

A STRATEGIC SUSTAINABLE DEVELOPMENT APPROACH FOR EXECUTING VISION 2050

Sara Flores Carreño, Tamar Harel and Carmelina Macario

Corporate Responsibility Research Conference, University of Leeds

September 2011

This executive summary is based on a Master's thesis paper for the Strategic Leadership towards Sustainability Program at the Blekinge Institute of Technology in Karlskrona, Sweden. You will find the completed report by clicking [here](#) or by visiting <http://www.bth.se/ste/tmslm.nsf/pages/9d6ea166f2d69df5c12578bf00412988!OpenDocument>

INTRODUCTION

While quality of life has improved thanks to the Industrial Revolution it has also put a strain on our ecological system thanks to the goods we ever increasingly consume that are produced because of it. If society continues with the same unsustainable trend, our relationship with nature can only get worse if we think that the global population is estimated to reach more than 9 billion people by 2050.

Our current situation is asking for a redesign of our values and priorities, and new measurements of success. We need to shift to a new and shared concept of prosperity: a concept based on fairness and happiness within the limits of a finite planet. Our economic system has a major role to play in this redesign.

Vision 2050, a report released by the World Business Council for Sustainable Development in February 2010 understands that. The report, whose authors include some of the world's biggest companies, was written by business in an effort to recognize the role businesses have to play in moving society towards a sustainable future. The report provides a vision of what a sustainable world could look like by 2050, one where "In 2050 around 9 billion people live well, and within the limits of the planet". It also provides a pathway, divided into 9 elements (People's Values, Human Development, Economy, Agriculture, Forests, Energy and Power, Buildings, Mobility and Materials). Each element has a list of actions to be completed before 2020 in order to attain the vision. As highlighted in the report, its biggest unanswered question is "How do we get there?"

RESEARCH QUESTIONS

In order to tackle the question "How do we get there?", a challenge that companies may face when they first decide to take on *Vision 2050*, our research aims to analyze how a Strategic Sustainable Development (SSD) approach can be integrated into an Implementation Guide (IG) in an effort to help companies move towards the achievement of *Vision 2050* goals in a strategic manner, with the ultimate goal of creating a sustainable society.

The SSD approach is informed by the Framework for Strategic Sustainable Development (FSSD). The FSSD is a 5 Level model aimed at help planning for solving complicated problems in complex systems (see Figure 1), such is planning and decision making towards a sustainable society.

The FSSD could help guide sustainability efforts bringing in a holistic approach. Though this framework can be used by anyone, it is useful for companies seeking to plan for sustainability, a challenge that requires major change. (Robert et al. 2002, 197)



Figure 1: Framework for Strategic Sustainable Development

The **Systems** level allows an organization to take a bird's eye view of itself within the system in which it operates in order to analyze and understand the various parts that make up this system and the relationship between them. This is to look at the company within society.

The **Success** level defines the goal, the compliance with the systems conditions for socio-ecological sustainability, according to the four sustainability principles (4SPs). The four sustainability principles were reached through scientific consensus, an effort led by Dr. Karl Henrik-Robert and Dr. John Holmberg in the early 1990's, and were developed in an effort to establish a shared understanding of what the system conditions are for a sustainable society, based on the laws of nature (Robert et al. 1997, 88). The three first principles are based on the three mechanisms that degrade our ecosystems and offer a frame for ecological sustainability. The fourth principle is included as it is societal use that influences the first three principles. (Broman et al. 2000, 17). The following characteristics of the sustainability principles make them helpful and reliable for companies seeking to move towards sustainability. They are:

- a)...based on a *scientific* agreed upon view of the world;
- b)...*necessary* to achieve sustainability;
- c)...*sufficient* to achieve sustainability;
- d)...*general* enough to structure all of society's activities that are relevant to sustainability;
- e)...*concrete* enough to guide action and serve as directional aids in problem analysis and solutions, and
- f)...*non-overlapping*, or mutually exclusive, in order to enable comprehension and structured analysis of the issues.

