Strategic Sustainable Investing: Recognizing Value in Transitional Leadership

Nicholas G. Blandford, Timothy J. Nash and André R. Winter

School of Engineering
Blekinge Institute of Technology
Karlskrona, Sweden
2008

Thesis submitted for completion of Master of Strategic Leadership towards sustainability, Blekinge Institute of Technology, Karlskrona, Sweden.

Abstract: Institutional Investors own a large share of publicly traded companies, controlling a significant amount of the economy’s working capital. These investors currently use little or no sustainability-related information to make their decisions, reinforcing a loop of increasingly unsustainable growth. This paper puts forward a new investment strategy that recognizes true movement towards sustainability and its link with bottom line benefits for investors: Strategic Sustainable Investing (SSI). To achieve this desired future, Institutional Investors must be able to recognize corporations that are strategically leading the transition towards sustainability. An Analysis Tool was developed to help address this need by identifying sectoral Emerging Sustainability Issues (ESI) using a consensus-based scientific definition of sustainability. Once ESIs are identified, companies’ strategies regarding each issue are assessed. This Tool was scrutinized by a panel of experts in the financial and sustainable development industries, and was tested on three companies within the Unconventional Oil & Gas Sector in Canada. Results confirmed the usefulness of a tool that can recognize which companies are leading the sustainable development agenda, and identified the need for future research on the financial materiality of sustainability-oriented actions.

Keywords: Socially Responsible Investing (SRI), Backcasting, Strategy Analysis, Extra-Financial Research, Corporate Social Responsibility (CSR), Environmental Social and Governance (ESG) Factors
Acknowledgements

We would like to impart a heart-felt ‘Thank You’ to everyone who has helped and supported our research and the writing of this thesis. We are particularly grateful to our supervisors, Pong Leung and Tamara Connell, for their wise advice and gainful guidance throughout this process. We could not have done this without them.

We would also like to thank the following professionals for their time and expert feedback; they have contributed immensely to this research:

Holly Coleman, Highwater Research; Michael Curry, Investeco Capital; Rachel Davies, Acuity Investment Management; Eric Gelfgren, Mercer Investment Consulting; Hazel Henderson, Ethical Markets Media, LLC; Clarissa Lins, Fundação Brasileira para o Desenvolvimento Sustentável; Jeffrey MacDonagh, Domini Social Investments, LLC; Nancy Palardy, Jantzi Research; Kevin Ranney, Jantzi Research; Florian Sommer, Fortis Investments; Ralph Wehrle, Axial Participações e Projetos; Bob Willard, sustainability Advantage.

We would also like to thank the following individuals for their time and input:

Anders Frisk, Dermot Hikisch, Li Xinze, Ryan Richardson, Karl-Henrik Robèrt, Renate Sitch, as well as shadow group members and our colleagues in the Master’s programme for Strategic Leadership towards Sustainability.

Finally, we would like to extend our deep gratitude to friends, family, and partners for their help and support throughout this insightful and extremely valuable period.

Priekā!
Statement of Contribution

It has been a privilege and an honour to work together. At the beginning, three individuals formed a fraternity that aimed to bring fortune and firmness to sustainable finance.

Each member contributed specific skills, ideas, and experiences that combined to create a product stronger than the sum of its individual inputs.

Mr. Winter brought his strong research abilities, his keen eye for detail, and his technical know-how to the table. His sweet-smelling coffee and Brazilian network added a much needed flavour to the group’s work.

Mr. Nash supplied a sunny disposition and his creative writer’s touch to the team. Often suggesting ‘business walks’, he kept ideas flowing and spirits high throughout the process.

Mr. Blandford provided a powerful business context to the work, keeping everything succinct and focused. Able to dial-in to key concepts and findings, he constantly kept the group on the right track.

Throughout the entire thesis process, all major decisions were consensus-based. Each group member reviewed individual contributions, and every aspect was considered in chorus. In the end, member’s contributions were so interconnected that it is impossible to determine precisely who did what.

We believe in the wonderful potential of Strategic Sustainable Investing, and are eager to watch it evolve.

Warm regards,

Nicholas G. Blandford, Timothy J. Nash, André R. Winter

Karlskrona, Sweden 2008
Executive Summary

Introduction

The current state of the world is driven by economic growth and development. Financial markets play a central role in the relationships between individuals, governments, and companies.

The allocation of money has a strong influence over decision-making and shapes the course of society’s development. With combined assets of over USD 24.6 trillion (OECD 2007), Institutional Investors such as Banks, Pension Funds, and Mutual Funds hold the most leverage in the current economic system.

The current pace of economic growth is deteriorating social and environmental systems as the costs of the exploitation of social and natural capital is externalized (UN MEA 2004). Some companies are starting to suffer the consequences of unsustainable behaviour due to increasing government regulation, depleting natural resources, rising costs, and consumer demand pressure. Other companies are exploiting the opportunities emerging from a new understanding of the system’s rules. These progressive firms are able to take advantage of the changing business climate by expanding young markets and developing smarter products and services focused on long-term stability.

This paper presents a new investment strategy that recognizes and rewards leading companies that are moving society towards sustainability. Strategic Sustainable Investing (SSI) relies on a consensus-based scientific definition of sustainability, and the recognition that ‘Backcasting from Principles of Sustainability’ is the preferred approach to strategically move a company towards sustainability.

Strategic Sustainable Investing (SSI) outlines success in two parts: the financial investment will offer a competitive risk-adjusted return, while providing investment capital to companies that are actively attempting to eliminate their contribution to violations of the four Sustainability Principles. It implies lower exposure to sustainability-related risks and it considers financial metrics together with Environmental, Social,
Governance (ESG), and strategy analyses to educate investment decision-making.

