires to reveal.

Intentions are though not for the sustainable development to stagnate but be strengthened by sustainability reports. The objectives given by the Global Reporting Initiative (2012) are:

- Enhance stakeholder awareness of linkage between sustainable development and poverty reduction, and resource conservation and biodiversity protection.
- To strengthen sustainability performance as well as competitiveness.
- To increase the capacity for stakeholders.
- To increase transparency regarding impact of foreign companies that invests in developing countries.

2.5 Tougher environmental vision required by some

The overview given in this section shows that there exist a lot of different means to reach environmental sustainability, however, Ählström, Macquet and Richter (2009) argue that there might not be enough critical perspectives to sustainable management. They are afraid that if research support marginal adjustments the search for something more than just marginal improvements might be lost. They also discuss if financially strong companies could even promote small marginal improvements, in order to remain operating as close to the current situation as possible but still be seen as green. A reason for not being critical enough Ählström, Macquet and Ritcher (2009) advocate and explains with a quote from Habermas in 1977: “The immunizing power of ideologies, which stifle the demands for justification raised by discursive examination, goes back to blockages in communication, independently of the changing semantic contents”.

2.6 Literature reflection

The literature review is built upon four major topics, environmental aspects, the tension between long-term and short-term focus, strategy implementation and green management. The environmental aspects and the tension between long-term and short-term focus is in a way describing the issue while strategy implementation and green management is interpreted as ideas leading to a solution. Strategy implementation is thought to be a developed area that could be set as an example on how to start implementing environmental goals as the way strategy is, but tailored for the new purpose. Green management has started to develop thoughts on how to get over thresholds of implementing environmental initiatives, which is important as the management are the ones who shall run the changes. What issues a company is responsible for can also be discussed as of how much of its customers and suppliers environmental impact the company can affect or similar with any other participants in projects ran by the company. Through this web of operations that creates a project, support has to be found for the set environmental goals.

The classic measurement of success has been sole monetary wins but there are suggestions on how to make for example the BSC into a Sustainable BSC (SBSC), to add soft factors like non-monetary goals and values to the strategy, of which could be environmental emphasises. Environmental literature suggests that the most value bringing aspect of turning green is the improved brand image, which is hard to put an exact number on. Other advantages are to prevent from future regulations or punishments, stay competitive, take part of possible subsidies, and satisfy customers and employees concerned with the green issue. The possible advantages and drivers are many, to neglect them all would be to neglect possibilities and risk adverse situations. As some believe that environmental changes has a higher burden of proof it might be an idea to have a structured way of implementing the environmental strategy.

Greening a project can have wide varieties of how it appears possible. As a manager and from the management's point of view it is for example important to get everyone aboard on the chosen environmental strategy, creating green values, implement relevant and measurable environmental goals and lead the way for that change to take place. If the project is not green by definition it is even more important as that is when the management and each managers' action can have the greatest positive impact. But implementing new ideas into the existing structure can meet resistance from all directions and can be of many kinds. In order to profit the environment, sustainable change has to be improving the environment over time. Incentives to work for long term-goals while staying afloat and mix those well, lay the foundation for an inspiring situation to work with all possible issues and take the company forward.

So a combination of those areas, strategy implementation, environmental aspects, green management in projects and the tension between short-term and long-term focus, should be able to nurture a new way of supporting long-term environmental goals managed in projects. Mature because it borrows from more tested management methods such as strategy implementation. At the same time as environmental thinking is integrated, effort to decrease the long-term and short-term tension can be put in place. Not at least because the environmental concerns are for a distant future, but as when a bigger change might be done it might get widely noticed by employees in the organisation. To start elaborating on the marriage between those subjects can hopefully spiral the development of a more modern style of management. To start somewhere is part of reaching a solution. Through discussing and elaborating on connections between multiple short projects and the lasting environmental gains could have the possibility to challenge the current management towards thinking that takes big steps forward, both in the mind-set of managers and in environmental gains.

Interviews with employees at five companies are later presented and analysed in comparison to this literature review. Some thoughts from the companies had mutual ground in literature. Those thoughts were brought together to create a conceptual model which is aimed at answering the research question.

3 Method

3.1 Research approach

The overall method has been to gather published literature in areas related to the research topic. In order to understand how environmental issues and goals are addressed in companies on a management level, interviews with five employees at five different companies were conducted. The literature and empirics were then interpreted and analysed to attempt answering the research question. Continuous feedback and fruitful discussions with the supervisor and fellow students have through the process guided and inspired.

3.2 Literature review

Initially Google was used to get a quick overview of what was most recently discussed and to elaborate on keywords to use later when searching in data bases. Reading books and journals in the field of interest brought an idea of what was already done and in what directions studies were aiming. The literature collected for the review was mainly from previously used course literature and found using Chalmers University's library and its databases, additional literature was at occasions found using NORA at Northumbria University's library. The main body of the literature review was done before the data collection but was updated when more topics were discussed during the interviews.

3.3 Qualitative focus

The literature review gave hints on how a more developed area of strategy could have similar grounds with environmental management. Crossing the fields of strategy and environment has been elaborated by (Länsilouto and Järvenpää, 2010) and together with the novelty of the environmental part (Kurdland and Zell, 2011) it led into a qualitative study rather than a quantitative. Bryman (2008) was used as a guide to perform various parts such as preparing, performing and analysing the interviews for a qualitative study in an academic correct manner.