The four principles are:

In a sustainable society, nature is not subject to systematically increasing

- Concentrations of substances extracted from the earth's crust
- Concentrations of substances produced by society
- Degradation by physical means

And in that society

- People are not subject to conditions that systematically undermine their capacity to meet their own needs (Missimer et al 2010, 1109)

It is by using these principles as guidelines to plan for sustainability that an organization can achieve success, as they provide a whole systems view of global sustainability. Organizations should use these principles as the framework for creating a vision, defining success and articulating specific goals. The aim should be to eliminate the *contribution* to violations of the SP's from their activities.

The Strategic level provides guidelines on selecting and prioritizing the most suitable actions which will strategically move an organization towards becoming a more sustainable one. The essence of this level is to backcast from the organization's definition of success within the constraints of the 4 SPs.

Backcasting is a planning method in which future desired conditions are envisioned and steps are defined to attain those conditions. This method is helpful when used to solve complex problems that require major change. (Ny et al. 2006, 63). The sustainability challenge we are faced with is a complex problem that requires major change. For the purpose of this paper we will be backcasting from the envisioned future of a sustainability society, based on the sustainability principles.

Basic guidelines for strategic prioritization of actions used in backcasting will include:

- bringing society closer to sustainability;
- avoiding blind alleys; and
- generating sufficient resources (e.g. economic, social/political, and ecological) for the continuation of the process. In addition to these, the company may have some other prioritization criteria to apply.

The Actions level includes all activities that have been prioritized during the strategic level that will help in moving the organization towards success, which includes global sustainability. Actions can be of many types, from energy efficiency programmes to community building activities within the organization.

The Tools level describes the various approaches which support the implementation of the prioritized actions, as well as confirm that in fact these actions are moving the organization towards success. This can be done in many ways, for example monitoring progress by using different indicators for success (Robert et al. 2002, 198-205).

This study explores using an SSD approach by asking the following main research question:

How can multinational for-profit companies implement a Strategic Sustainable Development (SSD) approach to integrate *Vision 2050*'s goals into their plans and operations?

With the following supporting secondary research questions:

1. What does the Framework for Strategic Sustainable Development (FSSD) reveal about *Vision 2050*'s approach in moving towards sustainability?
2. What are the barriers and enablers multinational for-profit companies face in executing *Vision 2050* when moving towards sustainability?
3. How can a Strategic Sustainable Development (SSD) approach be used to develop an implementation guide to complement *Vision 2050*?

METHODS

Joseph Maxwell's *Interactive Model for Qualitative Research* served as the template for defining the research components and how they interact, while still maintaining a flexible platform which allows constantly questioning and revising the process.

The research design was composed of five phases:

- Phase I of our research comprised of an analysis of the *Vision 2050* report, using the FSSD as an analysis tool. This analysis provided the answers to the first secondary question.
- Phase II consisted of surveys and interviews to provide the answers to the second and third secondary questions - the barriers and enablers companies are faced with when implementing full sustainability and what makes an implementation guide successful, which brought us into Phase III.
- The third phase focused on creating a prototype of the implementation guide based on previous knowledge, the results from the second phase, existing models and personal deduction.
- Our fourth phase centred on validating the prototype through feedback from participants of the second phase.
- The final phase consisted of the revision of the prototype based on the feedback from Phase IV.

RESULTS

Phase I which was completed by asking a set of questions for each level of the Framework revealed the strengths and weaknesses of the *Vision 2050* report.

Through this analysis we found gaps to varying degrees at each of the Framework's five levels, and focused the research around adding to both the success and the strategic levels. As a visioning document the report lacks strategic guidance for companies hoping to attain the vision prescribed in the report, for example a prioritization process that allows them to choose which

actions are most suitable for the company to take both from a company “fit” standpoint and from an economic standpoint. The lack of a definition of sustainability adds to this. Without a definition of sustainability a company cannot be sure if the actions they take will lead society towards sustainability.

Phase II revealed that the biggest barriers companies face in moving towards sustainability are: *Mindset*, which are challenges that are rooted in assumptions and perceived barriers which prevent action from being taken and *Uncertainty*, challenges which stem from the unknown aspects of sustainability.