Some investors currently practice Socially Responsible Investing (SRI), taking into account non-financial data, such as ethical motives and ESG issues, in their analysis and decisions. It is recognized that SRI efforts and achievements are remarkable in the quest for a more humane economic system. However, due to a lack of standardization in regard to the criteria used to select Socially Responsible Investments, it does not represent a unified force in the market for Sustainable Development (Hawken 2004).

The investment industry as a whole still does not understand and measure the correlating financial benefits of a company’s strategic movement towards sustainability. Investors do not have the adequate tools to understand the short, medium, and long-term financial effects of sustainability-oriented actions by companies.

To shift to the proposed Strategic Sustainable Investing system, Institutional Investors must be able to make educated investment-decisions regarding sustainability related issues. The following thesis explores this shift by asking:

*In what ways can Institutional Investors use a Strategic Sustainable Development perspective to recognize value in transitional leadership towards sustainability?*

**Methods**

Six steps were taken in order to answer the thesis question: Exploratory Research; Data Analysis; Tool Creation; Expert Feedback; Tool Testing; and Discussion and Debrief.

Exploratory research was conducted to expand upon the background information and to provide a better understanding of practical applications and industry limitations. This research also supported the proposed ways in which a Strategic Sustainable Development perspective could assist with the investment decision-making process.
A data analysis was conducted to identify the current gaps between the existing Traditional Investment and Socially Responsible Investment systems, and the proposed Strategic Sustainable Investment system. Once the gaps were identified, a creative process took place to address them by developing the first version of the Strategic Sustainable Investment Analysis Tool.

The Tool was sent to a panel of eleven experts in the investment and sustainability fields for scrutiny. The objective of this step was to verify the logic behind the Tool, gauge its usefulness, and identify possible improvements in its structure and operation.

Following this step, the Tool was tested using the Unconventional Oil & Gas Sector in Canada, and three companies within that sector were analyzed. This phase was conducted in partnership with Jantzi Research to obtain professional advice and critical feedback in the process undertaken and the information conveyed. Also, it helped to determine the effectiveness and clarity of the proposed format of the Tool.

The preliminary SSI Analysis Tool was reviewed based on the feedback and advice provided by experts, and from the lessons learned through practical application. These results were analyzed and discussed, and a list of the possible improvements for a second version of the Tool was formed.

**Results**

**Tool**

The SSI Analysis Tool is composed of two main elements: the sectoral Emerging Sustainability Issues (ESI) chart, and the company’s Strategy Analysis component.

The sectoral Emerging Sustainability Issues chart utilizes the Sustainability Principles to identify which unsustainable actions within a subject sector will form the foundation for the most pressing sectoral Emerging Sustainability Issue(s) based on three assessment criteria:

- Urgency – the time frame associated with each ESI,
• Severity – the potential consequences for the biosphere, society, and companies within that sector, and

• Systematic Contribution – the measure of the sector’s contribution to the overall issue.

Each of the assessment criteria is designated a colour in order to gauge, at a glance, the intensity of each category.

In the Strategy Analysis component, an individual company’s strategy for dealing with the identified ESI is assessed. This analysis involves reviewing the end goal, which is the subject company’s long-term desired future state in relation to each ESI, and the recent actions that are being taken to move towards this goal. Three questions are emphasized as a mental guideline for the Analyst when considering the effectiveness of the Strategic Actions:

• Does the action provide a competitive Return on Investment?

• Is this action taking the subject company in the right direction?

• Is this action versatile?

The Strategy Analysis Graph, shown in the centre of the report, is intended to combine the subject company’s targets and recent actions in relation to the ESI. This graph provides a summarized visual that plots the planned and current progress of the subject company for dealing with the ESI, in turn displaying its exposure to the sustainability risk.

**Expert Panel Feedback**

To frame the interviews with the Expert Panel, four statements were presented:

1. To deal with emerging social and environmental issues, society needs companies to plan strategically for a transition to a sustainable future.
2. Identifying and measuring a company’s strategy for dealing with Emerging Sustainability Issues is relevant for investment decision-making.

3. The Tool helps to identify companies with leading strategies for transitioning towards sustainability.

4. The document is clear and concise.

The most relevant themes discussed are: the predominantly reactive behaviour of markets, with the exception of a handful of companies that are proactively moving towards sustainability; the current quest for determining the links between sustainability-oriented behaviour of companies and shareholders’ bottom line benefits; and how these themes are relevant for the usefulness of the Tool for investors.

Several aspects relating to the language used in the Tool, as well as details relating to the clarity of the document, were brought up during the interviews. These issues were listed to outline the improvements for the second version of the Tool.

**Testing**

With the guidance of Nancy Palardy, Senior Analyst and Team Leader, CSID for Jantzi Research in Toronto, Canada, the SSI Analysis Tool was tested on the Unconventional Oil & Gas Sector in Canada. The process of testing the Tool, and the feedback from the Senior Analyst, resulted in more improvements to be incorporated in the next version of the Tool.

**Discussion & Debrief**

The Results from the Expert Panel Feedback and Testing phases were discussed, and a second version of the Tool was outlined. Some key points that were discussed are:

- Alternative applications of the Tool;
- The relevance of transparency; and
The importance of directly relating the movement towards sustainability with financial aspects.