3.4 Interviews

Companies that were contacted for interviews had a project based organisational structure in common. The interviewees were all project managers in varying levels and were not required to work specifically with environmental issues themselves. Out of the five interviewees three were females and two males. Questions were formulated in order to be the same for each interviewee but to not cover the whole interview time. In order to leave space for interesting discussions to surface but still obtain some common data from each company each question was formulated with a mind-set to not lead the interviewee, emphasise discussion and to be focused on topic. Having a similarity in organisational structure between the companies but have companies operating in various fields was a conscious choice to isolate the project management and organisational part of working, and not address an industry specific solution. In some sense the answers to the prepared questions did come out in different ways due to the differing nature of each interview. The answers were then also slightly interpreted in order to create the comparable tables, see Table 5.1, 5.2 and 5.3. Each interview was held at each company's facilities and was almost an hour long, they were recorded for the possibility to recall parts of the discussions later, additional questions and clarifications were then held over e-mail conversations when needed.

3.5 Ethical considerations

Interviewed companies have been asked about their requests for storing and using their data as well as if they had any other requirements. Otherwise the universities' guidelines are used.

3.6 Analysis

Analyses and conclusions have been in the back of my head during the whole process, each interview had some unexpected outcome that affected the reasoning through the process. In the end the final analyses was expressed in words and visualised in models from having been developed via small notes and thought appearing when least expected. With the full amount of data gathered connections between literature and practice became clearer and eased the reasoning.

3.7 Evaluating methods

Some companies suited for this study turned down the opportunity to take part, it made the number of companies a bit less than planned to and companies with a slight different profile took part instead. It is unclear how this coloured the study but in some way it did as the sample of companies changed. The low number of participating companies might also have added to the analysis' deviation. Another issue has been to join four different areas into one, the weighting of each area of how much it should contribute, how it should be interpreted to not interfere with the others and all in order to contribute to the research question.

3.8 Research focus

The research has been focused on bringing literature perspectives together with project managers in different project organisations views together for the possibility to answer the research question in a way acceptable from both perspectives. The study has been focused on four month and on companies located in Sweden.

4 Data Presentation

Here each participating companies and interviewees will be briefly presented together with what the interviews contributed to the study. Information about the company is partly taken from their web page and partly from the interviews. Data gathered from each interview is presented one by one, a data summary ends this section and the next section presents and analyses the data.

4.1 Company A

Company A consists of 14 employees, operates mostly in Sweden but are looking to expand into other Nordic countries and they supply costume made offers for logistic facilities such as storages and department stores. They offer something they call Green Options to their buildings in compliance with the EU initiative Green Building Programme. Their environmental goals are a bit unclear and general without any strict timeframes.

4.1.1 Company A interviewee

The interviewee is a civil engineer with a focus on Design and Construction Project Management and has worked for Company A as a projection manager for two years after graduating.

4.1.2 Company A interview summary

Company A's environmental goals are not set within specific time frames, nor uses a specified method to deal with them or are followed up as the way for example finance and quality is. The budget is followed up four times a year, time plans are checked every second week and quality is continuously overseen. That they do not check environmental goals does not mean they do not work with environmental issues, though it is just not done in a methodical manner or is strictly documented.

Drivers for their green initiatives are of two kinds, one is the business advantage and the other is personal engagement. So they are happy to work for the environment at the same time as they drive business advantages. They see the existing environmental regulations as quite hard but well balanced, yet they still strive to perform better. Requirements for the Green Building Programme's certification are always complied but the certification is not always applied for due to the cost of it. So concerns of improving their business are not focused on the environmental issues for the moment, but rather to expand into new markets. An example of space for environmental initiatives due to personal engagement was that the interviewee co-decided with the costumer to look at all building materials included and replace the ones found on a list of being harmful. The knowledge from that replacement process benefits future projects as well as some replacing objects were cheaper than the original ones. It would then be foolish to not to continue using the cheaper object with less environmental hazardous components.

Environmental goals are set for each project and are ultimately controlled by the client. There is a tendency of more ambitious goals when the client will own the building afterwards instead of leasing it, if it is owned by the client they also desire to show a sound green business. After each project it is documented in detail but the focus on environmental issues is not big. To measure environmental success is hard as goals are non-measurable.

Company A has a long-term focus with guidelines of where the business is striving to be in five years and how to expand into new markets. But on a project management level the horizon is no further than to the next project ahead and salaries are partly based on a one-year business achievement.

The interviewee's own reflection on how the environmental issue could be treated better is by governmental regulating laws, but within the organisation the easiest step would be to assign responsibility to someone engaged with environmental issues to take care of and drive the environmental awareness.

4.2 Company B

Company B has around 300 employees operating mostly in Sweden but also internationally. Their business is within five areas, HVAC (Heating, Ventilation and Air Conditioning), Energy and Environment, Control and Surveillance, Fire and Risks, and finally Technical Administration. Their projects are among other to aid for environmental certifications, within the constructions sector and perform changes for industry's facilities. The interviewee is from Energy and Environment. Company B has an ISO 14001 certification and their environmental policy is valid throughout the whole organisation and contains an environmental handbook, which among other things has an action program for Green Management and environmental checklists. Their environmental goals are mainly internal as clients set most environmental requirements for projects.

4.2.1 Company B interviewee

The interviewee has worked two years for Company B as an environmental engineer and is a manager for smaller projects. Post studies in environmental science the interviewee have gained a few years work experience from other companies before engaged with Company B.

4.2.2 Company B interview summary

Company B mostly has internal environmental goals and for the projects their client decides what green initiatives to run. The internal goals are for example to lower their CO_2 emission through lowering transport emission from employee's travels and operate in an energy efficient building. That is why they recently moved in to new facilities that are more energy efficient and close to public transports. An apparent philosophy is that if Company B is concerned with environmental issues, they are more likely to push clients in that direction.

Each year Company B produces an internal sustainability report where goals are followed up and measured in numbers. The report is based on the company as a whole and not on each project or department. Each year they also observe what regulations that might have changed that they have to comply with and new goals are set for the following year.

Company B use a computerised documenting system where projects are documented and made transparent for the management. In this system that they call experience feedback, there are specific parts concerning environmental progress in the projects. They also have a standardised model of how projects should be run and documented in order to find information easily, as information is always on the same place. On top of those systems and models they have both internal and external audits to control their environmental progress.