The barriers that Vision 2050 presents as an applicable document in helping companies move towards sustainability are missing *Details* and *Data*.

❖ *Key findings - Barriers*

When moving towards sustainability in a company:

- ✓ The biggest barriers are mindset and uncertainty.
- ✓ No external experts identified legislation or financial as barrier.
- ✓ Only external experts identified the lack of strategy as a barrier.

Barriers with working with the *Vision 2050* report:

- ✓ Missing data and details
- ✓ Missing actors and sectors
- ✓ High abstraction level

The greatest enablers for sustainable development that Vision 2050 as a tool provides both from a quality and action standpoint are: *Innovation*, in both planning and thinking, *Collaboration* through the formation of complex coalitions and collaborative innovation, *Change of Mindset* by creating new definitions and measures of success as well as true valuation of costs and *Guidance* towards setting goals and milestones.

❖ *Key findings – Enablers*

Inherent qualities of the report which can enable sustainable development:

- ✓ The report is innovative in its methodologies and message.
- ✓ It informs a company's strategy by offering guidance and inspiration.
- ✓ It carries a clear and easy message to communicate.

Actions which can stem from the report and enable sustainable development:

- Catalyst and platform for collaboration.
- Change the mindset around our measures and definitions.
- 'Door opener' for conversations around sustainable development.
- Defining and recognizing business opportunities in sustainable development.
- Platform for innovation, in particular collaborative sustainable innovation.

This phase also revealed that successful implementation guides must contain both “soft and hard wiring”: intangibles and tangibles most notably:

- ✓ Vision: Having a strategy and a prioritization process which can lead you towards your vision. Incorporate long term thinking into that strategy; define guidelines and success factors, including ambitious stretch goals
- ✓ Holistic Engagement: The model should include an element about engaging and stakeholders from all levels, by making it an exciting process for everybody. It should encourage the creation of cross functional groups, vertically and horizontally across the company.
- ✓ Human Capital: A model relies on people and therefore should include an element of leadership and empowerment. There should be build consensus through collaboration and open dialogue.
- ✓ Tools The model should include tools which allow; defining specific and measurable goals, i.e. Key Performance Indicators (KPIs), a plan-do-check-act approach, clear tasks and an element of transparency, both internally and externally. Consider Financial incentives.
- ✓ Structure and Controls. The model should be user friendly and allow identifying business opportunities and fundamental transitions. In addition it should enable a system approach and provide a plan for current reality assessment.

Phase III resulted in the creation of a prototype of the Implementation Guide (IG). The IG is the practical outcome created to aid in applying a SSD approach to assist in the execution of Vision 2050. The guide's purpose is to make the report a more applicable document and to address the report's challenges and gaps which were identified throughout the research. For instance, the Guide places a strong focus on fulfilling the need for *Engagement* and *Details*. Both elements were identified by our respondents as the most helpful elements that would enable them to move forward when using Vision 2050.

The process of developing the IG is described in three steps; first we identified the essential components and elements need to make a successful IG. This process was informed by our personal knowledge of and experience with the FSSD as well as the results we gathered through our interviews and surveys. Additional data came from reviewing existing planning models. Secondly a prototype for the *Vision 2050* IG was developed based on all the previous results, including those from phase II. The third step, which occurred in phase V was to review the feedback received on our prototype and finalize the IG.

❖ *Key findings -- Implementation Guide*

- ✓ An implementation guide for *Vision 2050* will be useful, but it will depend on the model and will have to be company specific.

- ✓ Most needed input for implementing *Vision 2050* is more details and tools, including tracking indicators, how to translate it to a strategic plan and how can it be used as an engagement tool.
- ✓ With sustainability related decisions companies consider the impact, the potential of different ROIs and alignment with strategy.
- ✓ Best opportunity for integrating sustainability is with early adopters.
- ✓ The major changes which need to occur in order to move away from business-as-usual are around mindset, innovation, system thinking and collaboration.

Phase IV produced feedback which was used to improve and revise the IG. The main comments received were that the guide was hard to follow due to its many different elements and not comprehensive enough due to the fact that the connection to the *Vision 2050* report was not stressed enough.