Conclusion and Recommendations

The core concepts of Strategic Sustainable Development (SSD) provide a new context for filling the gaps in the processes of Traditional and Socially Responsible Investing, while helping to guide financial markets towards sustainability. Three recommendations are made for future work in this area:

- Further research on the links between a company’s strategy for moving towards sustainability and their share price performance.
- Adapt the language used, translating the scientific wording of SSD into language that inspires the financial community.
- Further applications and higher effectiveness of the Tool, including how it can help companies create the best strategies in dealing with Emerging Sustainability Issues.
Acronyms

5LF - Five-Level Framework
BTH - Blekinge Tekniska Högskola
CDM - Clean Development Mechanism
CDP - Carbon Disclosure Project
CSR - Corporate Social Responsibility
DJSI - Dow Jones Sustainability Index
ESG - Environmental, Social and Corporate Governance
ESI – Emerging Sustainability Issue
GRI - Global Reporting Initiative
IPO - Initial Public Offering
ISO - International Organization for Standardization
MSLS – Masters in Strategic Leadership towards Sustainability
NGO – Non-Governmental Organization
OECD – Organization for Economic Co-operation and Development
ROI – Return on Investment
SIF - Social Investment Forum
SP – Sustainability Principle(s)
SRI - Socially Responsible Investing
SSD – Strategic Sustainable Development
SSI – Strategic Sustainable Investing

SSI Analysis Tool – Strategic Sustainable Investment Analysis Tool (also referred to as ‘the Tool’)

UN MEA – United Nations Millennium Ecosystem Assessment

USD – United States of America Dollars

WACC – Weighted Average Cost of Capital
Glossary

**Activism** is an intervention by shareholders using their ownership rights to influence the actions of corporate management with a view to enhancing the value of the company.

**Alpha** is the statistical measure of the incremental return added by an investment manager through active management.

**Analyst** See *Investment Analyst*.

**Asset** is anything owned by an individual, a business or financial institution that has a present or future value (i.e. can be turned into cash). Tangible assets can be land and buildings, fixtures and fittings; examples of intangible assets are goodwill, patents and copyrights.

**Backcasting** is a planning procedure by which a successful planning outcome is imagined in the future, followed by the question: “What do we need to do today to reach the successful outcome?”

**Beta** is the statistical measure of risk or volatility. It indicates the sensitivity of a security or portfolio to movements in the market index. Securities/portfolios with a beta greater than one are expected to be more volatile than the market as a whole, outperforming in rising markets and underperforming in falling ones.

**Biosphere** is the part of a planet’s outer shell – including air, land, and water – within which life occurs, and which living processes in turn alter or transform.

**Buy and Hold Strategy** is an investment strategy in which stocks are bought and then held for a long period of time regardless of short-term market movements.

**Causal Loop Diagram (CLD)** describes the reality through causalities between variables and how they form a dynamic cyclical influence. The goal is to observe the world through feedbacks rather than linearly –
repeated patterns that may be used to predict the behaviour in the problem. It’s about understanding cause and effect.

**Cleantech** is short for “clean technology”, a diverse range of products, services, and processes that harness renewable materials and energy sources that reduces the use of non-renewable resources, and cuts or eliminates emissions and wastes.

**Diversification** is a risk management technique which involves spreading investments across a range of different investment opportunities, thus helping to reduce overall risk.

**Dividend** is a distribution of money or property paid by the corporation out of the corporation's profits to shareholders. The directors of the corporation decide if a dividend payment is to be made and it can only be made if the corporation has profits.

**Eco-Efficiency** is based on the concept of creating more goods and services while using fewer resources and creating less waste and pollution.

**Economy of Scale** is the notion that larger volumes of production tend to reduce unit cost because fixed costs are distributed across a greater quantity of product. Also defined as the savings per-unit cost achieved by mass production.

**Externality** is when the effect of an economic activity is not included in its price. The cost or benefit is ‘externalized’ onto a third-party. Beneficial effects are positive externalities (i.e. pollination performed by bees); harmful ones are negative externalities (i.e. pollution).

**First-Mover Advantage** is the competitive advantage gained by being the first company to introduce a product or service in a market.

**For-Benefit Corporation** or **B-Corporations** are a type of corporation that are purpose-driven and create benefit for all stakeholders, not just shareholders.

**Forecasting** is a statistical estimate of the occurrence of a future event based on the analysis of historical data.
Framework for Strategic Sustainable Development is used in this thesis to refer to the five-level framework that has been adopted specifically for the system “society within Biosphere” and Sustainable Development of that system.

Hedge Fund is a fund that seeks to generate investment returns by using non-traditional investment strategies, utilizing mechanisms such as short selling, leverage, programme trading, arbitrage, and tools such as options, futures, swaps, and forwards (derivatives in general).

Human Capital stands for the unique capabilities and expertise – skills and knowledge – possessed by individuals.

Index or Market Index is a measure updated regularly that gives a representation of the movement in value of a particular market or a specified group of securities (i.e. Toronto Stock Exchange, Dow Jones Index).

Index-tracking Fund (or Index Fund) is an investment fund which aims to match the returns on a particular market index. The fund may hold all the stocks in the particular index or, more commonly, use a mathematical model to select a sample that will perform as closely as possible to the index.

Informational Asymmetry is the imbalance of access to information between parties. When one party involved with a transaction has more or better information than the other party, it gives them an unfair advantage.

Initial Public Offer (IPO) is the sale or distribution of a stock of a portfolio company to the public for the first time, raising working capital for the company.

Institutional Investors are organizations whose primary purpose is to invest its own assets or those held in trust by it for others. Institutional Investors usually invest large volumes in the securities markets. Examples include: pension funds, mutual funds, and banks.

Investment Analyst is a person who analyzes the performance, prospects, and value of stocks; and who provides this information, as buy and sell
recommendations, to his or her employer – brokerage or fund management house – and its clients. Analysts usually specialize in a particular industry sector or stock type.

**Investment Performance** is the total return earned on a portfolio of assets over a particular period.

**Lithosphere** (from the Greek word for “rocky” sphere) is the solid outermost shell of a rocky planet. On Earth, the lithosphere includes the crust and uppermost layer of the mantle (the upper mantle or lower lithosphere) which is joined to the crust.

**Money Manager** is a person who is responsible for ensuring that client portfolios are invested in accordance with agreed mandates, and are kept in line with the asset mix specified by the investment team.

**Mutual Fund** is a Fund operated by an investment company that raises money from shareholders and invests it in stocks, bonds, options, commodities or money market securities.

**Natural Capital** is the natural environment and its living systems, defined in terms of a stock of environmentally provided assets (soil, atmosphere, forests, minerals, water, fauna, wetlands), that provide the useful materials that represent the raw input, or consumable products of human production.