The interviewee believes that in order to become successful with your environmental work, engaged employees are required. For example it is most likely that those in the Energy and Environment department know more about the environmental goals than other departments. One of the possible improvements that the interviewee sees in Company B is to inform more employees about their environmental goals. The interviewee also points out that by knowing the goals together with a personal interest lays the foundation and gives the possibility to change for the better. By experience the interviewee sense that Company B listens to its employees and evaluate desired changes.

4.3 Company C

Company C has approximately 350 employees in Sweden and Norway. They offer professional project management, activity development and specialist services mainly within building society and energy. They hold an ISO 14001 certification and their Norwegian part also hold a Norwegian certificate.

4.3.1 Company C interviewee

The interviewee from Company C has an academic background in geosciences. Post study experience is within several companies until a few years ago when Company C became the employer as Project Management and consultancy became more interesting. The interviewee holds a position as a Project Manager and environmental coordination.

4.3.2 Company C interview summary

Company C does not work that much with internal environmental goal as with clients' goals for each project. The goals are usually set to comply with regulations but not very often more than so, sometimes higher ambitions are set but the reason is then often good marketing. When it is for marketing reasons it is often important that plans of what to do looks good rather than what is actually achieved. The interviewee finds it hard to set tougher environmental goals than following the law but with good relations with authority, agreements can be made on what should be made and how the regulations should be interpreted. With the authority to back suggestions it is likely to get them accepted as they as consultants inherit some of the authority's respect and power to apply on its client. In that way personal engagement can affect in a positive direction. From experience it is noticed that when cutting costs or negotiating for a project it is most likely to cut down on environmental concerns rather than financial or other issues.

Following up the project and environmental goals are done in the same process. This means that the overall environmental goals are basically the same as those for the project. The progress is checked and reported on each quarter of a year. The follow up is done through a control program of which the main part is a checklist, not standardised but hold very similar content for most projects and consultants. In the report on progress environmental issues do not get the same attention as other issues even though they recently is brought into the main report instead of being treated as a separate concern.

Company C has a strong long-term focus as they are working with a lot of changes in infrastructure that takes a long time to build, they inherent the long-term focus from its clients. The short-term view is narrowed down to stay flexible for changes.

The interviewee's own thought of how to improve and stay environmental friendly is to be clear from the beginning of the projects what environmental emphasises you want to include. If not so, funding for those planed emphasises might not exist and as a result rejected. To improve the environmental work includes staying up dated with new technologies and showing authorities what they are capable of, from that authorities can set stiffer but still achievable regulations.

4.4 Company D

Company D is a consultancy and educating firm that specialises in strategy, organisation and effectiveness, project management and management systems. Their projects are run with customers to improve their profitability and effectiveness. They have around 40 employees and operate around Scandinavia. Their environmental emphasises are focused on complying with regulations, perform high quality on delivered work, contract suppliers that are environmental aware, make active choices for transportation and continuously improve their environmental performance. They also hold an ISO 14001 certificate.

4.4.1 Company D interviewee

The interviewee for Company D has worked there for almost three years. Initially an education within agronomy led to a few different jobs within environmental management. Today the interviewee manages smaller projects holds a position as a consultant and environmental coordinator.

4.4.2 Company D interview summary

Company D's drivers for environmental emphasises are mainly business driven as they supply help to integrate EMS for customers. But before they recently got their ISO 14001 certificate they worked in accordance with an environmental policy that were turned into goals as they got their certificate. With that they also became trust worthier as EMS implementers when they practise what they preach.

At Company D they have their own reporting and documenting systems where quality and environment issues are documented together and they try to create a connection between the strategies and environmental emphasises. Still quality gets more attention than the environmental issues. Within those systems there are routines, checklists, templates and case descriptions. There are also newsletters and information about project running for everyone to see. Their environmental goals are set to a few years ahead but most focus is on the closest goal a year ahead that is a part of a PDCA cycle (Plan-Do-Check-Act).

When Company D helps customers implement an EMS they make sure that goals are SMART (Specific, Measurable, Attainable, Relevant, Time-oriented), that they include plans for continuous improvements, set aside resources and that one single person responsible for the environmental goals. They also find and focus on the most important aspects for the customer to work with and make sure the ambitions are on a reasonable level.

Personal engagement with the issue as a success factor is valid also for Company D. Employees have the opportunity to suggest improvements that if accepted is applied through the whole company. With personal engagement it is also possible to suggest further environmental improvements for customers. The interviewee believes that if more employees would affect clients in adopting an environmental approach in general projects, that would be the easiest way to improve their environmental emphasises. Everyone in Company D has got an environmental introduction but rarely use the methods taught in projects not specifically aimed at being green. If some continuous information or education would be implemented just to raise awareness and remind employees of their possibilities, methods would be more widely applied.

4.5 Company E

Company E have 1700 employees in Sweden and over 45000 worldwide. They produce a wide range of equipment for hospitals and healthcare companies. Their environmental premises are mostly to comply with the European Union's bans or directives, such as WEEE (Waste Electrical and Electronic Equipment Directive), RoHS (Restriction of Hazardous Substances Directive) and the EU Battery Directive. Even with directives that are not yet applicable to their business are implemented as it is thought to be in the future. This company is a bit diverse from the others in the way that they work in a bit less strict time framed projects. Those projects are aimed to improve operations and their products.

4.5.1 Company E interviewee

The interviewee from Company E has been employed for a bit more than two years after completing engineering studies within supply chain management. For the moment of the interview the interviewee holds the position as Section Manager.