Phase V resulted in a finalized Implementation Guide which consists of six steps. A copy of the guide is presented in **Appendix A**. The final document is the result of incorporating the feedback that we received, in an effort to make the document the most suitable fit for those who would be its users, without leaving behind the FSSD requirements for sustainability.

Integrating an SSD approach in multi-national companies

The *Vision 2050* Implementation Guide is designed to provide an SSD approach for implementing the report's goals by companies; however, much more can be done in order to assist and accelerate the process.

The recommendations below are points which can strengthen companies' efforts in moving towards sustainability, by providing external support and foundations to the internal work of implementing the IG. These points tap into ideas and answers which repeatedly came up through the research, yet were not necessarily quantified with raw data.

Along with the *Vision 2050* Implementation Guide these recommendations support our main research question:

How can multinational for-profit companies implement a SSD approach to integrate Vision 2050's goals into their strategic plans and operations?

- Establishing an over arching committee to *Vision 2050* which could, but not necessarily have to be, initiated by the WBCSD. The committee should provide tools and metrics for tracking progress and develop measures which could provide benchmarking data.
- Creating an actual 'platform' for a dialogue, a community of practice¹, a place where companies can meet and share knowledge and lessons learned regarding their experience with *Vision 2050*.

¹Communities of practice are groups of people who engage in the process of collective learning, and they differ from other communities in three main aspects; a shared domain of interest, the type of interactions around that which are mainly learning orientated and the shared practice, as opposed to just having interest in similar topics (Community of practice 2011).

- Promote regional *Vision 2050* projects, with wider scope of participants from many sectors, apart from business.
- Partner with experts from academia to expand the research around the business opportunities which are suggested in the report.
- Include government and banking representatives in any future dialogues.

DISCUSSION

The discussion portion of this report allowed us to explore the story which emerged from the research results. Here we provide our interpretations, acknowledge the strengths and limitation of the research as well as that of the final version of the Implementation Guide.

The FSSD analysis of the *Vision 2050* report identified where our research could have an impact – by providing a definition for sustainability and integrating that within strategic guidelines to be given to companies. It was fortuitous then that the results of our surveys and interviews produced the same findings – companies and external experts were calling for details, for guidelines to strengthen *Vision 2050*.

Based on our own experience with the FSSD and with our basic knowledge of existing models we created an Implementation Guide whose components were validated through the analyzed data.

We benefited from having access to 13 of 29 companies who participated in creating *Vision 2050* and having that inform our work. However when looking at it from a global scale we spoke to just a handful of companies and more specifically to their sustainability representatives.

As a result we created an Implementation Guide that provides an overarching view of what a company should do when answering the question “How do we start down this road?” broken down into six practical steps to follow.

FSSD analysis

We analyzed the report through the lens of the FSSD to identify what the *Vision 2050* report has and lacks with regards to Strategic Sustainable Development.

What the FSSD analysis revealed was expected: all five levels were incomplete (to varying degrees), confirming our assumption that a suitable tool would be an implementation guide which would incorporate the necessary elements to fill up the levels.

We want to make explicit that although the FSSD analysis reveals that not all levels are fulfilled by the report, this doesn't mean it is a mistake nor a gap. By definition the report is a vision and not a plan, hence it was not meant to be complete in all the levels. It provides an overall idea of how the vision can be achieved through the pathways. However it is surprising that there are no

guidelines to continue the dialogue since this is one the explicit purposes of the report.

The report's definition of sustainability is a vision, one in which by the year 2050 9 billion people will be living well within the finite resources this planet has to offer. This may seem as a valid definition; however what if society is able to maintain the equilibrium of the biosphere so by 2050 people live well, as we do now, but the biosphere is at the very brink of collapse? What would happen with the next generation after 2050? Should we start thinking of restorative levels more than maximum levels?

Finally we would say that our FSSD analysis continues the discussion *Vision 2050* asks for, by pointing at what else need to be *talked about*. This analysis might be misunderstood by the report's creators as it looks at purposes the report was not made to have. Though they may feel the Vision as a vision is complete, as shown in the systems and success levels, we identified a few gaps, the main one being between the report's definition of success and the four sustainability principles.