**Outperformance** is used to refer to the performance of a portfolio relative to its benchmark – a portfolio is said to outperform if its return is greater than that of its benchmark. Underperformance is defined similarly.

**Pension Fund** is similar to a Mutual Fund, except that investments are more long-term as returns are intended for retirement. Pension Fund investors are bound by some common workplace affiliation (such as a union).

**Portfolio** is a block of assets generally managed under the same mandate.

**Price Earnings ratio (P/E ratio)** is a commonly used indicator of the value of a stock calculated as a company’s current share price divided by its earnings per share. A high P/E ratio may be justified because a company is
expected to increase its earnings per share or it may indicate simply that the company is expensive.

**Qualitative Analysis** assesses the value of an investment by examining mainly non-numeric characteristics such as management, people, process, etc.

**Quantitative Analysis** uses mathematical and statistical techniques to make investment recommendations.

**Recession** stands for a significant decline in general economic activity extending over at least six months.

**Researcher** is a person, or company, who compiles information about a company or sector in a report that is used by the *Investment Analyst*.

**Return on Investment (ROI)** is the increase in value of an investment over a period of time, expressed as a percentage of the value of the investment at the start of the period.

**Risk** is the probability of a consequence occurring multiplied by the magnitude of the consequence.

**Risk-Adjusted Return** is a measure of the return earned by an investment that is adjusted to take into account the level of risk taken to achieve it.

**Securities** are the general name for shares and bonds of all types. Shares produce a variable dividend while bonds have a fixed interest.

**Socially Responsible Investing (SRI)** is the process that takes social, environmental and ethical criteria into account when investing in companies.

**Society** refers to the human system (as a sub-system within the Biosphere) in which materials, products and their associated industries interact.

**Stock Selection** is the selection of a portfolio of stocks in a particular market or sector, usually based on technical or fundamental analysis and usually with the aim of achieving a return superior to the overall market or sector or benchmark thereof.
Strategic Goal is a part of a vision and formulated on the basis of principle. Strategic goals have a clear future perspective, i.e. – they should point to the key factors that define a successful organization in the future.

Strategic Plan is the outcome of a business planning process. Key components of the preferred Strategic Plan are:

- A vision, core purpose, core values and strategic goals,
- The business goal document with responsibility, activities, schedule, budget/resources and indicators, and
- An appendix with prioritized measures.

Strategic Sustainable Development (SSD) is a way of strategically moving towards sustainability that is designed to help bring clarity, rigor, and insight to planning and decision making in order to achieve a sustainable society in the Biosphere. Grounded by a ‘Backcasting from Sustainability Principles’ approach, whereby a vision of a sustainable future is set as the reference point for developing Strategic Actions (Holmberg and Robèrt, 2000).

Sustainability Principles or System Conditions are four generic and non-overlapping principles that are used to define sustainability from a scientific, whole-systems perspective. These principles are constraints, and describe the basic conditions that must be met in order to achieve sustainability. The four conditions describe a society in which nature is not subject to systematically increasing…:

1. concentrations of substances extracted from the Earth’s crust,
2. concentrations of substances produced by society,
3. degradation by physical means,

and in that society,

4. people are not subject to conditions that systematically undermine their capacity to meet their needs. (Holmberg and Robèrt, 2000)
Sustainability or Sustainable Society is a state where the four ‘Sustainability Principles’ are not violated (Holmberg and Robèrt, 2000; Ny et al. 2006).

Sustainable Development is defined as meeting the needs of today without compromising the ability of future generations to meet their needs (Bruntland et al. 1987).

Systems Analysis is about discovering organizational structures in systems and creating insights into the organization of causalities. It is about taking a problem apart and reassembling it in order to understand its components and feedback relationships. Systems Analysis involves group modelling, where we ask the initial questions about the problem and create a mental model structure, using Causal Loop Diagrams, to reflect that problem.

Systems Dynamics refers to the re-creation of the understanding of a system and its feedbacks. It aims at exploring dynamic responses to changes within or from outside the system. Furthermore, Systems Dynamics deals with mathematical representation of our mental models and is a secondary step after we have developed our mental model. Systems Dynamics also deals with numerical analysis and understanding uncertainty of the practical representation in the developed mathematical model.

Systems Thinking is a science that deals with the organization of logic and integration of disciplines for understanding patterns and relations of complex problems. Systems Thinking is also known as principles of organization or theory of self-organization and the way of using it involves “systemic” or “holistic thinking”. It is a science based on understanding connections and relations between seemingly isolated things. Systems Thinking embeds two other concepts, Systems Analysis (SA) and Systems Dynamics (SD).

Switching Costs are the costs incurred in changing from one provider of a product or service to another. The switching cost for a differentiated or unique product can be substantial while the switching cost for a commodity can be very small or non-existent.

Underperformance See Outperformance.
**Universe** is a term sometimes used to describe the total number of available stocks from which a portfolio is selected.

**Value Investing** is an approach to investment which places emphasis on identifying shares which are believed to be underpriced (on the basis of indicators such as Price/Earnings ratio and dividend yield) by the market.

**Weighted Average Cost of Capital (WACC)** is the calculation of a firm’s overall cost of capital that weights each source of finance proportionately (i.e., equity and debt).