4.5.2 Company E interview summary

Company E's drivers for environmental improvements are mainly governmental regulations, and then priorities are business benefits and image improvements. If they find themselves breaking the law powerful actions are taken, it goes under the term 'fire fighting' to visualise the importance of action. When projects and its managers are evaluated it is through their EMS (Employment Measurement System) where each employee sets their own SMART (Specific, Measurable, Attainable, Relevant, Time-bound) goals and follow them up. Compliance with goals is graded 1-5 and the EMS is connected to another separate system called strategy deployment. The strategy deployment system is a system for aligning the strategy with the organisation. Even though all these systems are connected to the EMS, the EMS is mainly based on four criteria's, quality, costs, time and EHS (Environment, Health and Safety). Their kind of sustainability report is an EHS update document. An outspoken policy is that severe EHS issues should always be solved before economic interests can have an impact. EHS also has its own reporting system for flaws discovered, it is called Concern Reporting System where EHS issues and near misses can be tracked.

There is a minimum level of environmental emphasises but there is space for engaged staff to do even more. The goals that each project manager set with their own manager for projects can be more or less environmental oriented due to the level of personal engagement. When environmental goals are set for a project that is a criterion for evaluation, otherwise environmental criteria are only evaluated when the project has an environmental focus. Recently they got a new CEO (Chief Executive Officer) whose environmental interest is greater than the previous CEO's, as a result environmental incentives are increasing.

Company E is a global organisation and have standards for most things, which mean that regulations in one area have to be a minimum standard for all areas. It results in that the organisation complies with hard regulations originated in one area in less hard regulated regions as well. Their reporting systems are many, have matured and are wide spread within the organisation to align it with its strategy. Environmental goals are not put aside as an external issue but integrated in existing reporting systems together with strategy, quality and costs. Even though environmental issues are less prioritised than quality, costs, time and strategy as long as environmental regulations are followed.

Company E has long-term goals that they break down to yearly goals to fit the everyday work. When long-term goals are revised, short-term goals go through changes as well. The long-term focus makes environmental goals set higher than converging to existing environmental regulations as they aim to fulfil future requirements without ending up in the fire fighting situation. A severe fire fighting situation could harm Company E's reputation and ultimately its brand image.

The interviewee believes that the best way of reducing Company E's environmental impact is to focus on employees' travels. Other areas have been improved with either an environmental view or improved due to other business beneficial reasons. Travelling within work could be revised to reduce its impact. But travelling to and from work would be easiest to change for the better. Many employees live in a larger city 70-80 kilometres away and public transports are expensive which results in many shuttles with one person per vehicle. The interviewee thinks that if Company E counts its employees' travel to and from work as part of their environmental impact, they would give incentives to use the public transport or travel together.

4.6 Data summary

As Figure 4.1 shows there is often some spread between how far into the future environmental goals are set for and how long the projects to reach there are. Even though it is an estimate and the interviewees often mentioned a span of project duration, it still showed that environmental goals often have to be reached through efforts in a numerous of projects. Worth noticing is that Figure 4.1 is based on interviewees estimates and not statistics. The special cases in Figure 4.1 were that Company A did not have any time specified environmental goals and Company C inherited their environmental goals from the projects they worked in and the clients that they worked for. But to make sure the overall environmental goals are reached, each project has to be obliged to and get credit for its part of reaching the goals. Some companies follow up the environmental goals in each project while others do not, but either way it does not have a major part in being a success criterion of the project. When environmental goals are set, a path of how to reach there should be set as well. The bigger projects to happen in a company should logically be known some time in advance and could then be directed to contribute the environmental strategy with some allocated part. In other words the environmental long-term goal should be broken down into parts that can be managed in projects that you know of in advance.

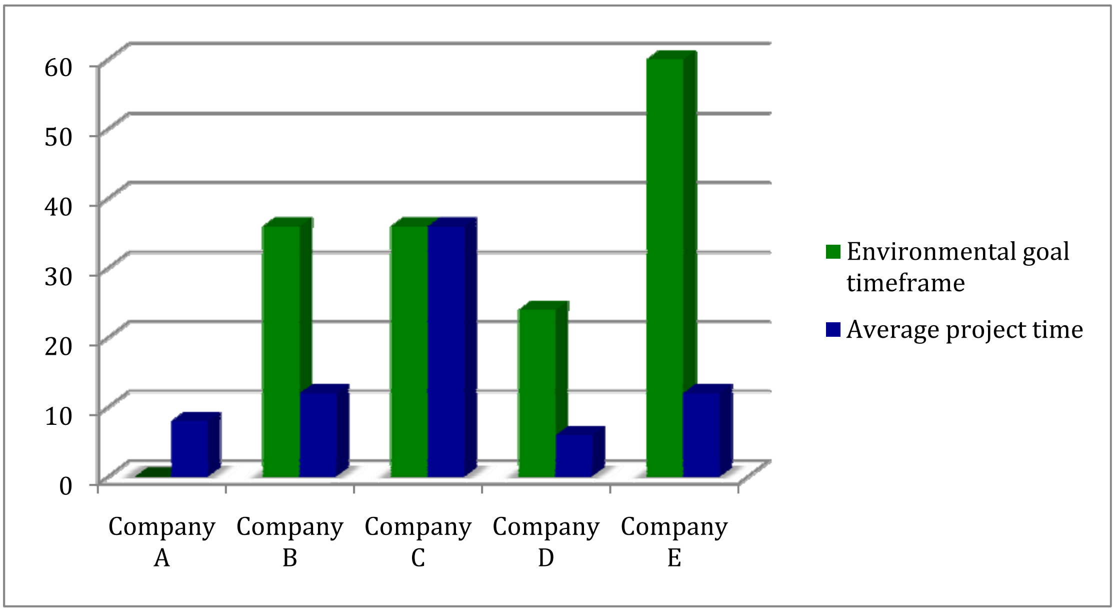

Figure 4.1 - Comparison between the time frames of interviewed companies' environmental goals and average project durations (based on interviewees estimates)

All five companies thought of their own environmental emphasises as good and was happy with their performance, they also talked about that constant improvement was a key to success. Each company had their own way to address and work with environmental issues and focused on some methods that could be connected with some part of academic literature, but left other parts less integrated and had those areas to improve within. Each company had reached various levels of emphasises and had different options for improvement. For example:

Company A focused on delivering solutions in line with the EU initiative Green Building Programme but did not have concrete environmental goals or any one person responsible for those. To ensure improvements are generated benchmarks and someone responsible are needed to put pressure to get things done and follow them up. Without a measure it is hard to either success or fail.