Barriers and enablers

We received a broad set of complementary information which when pieced together built a complete picture that provided us with an overall view of the current reality that multinational companies are faced with when working towards sustainability, with or without the *Vision 2050* report. What works better, what do they need to succeed, what can be done, what can be improved, what helps or hinders a company?

- ❖ *Key thoughts upon relevant answers from our respondents:*
 - ✓ We heard from our respondents that they felt it was a threat that *Vision 2050* report could end up being just a "Theory on the shelf". This aligns with our concern about the report aiming to 2050, which is 40 years away. This may be the case because plans for near future are already made and are harder to change, hence it is easier to agree on matters that are far away in time as they require less commitment.

Unfortunately the people who have agreed upon this vision may not be here in 2050. We see it as a risk as, the interest to work for something that you may not see materialize is not as strong as something that you will experience. Could this hinder *Vision 2050* from being accomplished?

- ✓ Sustainability asks for a redefinition of values, resource management, and behavioral change, among others. These are big steps to be taken, pointing at a transformational change.

This need was validated by the fact that both mindset and collaboration were identified by business as required pieces for transformational change, as well as identified as actions from the report that can have the biggest impact in moving towards sustainability.

What was not expected was how low leadership played in this category, with only 22%. However, given that mindset scored higher this makes us wonder about the relationship between the two; is leadership still needed if a shift of mindset occurs on its own, or is it that leadership is needed to promote a change of mindset?

- ✓ Strategy came up when we asked external experts which key aspects of the *Vision 2050* report have the strongest relevance to today's business models. This reassures the relevance of creating an implementation plan.

Applying an SSD in an Implementation Guide for Vision 2050

We wanted to help companies willing to work towards *Vision 2050* by creating a tool which provides guidelines for creating their own *Vision 2050* action plan for achieving *Vision 2050*'s goals with an SSD approach.

External experts were very interested in our work of creating an implementation plan. As they identified a *tool* and *strategic plans* as what could make *Vision 2050* a more applicable resource. Our Implementation Guide is a tool that helps create strategy.

The IG strongly promotes Transformational Change, Engagement, Collaboration, Systems thinking, components which have been the most identified terms needed by the respondents. At the same time are concepts that we believe are essential to enable Sustainable Development. Definitions of success and sustainability are also needed, we address these issues in the Implementation Guide by adding the four sustainability principles.

Implementation Guide contribution to SSD

Our results suggested that while the *Vision 2050* report holds potential for moving companies towards sustainability, it also presents a few challenges which might hinder it from doing it successfully if companies don't follow an SSD approach when implementing the paths of *Vision 2050*.

The FSSD analysis informed what was needed in order to follow an SSD approach. This is how our implementation guide contributes to fulfilling the levels of the FSSD:

- Systems: It follows a systems thinking approach.
- Success: It addresses the success level by introducing the concept of the four sustainability principles and the importance of having a shared vision.
- Strategic: It provides strategic guidance for moving a company towards sustainability with an SSD approach, including using backcasting as a planning methodology.
- Actions and Tools: We acknowledge that every company is different and therefore these two levels are meant to be filled by the company as they

follow the Implementation Guide, which is itself a tool to serve as a vehicle for companies to determine their action plan, based on prioritized actions and the most suitable tools to use.

An Implementation Guide for Vision 2050

This tool has been designed based on our previous knowledge of SSD approach and is informed and shaped by our results and existing models.

In this section the key elements and structure of the guide's final version are described in a succinct and comprehensive form.



Figure 2. The 6 steps of the Vision 2050 Implementation Guide

Key Elements:

- **A gap analysis.** Considering some of the gaps and limitations which were identified in *Vision 2050*, in order to avoid being taken off track towards sustainability, the model should include the four sustainability principles as guidance. These are necessary to ensure success when backcasting, given that the report does not backcast from principles to ensure companies' decisions will lead them in the right direction.