**Working Capital** is the operational assets and liabilities needed for everyday operation (i.e. cash or bank overdraft, stock and trade creditors).
# Table of Contents

Acknowledgements ............................................................................................................. i

Statement of Contribution ................................................................................................. ii

Executive Summary ............................................................................................................ iii

Acronyms ............................................................................................................................ ix

Glossary ............................................................................................................................... xi

Table of Contents ................................................................................................................ xix

List of Figures and Tables ................................................................................................. xxii

1 **Introduction** .................................................................................................................. 1

   1.1 Systematic Sustainability Challenge ....................................................................... 2

   1.2 Opportunities and Risks for Businesses ................................................................. 4

   1.3 Traditional Investing ............................................................................................... 6

   1.4 Backcasting as a Strategy ....................................................................................... 8

   1.5 Strategic Sustainable Investing ............................................................................. 12

   1.6 Socially Responsible Investing ............................................................................. 14

   1.7 Gap Identification and Analysis ............................................................................. 18

   1.8 Research Question ............................................................................................... 21

2 **Methods** ....................................................................................................................... 22

   2.1 Research Approach ............................................................................................... 22

       2.1.1 Validity ............................................................................................................ 22
2.1.2 Exploratory Research .................................................. 23
2.1.3 Data Analysis: Identifying the Gaps................................. 24
2.1.4 Addressing the Gap: Tool Creation.................................. 25
2.1.5 Expert Feedback .......................................................... 25
2.1.6 Tool Testing................................................................. 26
2.1.7 Discussion and Debrief.................................................. 26

3 Results ................................................................................. 27

3.1 Section 1: Preliminary Version of the Strategic Sustainable
Investment Analysis Tool ...................................................... 27
   3.1.1 Sectoral Emerging Sustainability Issue (ESI) Chart .... 28
   3.1.2 Strategy Analysis Component .............................. 33
3.2 Section 2: Expert Feedback ................................................ 37
3.3 Section 3: Testing the Tool .................................................. 43

4 Discussion .......................................................................... 46

4.1 Boundaries ...................................................................... 46
4.2 Validity ........................................................................... 47
4.3 Implication of Results ...................................................... 47
   4.3.1 Statement 1 .............................................................. 48
   4.3.2 Statement 2 .............................................................. 49
   4.3.3 Statement 3 .............................................................. 50
   4.3.4 Statement 4 .............................................................. 51
List of Figures and Tables

Figure 1.1. Economic Sub-Systems within Society within Biosphere .......... 3
Figure 1.2. Limits to Growth ........................................................................ 3
Figure 1.3: Potential for Unlimited Growth.................................................... 4
Figure 1.4. Causal Loop Diagram of the Ideal Growth Cycle for the Traditional Investment System ................................................................. 7
Figure 1.5. SSI Causal Loop Diagram............................................................... 13
Figure 1.6. SRI Causal Loop Diagram ............................................................. 18
Figure 2.1. Research Steps............................................................................. 22
Figure 3.1. ESI Chart Workflow..................................................................... 30
Figure 3.2. Sectoral Emerging Sustainability Issues (ESI) Chart.................. 33
Figure 3.3. The Strategy Analysis Graph ......................................................... 37

Table 1.1. Traditional Investing and SRI Gaps to reach SSI......................... 20
1 Introduction

In an increasingly globalized world driven by financial growth and development, economics play a central role in shaping the activities of individuals, companies, and governments (Schumacher 1973). The allocation of money serves as a form of voting, influencing the direction of society’s development (Shaw et al. 2006). With combined investments of over USD 24.6 trillion (OECD 2007), Institutional Investors such as mutual funds, pension funds, and banks have the power to guide society’s growth and development. These investments provide the majority of the working capital for public corporations (OECD 2007). By embracing the vision of a wealthy and sustainable future, Institutional Investors can strategically allocate capital to companies that are leaders in this transition. In doing so, they will help create an economy that is strong, stable, and sustainable.

There is a growing understanding that money alone does not lead to well-being (Reeves 2003). Although financial wealth provides the means for having subsistence, freedom, and education, money itself does not provide these fundamental human needs. A higher income provides many benefits for the individual, but is not a solution for all the world’s problems. For centuries, investment decisions were made on the basis of maximum financial return, assuming that the only responsibility of business is to increase its profits (Schumacher 1973). Short-term returns were given priority over long-term implications. Progress was viewed as the conversion of social and environmental systems into providers of consumer needs.

Recently, this perspective of profits over people and planet has been shifting to a belief that the most successful companies are those who are able to manage their human and natural capital most effectively (Camejo 2002). Correlations are being made that link socially and environmentally responsible companies with lower risks and a better reputation (Willard 2002). It is reasonable to suggest that as investors continue to recognize intangible values, stock prices will reflect this changing perspective. Money Managers who invest earliest in these companies will generate competitive financial returns with less sustainability-related risk exposure.
1.1 Systematic Sustainability Challenge

Institutional investments grew at an average global rate of 9% between 2004 and 2006 (OECD 2007). Unfortunately, this growth is coming at the price of deteriorating social and environmental systems (UN MEA 2004). Although economic systems are sub-systems of society, which is itself a sub-system of the biosphere (Figure 1.1), their connection to these systems is largely ignored. Corporations are in the habit of externalizing costs onto these systems by forcing current and future generations to pay for negative consequences of their business, such as pollution clean-up, health care, and the erosion of trust. Justified by the pursuit of maximum profitability, these externalities have far-reaching consequences for society as a whole, as their effects may not be seen immediately. Unfortunately, due to the growing nature of the economic system, its equilibrium “implies a growing flow of physical inputs from and outputs to nature” and society (Daly 1977, 69). The constantly growing economy is starting to have a resounding negative impact on the social and environmental systems, of which it is a part. Infinite economic growth will not be possible, so long as these negative impacts continue together with the over-exploitation of natural cycles:

If the present trends in world population, industrialization, food production, and resource depletion continue unchanged, the limits to growth on this planet will be reached sometime within the next 100 years. The most probable result will be a sudden and uncontrollable decline in both population and industrial capacity. (Meadows, Meadows and Randers 1972).
When these limits to growth are incorporated into long-term market forecasts, any economic activity that depends on human and/or natural capital will be adversely affected by the degradation of social and environmental systems: “The rapid growth of the past 200 years has occurred because man…began to live on geological capital. The geological capital will run out” (Daly 1977, 23). According to this theory, economic growth will continue for a time, but will eventually fall (Figure 1.2).