Company B has a clear structure of how internal environmental goals are to be addressed and have internal goals for short-term and long-term measures. A computerised documenting system and an utterly responsible person who follow up goals and writes a kind of sustainability report are all examples of which is recommended in literature. But what literature discusses is whether a company is partly responsible for suppliers and customers emphasises as well.

Company C works for constant improvements but still inherent most environmental goals from its clients that are mostly satisfied to comply with regulations. Clients' goals are often long-term as the projects are of that character and if some environmental emphasises are not financial supported from the beginning they might later be excluded. That could support a greater mix between long-term and short-term goals and raise the question of how much a company's environmental responsibility is inherited from its clients and the other way around.

Company D sells services to help integrating EMS in clients companies and have adopted many methods, such as the PDCA loop, SMART goals, integrated environmental with other strategy goals. Company D has adopted much and wide environmental knowledge in projects that are green by definition. As a company that also provide consultancy within strategy and project management Figure 2.5 suggests that is where managers can have the bigger impact on projects, as they are not already green by definition.

Company E has well developed systems for information flows and detecting errors, goals are SMART and goals have a balanced mix between long-term and short-term among other methods that has support in academic literature. Other parts of literature suggest that environmental emphasises bring company value first when more than minimum efforts are aimed at. Company E looks behind and follow regulations instead of embracing opportunities.

5 Analysis

If no specific company is mentioned a general picture of the companies participating in this study is referred to.

Table 5.1, 5.2, 5.3 presents interpreted and shortened answers to questions that all participating companies were asked. This more comparable view can be used to find connections and varieties in the way the companies work.

Table 5.1 Comparison between interviewees' view of their company's environmental emphasises

Environment					
	Company A	**Company B**	**Company C**	**Company D**	**Company E**
Environmental drivers	Law and business, further are personal engagement	Mainly personal engagement and ISO certification	Laws	Business and to set an example	First priority is complying with laws and secondly business
Environmental goals	Loose and long-term, but they're not time concrete	Mostly on a yearly basis and thought of as internal issues are easiest to handle	Inherited from client	Internal goals but are also trying to push clients to tougher goals	Following laws, further goals can be set by each manager according to their personal emphasises
Environmental goals follow-up	No specific follow-up	Follow up every year with an environmental report	Check if they comply with laws are done mainly through a check list	SMART goals are measured. They have their own reporting system where both quality and environment is treated.	Goals for the organisation is controlled but not followed up in each project, only when the project is clearly focused on environmental issues
Environmental responsible	No one specific, the upper management is ultimately responsible	Yes	For each project, but not for the company	Yes	Yes
Environmental goals implementation	No specific method, each individual's engagement drives	Through communication. Their computer based reporting system documents changes	Through control of progress	Goals are communicated and questioned when not complied to.	Basic goals are implemented in an organised and controlled manner, engaged managers own goals are managed by each manager and their boss

Table 5.1 shows that the most common driver is connected to regulation or certifications of some kind and that most companies have assigned someone specific responsible for the environmental goals. With the environmental goals there is a big

spread of what they hold, but in common is that most goals are set for the own company and the viewpoint is not the big picture which could include all parts of the operations the company is involved with. The goals might also reflect that the decision makers' own interpretation of environmental issues shines through. The goals are mostly internal focused but it might be hard to have full control over operations partly executed by others but in collaborations all participants are affected, positive or negative. How follow-ups and implementation of environmental goals are treated varies, maybe because each company has their own goals that need its special implementation and follow-up or that each company choses to work their own way creates a non-unified picture. The general way of implementing the environmental goals is to communicate the goals and sometimes control if they are followed. How structured the implementation is seems to be linked to the size of the companies. The company size did not seem to correlate with the level of emphasises, Company A and D were the two smallest companies and Company D had a much higher level of environmental emphasises than Company C and E while Company A had much less than those.

Table 5.2 Comparison between interviewees' view of their company's general projects

General project management					
	Company A	**Company B**	**Company C**	**Company D**	**Company E**
General project duration	6-12 month	20h-a few years	A few years	1 day-a few years	3 month-a few years
General project goal/driver	Economic	Bottom line economic but some are of other nature as well	Economic	Economic	Very clear and business based
General project goal follow-up	Quality - Continuously, Time - every second week, Economic - monthly, through meetings	The same computer based reporting system as for environmental issues	The same system as used for environmental goals, even though general goals are often higher prioritised	The same way as environmental goals though more extensive.	Everything is measured and followed up in a matured and aware manner, goals are SMART (Specific, Measurable, Attainable, Relevant, Time-bound)
General project goal responsible	Economic - finance department, Quality - external consultant	Yes, they have a specific responsible for other areas such as economy and quality	Yes, an overall responsible exists who is utterly responsible, but each area has its manager who is responsible as well	Yes, there is responsible people for each goal	Each Project Manager is responsible for their project goals, on a higher lever Programme managers are responsible for wider goals

Table 5.2 indicates that the overall project driver is mainly based on financial reasons compared to legal reasons for environmental goals. Otherwise the general goals and follow-ups of those do not differ much from how the companies treat their environmental goals, the goals are joint together though the environmental issues might get less attention and are of less importance. Company A and C that did not have as structured environmental emphasises as the others, see Table 5.1, narrows down the gap when it comes to general emphasises in Table 5.2.