At first the four sustainability were described in the guide as an overarching framework of Vision 2050. However, all seven feedbacks replied this was confusing and —unnecessary. The four sustainability principles are now included in the guide as questions in the *gap analysis*.

- **A check list.** A checklist accompanies and is tailored to each step. They are made to ensure that each element is considered throughout the steps.
 - *Holistic approach:* To avoid the traditional way of positioning sustainability within the company, being just a department separate from the core of the company. Instead our implementation plan leads to the integration of sustainability into the company's strategy as a holistic component. This starts with a company re-thinking its business model by asking themselves 'what are we in the business of?', taking a systems thinking perspective. We understand systems thinking as the main pillar above which the kind of change needed is suspended on.

- *Leadership*: It is the most crucial component needed to face the sustainability challenge.

"The question of reaching sustainability is not about if we will have enough energy, enough food, or other tangible resources - those we have. The question is: will there be enough leaders in time?" (Dr. Göran Broman and Dr. Karl-HenrikRobèrt).

Leading companies can influence their supply chain, their competitors, etc. By taking the lead in moving a business sector towards sustainability others will follow. However, for companies to be leaders externally they must first create leadership internally and get the entire organization engaged as a way to succeed in achieving their goals.

- *Collaboration*: Collaboration brings many benefits like support and innovation. It is also a way to overcome the barrier of ROI related issues.
- *Engagement*: One of the necessary keys for success. The company's executives must tap into the hearts and minds of their stakeholders and engage them by asking them for their advice. External stakeholders' engagement may lead to partnerships and collaboration.

Engagement is a way to get people to collaborate with one another. By coming together they become a strong coalition, in which they help each other to bring about collective initiatives. This is a way to get support. In addition, with regard to support we want to mention here how helpful we think it would be to have adequate legislation (identified as challenge, threat and transformational change in the results section) to promote the momentum of sustainability.

- *Transparency*: This is important to sustainability, for building trust and to encourage benchmarking. For this reason we encourage reporting the company's accomplishments, both internally and publicly. Communicate to connect, connect to collaborate.

The following steps are included to guide companies as they go through the process. With these steps we tried to replicate the same process used to create the report, which is backcasting from a vision of success. This aligns with an SSD approach and lends credibility by being consistent with the report.

The Steps:

0.Pre step- Decide: Relying on *Vision 2050*'s clear message as an effective vehicle to call people to buy into sustainability, the guide is only to be used once the company has bought into sustainability. "Sustainability is to make the strategic choice to do things right." (Per Sandberg 2011). We know it is much more fruitful to work with those that already want to.

Transformational change is required to move a company towards sustainability, it is a whole mindset shift, therefore the CEO and the

executive committee's mandate is essential, as they are the ones with the ability to decide and support a move of such scale.

1.Prepare: A project team has to represent all business units in order to make sustainability a holistic strategy of the company.

Given that Vision 2050 is a large scale vision that has to be tailored to each company, the report's components and goals need to be brought down and adapted to the company's area to become a more tangible goal to pursue.

2.Vision: An meaningful vision for the main stakeholders is essential to achieve success in sustainability. If they can inspire their employees and engage them to a point where the employees can see themselves in that message, they will reap the benefits of higher productivity and employee retention. (Willard 2002, 21)

3.Explore: Decide slow, implement fast. We suggest a process which takes time to design, in order to be effective and successful in execution. It is an investment in time to the benefit of making the most of the actions that will follow.

4.Action plan: We suggest making decisions carefully to ensure companies choose well from their range of possibilities. Research should be included in this process, as well as being in contact with other companies and learn and share experiences and successful methodologies.

5.Implement and track: When executing the action plan it is essential to measure accomplishments. This will help companies to stay on track, and come back to redefine plans if necessary. This contributes to the iterative approach of the guide, enabling reflection to occur along the process, by constantly evaluating progress.

6.Communication: The *Vision 2050* report can be a powerful tool for spreading the word of sustainability, since it can be used as a platform for dialogue. The report can start the conversation around sustainable development and how is it being implemented in the company.