The extent and swiftness of the plunge will depend on a multitude of factors, but the recession is inevitable: The early 1990s collapse of the Newfoundland cod fishery due to over-fishing resulted in the loss of tens of thousands of jobs and cost at least $2 billion in income support and retraining (UN MEA 2004).

![Figure 1.1. Economic Sub-Systems within Society within Biosphere](image)

*Figure 1.1. Economic Sub-Systems within Society within Biosphere*

![Figure 1.2. Limits to Growth](image)

*Figure 1.2. Limits to Growth*
In order to avoid this economic disaster, levels of social and environmental capital must be sustained over time. Economic growth must de-couple itself from unsustainable behaviour, reducing its dependence on non-renewable resources and diminishing the externalities imposed upon the society and biosphere systems. By designing new business processes and models that preserve, or ideally enhance, social and environmental systems, economic growth and progress can continue unencumbered into the future (Figure 1.3).

1.2 Opportunities and Risks for Businesses

Public companies are in a constant flux of transition, attending to changing market conditions and consumer demands. Companies that respond early to the pressures of their environment tend to become leaders in their industry (Lieberman and Montgomery 1988, Ernst & Young 2008). Some social and environmental costs that were previously external to companies’ balance sheets are now accounted for under strict government regulations or stakeholder pressure. Many companies have been sued for unsustainable practices such as pollution, chemical contamination, harassment, perverse employment practices, etc., while others are experiencing increased insurance costs due to environmental risks from their unsustainable practices (Bergen, Soonawala and Wälzholz, 2008). Organizations that work on mitigating sustainability risks generate substantial savings, carry on a good public image, and do not expose their shareholders to unexpected financial drawbacks.
The sustainability challenge not only exposes companies to risks but creates a broad range of opportunities. The pressure to reduce the use of scarce natural resources gives organizations the chance to generate financial savings from using more effective processes. The greatest opportunities, however, are yet to be seen. There is much greater potential for sustainability-driven opportunities in the future than can be observed today; proceeding from sustainability-oriented innovation that might lead to the creation of new markets, and greater productivity from a motivated workforce energized by their contribution to the success of a business doing worthwhile work (Keeble et al. 2005, 3; Willard 2008). Beyond the sustainability realm, leading businesses have been observed to have some common characteristics. Collins and Porras (1994) outlined that successful companies tend to have a strong core ideology that goes beyond making money. Organizations with strong core ideologies that pursue a vision suitable for a sustainable society are more likely to influence the industry in that direction. Developing the ability to compete using the corporate culture in a way that allows constant improvement and advantage over competitors is what keeps leaders one step ahead, sustaining their “first-mover advantages” (Johansson 2007).

Initially, first-mover advantages enclosed the idea of economies of scale – a concept broadly disseminated by Boston Consulting Group in the 1970s. Moreover, organizations that act first in the right direction obtain a clear competitive advantage in the marketplace due to the incorporation of innovative technology and other pioneering opportunities (Lieberman and Montgomery 1988, 42). Businesses leading the movement towards sustainability could potentially influence industry standards and government legislation. As well, they might generate switching costs for the consumer¹ and enhance brand loyalty (Lieberman and Montgomery 1988, 46-47). Leading companies in sustainability-related fields are developing new market spaces. Industries that did not previously exist,

¹ Switching costs often involve the costs of identifying and negotiating with new suppliers, as well as the costs for adapting infra-structure. For example, when DVD Technology was introduced, consumers incurred the switching costs of buying the DVD equipment to replace the VCR Player.
such as renewable energy and green design, are now generating great value within the present sustainability challenge. These companies re-shape sector boundaries, or create completely new ones, making competition irrelevant in their own new environment (Kim and Mauborgne 2004).

Not all companies embrace these emerging opportunities, and neither are they all completely apathetic to them. Organizations exist on a spectrum of evolution in this matter, somewhere between the old-paradigm market convention and an active role in the transition towards sustainability. Some companies speed up socio-ecological disaster by their increasingly unsustainable practices; others are simply going with the flow of business as usual, content to do nothing; still others are implementing incremental improvements in eco-efficiency, delaying the implications for as long as possible; and finally, a few companies are actively attempting to turn themselves and society in a new direction towards a sustainable future.

1.3 Traditional Investing

Conventionally, firms raise capital with the issuance of an Initial Public Offer (IPO). This offering, equal to the number of shares issued multiplied by the offering price, becomes the majority of the company’s working capital and is recorded in standardized balance sheets. Financial reporting is performed on a quarterly basis, outlining costs, revenues, and profits. A favourable financial report and stable growth will result in dividend payments and more interest from investors, driving up the share price. A higher share price, and therefore larger market capitalization, allows for easier financing and better cash flow. This reinforcing positive feedback loop is the ideal growth cycle of public companies, and has resulted in dramatic wealth creation for investors over several centuries (Figure 1.4). Unfortunately, this cycle ignores the social and environmental implications of a company’s operations. These externalities are perceived to exist outside the profit maximizing equation (revenue minus cost), and are deemed largely irrelevant to investment decisions.
When a Money Manager – the professional responsible for the management of investment portfolios – makes an investment decision, they rely on recommendations from Analysts, who themselves base their endorsements on information gathered by Researchers. This process is typical for virtually every decision made by a traditional Institutional Investor (Willard 2008, Coleman 2008).

Institutional investment management decisions are made based on information gathered either by in-house Researchers, employed by the investment firm, or external research companies, which sell their work to multiple institutions. This information is compiled into company reports that display valuable qualitative and quantitative data relevant to the investment decision. These reports are sent to Analysts, who often have expertise in a particular sector, for review. Analysts try to forecast a company’s future earnings and value by looking at current market trends, projected profitability, and management effectiveness. Analysts generally make a recommendation to ‘buy’, ‘sell’, or ‘hold’ the company’s stock based on their evaluation of this information. This recommendation is passed on to Money Managers, who make the final decision on whether, and how much, to invest in a particular company. Money Managers allocate capital in the attempt to have maximum return on investment with minimum risk exposure.