Table 5.3 Comparison between interviewees' view of their company's different focus on long-term and short-term goals

Long-term / Short-term					
	Company A	**Company B**	**Company C**	**Company D**	**Company E**
Short-term	Short-term wins generate bonus	Short-term wins generate bonus	Stay flexible in their long-term view	Mostly yearly based goals	Short term wins generate yearly bonus, project manager's status within the company is changed slight with each project
Long-term	Excists but not emphasised	Exists as to own shares of the company you have to work for the company. But not that far down in the hierarchy.	Mainly long-term oriented	Exists but not strongly emphasised	Long term goals are set clearly and broken down to yearly basis, Long-term goals are changing and then also broken down yearly goals
Focus	Short-term	Mixed	Long-term	Mixed/Short term	Mixed/Long-term

Table 5.3 show that the companies have a unified clear vision of how the short-term work is about to be run, but the same clear vision of the long-term efforts are not as unified among the companies. The bigger the company the more focus is leaning towards long-term thinking while smaller companies in this study have a more short-term oriented focus.

In general it seems like the companies' environmental goals are not something most employees in its full extension are aware of. Methods used to address goals are not strictly taken from academic literature or could not be named after specific methods, even though the logic can be seen as similar to known management methods. How to work with their environmental issues seem to be developed by each company themselves. That can be considered both good and bad. Good in the way that it will be tailored for how the organisations are built and operate. Bad in the sense of everyone risk doing the same mistakes instead of learning from others. What leans in the bad direction is that the participating consultancy companies tend to lay the responsibility entirely on their clients and refer to them when decisions are non-favourable for green business.

Everyone is aware of environmental regulations and strive to stay on a safe distance from breaking them. That would be the strongest motivation for implementing and improving the environmental management while the second strongest would be due to personal engagement. Each individual’s engagement seems to be seen in each company and also seems to a big part of why some companies might go beyond regulations. Business advantages are also mentioned as drivers but in examples given that is not as much a sustaining motive as a nice way to capture the seriousness in the company’s green efforts, as business might be seen as more concrete than environmental charity.

The interviewees have explained a variety of different methods to keep track of how goals should be complied to and how they are followed up. For example through communication, computerised documenting systems, checklists and by having indicators in various computerised reporting systems that alarms when something goes out of plan. The range and sophistication of each company’s method seems to be correlated to the company’s size. Smaller companies tend to have less strict environmental goals and a weaker and more spontaneous implementation of them. While bigger companies have outspoken environmental goals and both a preferred way to implement them and another to follow them up. Middle-sized companies are also somewhere in between those extremes. Reasons for this could be both from that the smaller the company, the easier it is to oversee the whole process without simplifications and summarised numbers. Or it could be that bigger companies have more eyes on them and therefore have to be able to show that concern is taken to not gain bad reputation.

6 Conceptual model

This section presents a conceptual model that is inspired by discussions during the interviews and based on those ideas that had support in the literature as well. The conceptual model in Figure 6.1 also tries to address the research question: How can long-term environmental goals be managed in projects?

As strategic goals and environmental goals in particular need to be set for a distant future it is important that they do not get lost in short-term operations. Figure 6.1 is a model that aims to introduce a way of thinking in order to implement strategic methods with environmental goals and thoughts that could lower the tension between long-term and short-term efforts. It does not necessarily have to be environmental goals or strategies, it works for strategies in general.

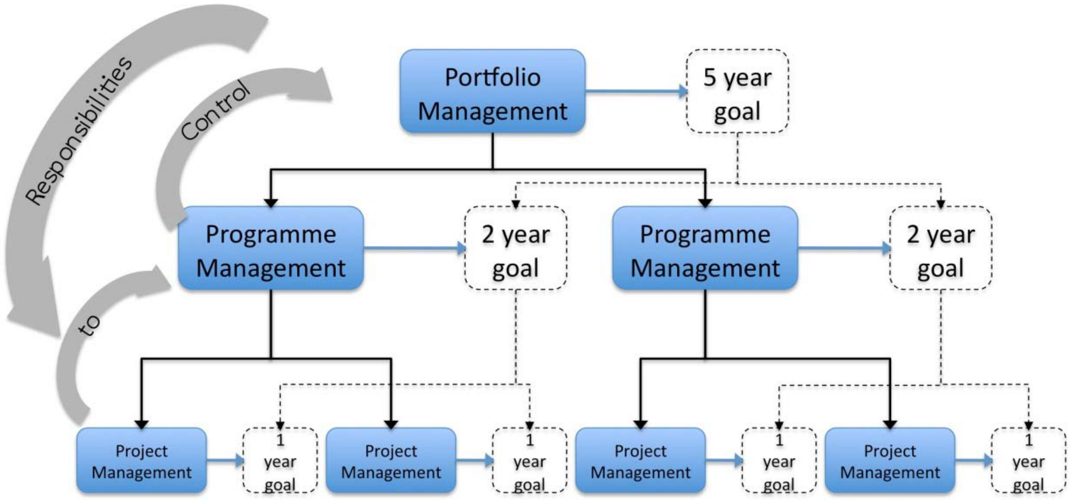

Figure 6.1 Suggested conceptual model to manage long-term environmental goals in projects

Inspiration that led to the model in Figure 6.1 was ideas of improvements in companies elaborated during interviews and which had support in the literature review. The ideas the model is based on are:

- Goals that are broken down in many time frames are suggested by Dodd and Favaro (2006) and are used in Company E.
- Assign environmental responsibilities are the way Company A thinks environmental improvements are easiest done. Lenzen and Murray (2010) also talks about finding what each company is responsible for in the same way as individuals should be in Company A's idea.
- Bonuses and incentives are directed towards the impletion of strategy and reaching goals instead of only financial gains is an idea taken from Kaplan and Norton (2005). If reaching goals were incentives for bonuses, focus would turn towards realising even the environmental goal. Company B believes in a higher level of engaged staff within the issue which probably would be the case if bonuses were given according to the level of strategy implementation and how well goals are reached.