Tool strengths and weaknesses

We encountered a triple challenge when developing the implementation guide; first, how to create a tool which will be generic enough to be used by different companies, yet detailed enough in the guidance it offers. Then, how can the guide help in addressing the sustainability challenge, which by nature is both varied and constantly changing.

The tool provides an answer when a company asks the question "How do we start down the Vision 2050 road?" It utilizes a structure that companies may already be familiar with since it is based on other successful models, avoiding

companies the task to learn a complete new thing. The tool is broken down into 6 concrete steps to provide a company with clear direction on the path they must follow in order to achieve success.

Much like the *Vision 2050* report we could not go into all the details a company needs to know about how to execute this on a day to day basis. It is the middle point between wanting to integrate sustainability into their operations and having a day to day operations plan.

Integrating an SSD approach in multi-national companies

Without an SSD approach a company following the *Vision 2050* path could be taking the right actions in some aspects, but it may also risk contributing to the violation of one of the four sustainability principles.

The answer to our main research question is formulated around the application of the *Vision 2050* Implementation Guide. We believe it provides the necessary elements for multinational for-profit companies to take an SSD approach when executing *Vision 2050* pathways.

However, sustainability is a whole sea of possibilities and directions to look at, so although the IG should keep a company in track for SSD there are some other actions that a company could take (explained in the section *Integrating an SSD approach in multi-national companies*) intended to engage more and more stakeholders and to provide support platforms for each other. Along with integrating sustainability themselves, companies must create a plan for engagement with government and advocate for the changes needed to move society towards sustainability.

Many players have a role in this challenge, and as was said by our research participants, *it cannot be done alone*.

CONCLUSION

We became familiar with the *Vision 2050* report over the five months we spend with it and it has made its mark on us. It is a positive, forward-looking, opportunities oriented piece of work that has inspired our work and the final Implementation Guide. Too often sustainability is seen as a cost and a barrier; reports like *Vision 2050* are helping to change that. Sustainability is a strategic necessity and now is the best time to take advantage of it.

We cannot deny that the road to sustainability will be a challenging one. Our research has shown that mindset is the greatest barrier we face, but it is also the strongest agent of transformational change.

Vision 2050 has also shown us that by tackling the sustainability challenges, opportunities await in the form of improving social and ecological health as well as economic.

We hope that having tried to provide a practical guide for companies that they will feel empowered by the message *Vision 2050*'s promotes and pick up our guide. We hope our guide gives companies the information they need in order to recognize the opportunities sustainability brings with it and the value that long-term and systems thinking have to offer. If we can do that, help ensure that the report does not become just another theory on the shelf, then we have done our job.

Thank you for your time, for more information you can contact us in the following email vision2050thesis@gmail.com

References

Broman, Goran, John Holmberg and Karl-Henrik Robert. 2000. Simplicity without reduction. *Interfaces*. 30(3):1 13-25

Missimer, Merlina, Karl-Henrik Robèrt, Göran Broman, Harald Sverdrup. 2010. Exploring the possibility of a systematic and generic approach to social sustainability. *Journal of Cleaner Production*: 18(10-11) 1107-1112.

Ny, Henrik, Jamie MacDonald, Göran Broman, Ryoichi Yamamoto, and Karl-Henrik Robèrt. 2006. Sustainability constraints as system boundaries. An approach to making life-cycle management strategic. *Journal of Industrial Ecology* 10 (1-2): 61-77.

Robert, Karl-Henrik, Herman Daly, Paul Hawken and John Holmberg. 1997. A compass for sustainable development. *International Journal of Sustainable Development and World Ecology* 4 (2): 79-92.

Robert, Karl-Henrik, B. Schmidt-Bleek , J. Aloisi de Larderel, G. Basile, J.L. Jansen , R. Kuehr , Peter Price Thomas , M. Suzuki , Paul Hawken j, M. Wackernagel. 2002. Strategic sustainable development — selection, design and synergies of applied tools. *Journal of Cleaner Production* 10(3): 197-214.

Sandberg, Per. 2011. Interview by author. Karlskrona, Sweden. May 3.

Willard, Bob. 2002 *The Sustainability Advantage*. Canada: New Society Publishers.

Appendix A