Money Managers use different types of strategies to achieve this goal of maximum risk-adjusted return. These strategies include: buy and hold, which is when managers take a long-term passive approach; indexing,
which is when managers link investments to an index such as the S&P 500; and value investing, which is when managers invest in companies that they feel are currently under-valued by the market in anticipation of appreciation. Value investing strategies assume the existence of market inefficiencies such as: incorrect pricing, when the price of a company’s stock does not reflect its real value; and informational asymmetries\(^2\), when some investors, but not others, have accessed and considered valuable data. These inefficiencies are assumed to correct themselves over time, and the wise Money Manager can recognize and exploit them to generate positive returns. Interestingly, Money Managers are attempting to predict the future, while the research upon which this entire process depends is based on forecasting using historical information. Researchers compile past data into their reports, which Analysts use to forecast trends and expectations for individual companies, while Money Managers must look forward and surmise how entire sectors will behave in the market. Although logical for short-term investment decision-making, this process is inadequate for medium and long-term strategic considerations involving complex systems.

### 1.4 Backcasting as a Strategy

Although forecasting is used for identifying opportunities in the short-term, it is not an efficient method for recognizing opportunities in the medium and long-term. Forecasting relies on the trends of today and the past, and attempts to apply them to the future. It can be risky if past factors are allowed to influence a realistic strategy for the future, particularly if the factors contribute to present problems. If these trends are allowed to be main determinants of what is relevant in the planning procedure, the

\(^2\) A good example of informational asymmetry occurred during the dot-com bubble of 1995-2000. Investors bought heavily into internet start-up companies, driving the share prices to incredible heights. Unfortunately, not all investors understood the complex business models of internet companies, and stock prices became over-valued. Many of the start-up companies were simply advertising and catchy domain names, but investors could not spot the difference. Eventually, the market corrected itself with the ‘bursting’ of the bubble, and billions of dollars were lost. (Ljungqvist and Wilhelm Jr. 2002)
resulting strategy is likely to transfer the problems that are a result of these factors into the future (Holmberg and Robèrt 2000, 294).

To alleviate the influence of past trends and to escape the barriers of forecasting from present trends, the strategy of Backcasting can be used to plan within complex systems for long-term success (Holmberg and Robèrt 2000, 294). Backcasting is a planning procedure that involves envisioning a desired and successful outcome in the future, then asking the question; “What do we need to do today to reach the desired outcome?” (Holmberg and Robèrt 2000, 294). The term ‘Backcasting’ originated from the concept of scenario planning (a planning methodology), which is based on envisioning a simplified future outcome (Robinson 1990). An analogy is that of a jigsaw puzzle, where there is an ideal future scenario of success (i.e. the picture on the jigsaw box) that guides the current actions (i.e. assembling the puzzle).

Although Backcasting from scenarios is a methodology that may encourage people to be more strategic, creative, and cooperative toward a shared vision, it suffers from three potential defects when dealing with complex systems:

1. It can be difficult for large groups to agree on detailed descriptions of a successful outcome in the future;

2. Technological development may affect conditions for planning which would make the scenario irrelevant; and

3. When planning for sustainability, it is difficult to determine if a scenario is sustainable or not (Ny et al. 2006, 63).

Instead of Backcasting from scenarios to move towards sustainability, the method of Backcasting from Principles of success is utilized (Holmberg and Robèrt 2000, 294, Ny et al. 2006, 63). This method resembles the game of chess, where the principles of success (i.e. checkmate) define the

3 Please see Appendix A for brief explanation of Backcasting from Principles using the ABCD Methodology
rules for winning the game. Because each player takes the current situation of the game into account before moving, chess resembles a dynamic planning method that aims to minimize the risk of losing pieces, while optimizing the possibility of achieving checkmate. There are a multitude of possible scenarios, or piece positions, that meet the principles of checkmate, rather than the single outcome outlined in the jigsaw puzzle analogy. Instead of agreeing upon a detailed description of a desired sustainable future, consensus should be reached outlining the basic principles of sustainability. These principles set the context for success in the ‘game’ of transitioning towards sustainability, and ensure that every player has the same goal in mind (Holmberg and Robèrt 2000, 298-299, Ny et al. 2006, 63).

The four principles for sustainability were developed to provide a clear, first-order, principle-level definition of sustainability, so that any organization could move towards meeting these principles (Holmberg and Robèrt 2000, 299; Ny et al. 2006, 64). The Sustainability Principles were developed so that they were (Ny et al. 2006, 63):

- Based on a scientifically agreed upon world-view;
- Necessary to achieve sustainability;
- Sufficient to cover all aspects of sustainability;
- Concrete enough to guide actions and assist with problem solving; and,

- Mutually exclusive to facilitate comprehension and monitoring.

The four principles for sustainability are stated below (Holmberg and Robèrt, 1997; Robèrt et al. 2002, 200; Ny et al. 2006, 64.).

| In a sustainable society, nature is not subject to systematically increasing… |
| I.  ...concentrations of substances extracted from the Earth’s crust, |
| II.  ...concentrations of substances produced by society, |
III. ...degradation by physical means

And in that society

IV. ...people are not subjected to conditions that systematically undermine their capacity to meet their needs.

By using these four principles for sustainability as the constraints for the desired outcome, or success; a community, business, organization, or individual can use the Backcasting from Principles (i.e. Sustainability Principles) method to plan for a transition to a sustainable future (Holmberg and Robèrt 2000, 297).

It is important for individual companies to translate the Sustainability Principles into their particular organizational context. Therefore, a company moving towards sustainability can be defined as a company that aims to:

I. Eliminate their contribution to systematic increases of concentrations of substances extracted from the Earth’s crust.