- It was not often the interviewees knew their environmental goals but they often knew more of financial and quality goals, which are why the goals are broken down into focused goals that are more relevant to each manager. To understand the goals from another employee's perspective, managers every now and then follow up other managers' goals that are set in another time frame. Kaplan and Norton (2005) support the idea that it becomes a beneficial mix when different parts strive for the same goal but in different timeframes. Kurdland and Zell (2011) also suggest that managers should know about the environmental possibilities in order to lead the way into becoming an environmental sustainable organisation.
- To continuously be reminded of the opportunities there is as a manager to contribute with environmental initiatives when projects are initiated is mentioned by Company D as a favourable improvement. Kurdland and Zell (2011) talks about challenging the status quo which would be done if the established way of thinking is changed. They also list that a manager should establish environmental metrics to ensure compliance which means that managers should stay aware of possibilities. In Figure 6.1 the follow-up arrows on the left challenges the status quo and reminds managers of the environmental aspects and what possibilities there are.

The strategy is shown in the goals that are set (Johnson, Whittington and Scholes, 2011), see Figure 6.1. As Company E does, the goals are then narrowed down and put in shorter time frames the further down in the hierarchy the goals go, or the closer to short-term projects they go (also see Dodd and Favaro, 2006). They should be narrowed down to be steps towards the long-term goals, if the long-term is five years and the shortest term is set to one year, then at least one fifth of the goal should be set out to be completed in that project. In that way the goals should be aligned with the organisation (Kaplan and Norton 2006) and are easier to work with on each level. Similarly as Dodd and Favaro (2006) and Company E suggest, a middle-term time frame is also introduced to lower tension between the long-term and short-term efforts. Many interviewees did not know of their entire environmental goals or what part was relevant to them, if they are broken down to what is relevant to them less information has to be processed before they get to know what is relevant. More focused goals for each manager should be easier to grasp and commit to. Further incentives should also be given to comply with the goals, most interviewed companies had a bonus system that was due to the company's financial success previous year. If the bonus instead was due to how well goals were achieved and the size of it could be due to the previous year's financial results, incentives would be more focused directly towards how the employees were working. It would take away the affect from how healthy the national and global economy is, instead give more direct bonus on how the employees actually are working. It is also a way to make the goals more important and get employees more engaged with reaching the goals. The organisation, just as Company B mentions, will then also be more focused on what it set out to do through its strategy (also see Kaplan and Norton, 2006). To focus on what is said in the strategy might also be a way to over time gain trustworthiness of doing what you say you will do.

The conceptual model that aims on combining thoughts discussed in different interviews that also had support in literature. On its left side of Figure 6.1 it has arrows that show how the goals could be followed-up. The idea is that managers control longer time framed goals and those successes in order to get to know of the bigger picture as well and a broader knowledge why the shorter termed goals are what they are. Ideas and constructive criticism can then be communicated from differing perspectives and hopefully the communication between hierarchies will open up and the status quo is pushed into constructiveness and then challenged as Kurland and Zell (2011) suggests. If checks are run often, the awareness of environmental issues is raised often as well (Kaplan and Norton, 2005), and as Company D add to this, with constant reminders small but unnecessary hazardous actions can be eliminated. As checks are done often observations on how the strategy really is implemented in every day work by the practitioners can be assessed as well (Sage, Dainty and Brookes, 2012). If something is found that have to be changed on any level it could start doing so and with that mentality to continuous improve and learn, the company's culture might change and environmental strategy could become practice. But to make strategy into practice all levels of hierarchy in the organisation has to respect each other and work together in order to understand each other enough to work in the same direction.

The conceptual model in Figure 6.1 tries to combine theory from diverse areas and it is then hard to integrate all desired theories into it. It does not consider any drivers or how it works together with certain EMS or organisational structure. It is also a normative model of how things should be done in a perfect world and lacks a descriptive perspective of how the thoughts are transformed into daily work.

7 Discussion and Conclusions

There is research that covers many issues that is within complying with long-term environmental goals in more short-term projects but they all have to be brought together and really be used. Vague efforts to might use methods to realise strategies leaves more to ask and with more effort the value of those efforts becomes clearer (Pojasek, 2007). Most companies pointed at that personal engagement can have a big influence on environmental emphasises, Dummett (2006) calls such a person an environmental ‘champion’. Through personal engagement and the opportunities that it brings, Kurdland and Zell (2011) lists various ways to help realise ideas as a manager, how to get co-workers aboard, overcome the burden of proof and seek support for the ideas from various angles. If a manager can identify what is blocking an environmental sustainable progress, suggestions on how that might be able to overcome could ease the manager’s workload. To lower the total workload for a manager who pushes environmental sustainability could be desirable as Kurdland and Zell (2011) describes that such a manager will have to work according to classic management guidelines and in addition work with environmental sustainability implementation. When some interviewees gave examples of how they were able to drive emphasises themselves they touched on some points listed by Kurdland and Zell (2011). Company A’s interviewee gave an example of engaging with the customer and agreed to swap to green building materials according to a list by a non-governmental organisation which is listed as number 8 and 9 by Kurdland and Zell (2011). The interviewee from Company C used number 7, to seek buy-in from those who supply licences. Company D made it a business case when selling help to get a certificate, helped formulate and execute goals and mentioned ways to overcome resistance to change, which is listed as number 2, 4 and 5. So some points listed were used but not a majority by any same manager.

In Table 5.1 it becomes visible that most companies use different EMS. Their own EMS can profile a company from another and having a better EMS than rivalries brings a niche and competitive advantage (Dummett, 2006). Sharing generously how that niche and competitive advantage is achieved would level out the plains field and is understandably not desired by those who worked for that niche. But the profession of project management would benefit from it as well as the environment in the long run. Other ways to share the knowledge would then be needed. Maybe it could be made a business case to sell the knowledge a company has achieved or knowledge sharing between non-rivalries could be done to reach a higher level of environmental emphasises. Due to the novelty of the subject (Kurdland and Zell, 2011) it might be hard to develop a good EMS for each company and it might be hard to develop it organically. That novel knowledge might have to be found through experienced non-rivalry companies or through new recruits that has gained fresh academic knowledge from the universities.

There are many thoughts on how to solve different issues and within a novel area different approaches might have to be tested and they might show success in different ways. To have a mind-set that it can be solved and be open for ideas and opportunities managers should be able to find a way that is applicable for their organisation. Not only to find a model that can be used as a frame work for how the strategy should be implemented but take it further towards SaP, so that the strategy is actually run and understood by those who are intended to do so. Projects may be small and short by their own but in numbers they add up to a big portion of companies operations and possible environmental impact. It is then important to see opportunities that each new project brings and see how that single projects is a part of a bigger picture (Company D). By making the connection between single projects and the big picture the long-term and short-term tension is realised, the strategy can then be more transparent in the organisation, managers know what to address and the environmental issues can get the attention it needs.

All participating companies though they did a good job addressing the environmental issues but realised at the same time there were potential improvements. All companies have also started their journey towards a more environmental sustainable way of operating and reached different levels. They have taken approaches from different angles and stresses different parts of the big picture. That is a reason why some cooperation between companies could be beneficial as inspiration and knowledge about how to attack the issues in a greater breadth. Preferably non-rivalry companies could share knowledge to keep the niche for that company within its industry and keep environmental advances as a competitive advantage. Greatest potential for improvements within the companies was agreed among most interviewees to be employees with a personal engagement with the issues. Literature and other companies hold information not attainable by each company and to further develop engaged employees are important and that engagement has to be used as a benefit.

An interesting option for making environmental advantages a business case would be as Company C mentions, work with authorities to set stiffer regulations. Interviewee for Company C describes that it is possible to show authorities what is possible and argue for regulations according to what is feasible. Just as Company C themselves among others, have their environmental goals set for following the laws as their client's whish so. To show authorities through practice what is feasible to do and imply that not doing such an effort is irresponsible regulations could change. Competing companies then have some options, buy that knowledge from the pushing company or invest in their own development. That makes either extra income for the pushing company or more expenses for the rivalry, in either case a competitive advantage.

There are a lot of factors contributing to the way environmental goals are managed in projects. It can be hard for project managers to manage all factors, a conceptual model or other tools to bring them together could ease the work in an environmental sustainable direction. Interviewees showed that they all used some methods they found useful for their daily work but there are many more to choose from. The management methods and strategy implementation parts were among the interviewees relatively well known in contrast to the tension between long-term and short-term focus. So that might be something lacking in the conceptual models used for the moment. But I believe by broadening the conceptual model and being aware of more issues, managers can run more environmentally sustainable projects. Realising a problem is a first step of solving it so hopefully this research have opened your mind towards a new issue close to your believes in order to start working with it. The more you know, the more you know that you do not know.

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9 Appendices

9.1 Appendix A

9.1.1 Swedish (original)

Interview framework (in Swedish, for translation see 9.1.2)

(Mål: Ta reda på om dom drivs av lagkrav/extern press eller av en tro på miljö som en del av verksamheten)

Vad ligger till grund för ert miljöarbete?

Var drar ni gränsen för när fokus på miljöförbättringar upphör?

(Mål: Få reda på miljömål och hur de följs)

Hur ser era miljömål ut? Nu, framöver? Hur långt framöver sträcker dom sig?

Hur följer ni upp dom?

Hur har det gått?

Hur jobbar ni med att få målen implementerade i organisationen? Vilka jobbar med och känner till målen?

Vem eller vilka ansvarar för miljöfrågorna? (En person eller spritt mellan många)

(Mål: Undersöka relationen mellan företagets långsiktiga mål och kortsiktiga projektmål)

Nämns företagets miljömål i enskilda projekts möten?

Kopplas miljömålen på något sätt till utvärderingen av ett projekt?

Har ni någon uttalad prioritering mellan långsiktiga och kortsiktiga mål?

(Mål: Att se hur dom jobbar med andra mål/strategier för att se om miljömål kan behandlas på samma sätt, både interna och externa strategier)

Hur jobbar ni med andra strategiska mål?

Hur länge sträcker sig vanligtvis generella projekt?

Hur implementeras, rapporteras, mäts och följs de upp?

9.1.2 English (translation)

Translation of the interview from Swedish to English with the approximations that it brings.

(Aim: Find out if they are driven by laws or other external pressure, or by the believe in green as a part of the business)

What are the reasons for your environmental emphasises?

To what point do you push environmental improvements before you see it as enough?

(Aim: Get to know the environmental goals and how they are complied to)

How does your environemental goals appear today? In the future? How far do they stretch?

In what way do you comply with your goals?

How has it turned out, what are the results?

In what way are the goals implemented in your organisation? Who works with them and who knows about them?

Who is responsible for the environmental goals? (A single person or a few together?)

(Aim: Investigate the focus between long-term and short-term emphasises)

Are the environemental goals mentioned in dayly meetings?

Are the environmental goals connected to the evaluation of projects?

Do you have any outspoken prioritisation between your long-term and short-term focus?

(Aim: To see how general goals and strategies are treated and find possible differences to environmental goals and strategies)

How do you work with other goals?

How long are your average projects?

How are they implemented, reported, measured and followed up?