II. Eliminate their contribution to systematic increases of concentrations of substances produced by society.

III. Eliminate their contribution to systematic increases of degradation by physical means.

IV. Eliminate their contribution to the undermining of human’s ability to meet their needs worldwide.

This outcome is purposefully very difficult to achieve. It requires a company to move consistently in this direction over a prolonged period of time. Companies that are attempting to transition towards sustainability will benefit from strategic planning using Backcasting from Sustainability Principles as their primary strategy. By first envisioning themselves as ‘sustainable’, the company can use this image as a guiding compass to assess whether individual initiatives are moving them towards this goal.
1.5 Strategic Sustainable Investing

This paper proposes new ways of considering how investment decisions can help companies transition towards sustainability. Shareholders and Money Managers must be strategic, empowering sustainability champions of tomorrow by providing the investment capital needed today. Strategic Sustainable Investing (SSI) is a theoretical investment strategy that provides investors with a risk-managed portfolio, which generates a competitive financial return from sustainability-oriented companies. It uses the four Sustainability Principles to identify sectoral Emerging Sustainability Issues (ESIs) that will impact stock market performance in the near future, and then analyzes individual companies based on their particular strategy to address these Issues.

Backcasting from Principles is suggested as the ideal strategy for dealing with ESIs, and a company’s strategy is compared to Backcasting in order to gauge its long-term viability. SSI assumes that as society becomes conscious of the impending social and environmental impacts resulting from unsustainable behaviour, companies who have made the strongest commitments to strategic plans and actions towards sustainability will experience a competitive advantage over their less-prepared competition.

In the SSI system, success is outlined in two parts: the financial investment will offer a competitive risk-adjusted return; and the financial investment will recognize companies that are actively attempting to eliminate their contribution to violations of the four Sustainability Principles.

From a SSI Money Manager’s perspective, this strategy means identifying profitable companies that are leaders in the transition to sustainability. A SSI Money Manager that understands the system and the principles for success can play an active role in creating a sustainable society by recognizing and allocating funds to the companies that will prosper in such a future.

Characteristics of SSI:

- Lower sustainability risk exposure
• A definition of sustainability based on scientific consensus
• Primarily driven by movement towards sustainability
• Considers financial, ESG, and strategy analysis

The SSI industry will operate by prioritizing investment capital allocation to companies that are taking the lead in shifting away from unsustainable behaviour towards new ways of doing business. This allocation will provide an incentive for companies to move in a sustainable direction. This movement will still be reported in CSR and other extra-financial reports, but will also be recorded in traditional areas of a firm’s financial balance sheets.

By incorporating sustainability investment and returns into traditional financial reporting, a clearer picture of the bottom-line impact of a company’s transition towards sustainability is made available. Competitors and investors alike will analyze the company’s strategic investments in sustainability, and the link between these actions and bottom-line performance will be made. In this positive reinforcing loop, greater investor returns and increased movement towards sustainability are generated with every cycle (Figure 1.5).

![Figure 1.5. SSI Causal Loop Diagram](image)
Market growth becomes disconnected from increasing energy and resource use, and the possibility for endless progress emerges as limits to growth are avoided by sustaining human and natural capital.

Institutional Investors, such as mutual and pension funds, take a longer-term position on investments and are thus ideally suited to incorporate SSI strategies. By investing in tomorrow’s leaders today, these funds can employ a buy-and-hold strategy that will lower transaction costs to clients, while benefiting from the long-term returns of sustainable investments. Moreover, since clients invest in these funds with a view of retirement in mind, they can rest assured that their investments are contributing to the development of a stronger society and healthier environment to be enjoyed when they are ready to sell their investments and enjoy the fruit of their life’s work.

Alternatively, funds that incorporate SSI alongside traditional investment strategies will be hedging against emerging sustainability risks, as the transitional leaders are subject to a different assortment of risks than traditional investments. For example, investors whose portfolios are heavy with Oil & Gas Sector stocks are overly exposed to the risk of government legislation restricting greenhouse gas emissions, and would benefit from investing part of their assets in renewable energy companies. In the event of social and/or environmental turmoil, SSI strategies will outperform traditional investment strategies.

1.6 Socially Responsible Investing

Some investors already recognize the value of better corporate citizenship. Socially Responsible Investing (SRI) occurs when investors take into account more than financial criteria when selecting and managing a portfolio. Often deemed ethical, it can suggest investing with a concern for the social consequences of the investment (Henningsen 2002, Camejo 2002, 115-117, SIF 2008). SRI recognizes that corporate responsibility and societal concerns are valid parts of investment decisions. SRI considers both the investor’s financial needs and the investment’s impact on society (Henningsen 2002, SIF 2008). Through SRI practices, investors try to influence individual companies, as well as the market as a whole, to improve their corporate citizenship performance. Currently, SRI investors
have three different investment approaches (Domini 2001; Camejo 2002, 117-118; Henningsen 2002, 19-27; SIF 2008):

- Screening
  - Positive Screening
  - Negative Screening
- Shareholder Advocacy
- Community Investing

The Screening approach means that the investor will take into account environmental, social and/or corporate governance (ESG) criteria when defining a set of companies for an investment portfolio (Domini 2001, 61-76; Henningsen 2002; Camejo 2002, 117; Geczy, Stambaugh and Levin 2005; SIF 2008). It is a passive tactic, in the sense that the investors are only selecting the companies that fit in their criteria, not attempting to influence the decision making process of the companies’ board. Screening can be unfolded in two sub-categories: positive and negative screening.

Positive Screening is when investors look for companies with positive indicators according to their social investment criteria (Geczy, Stambaugh and Levin 2005). This strategy suggests that a mutual fund can decide to invest in companies that outperform in criteria such as socio-environmental indicators, volunteering, or stakeholder engagement. Often, these screenings use indexes such as the Dow Jones Sustainability Index (DJSI) or the FTSE4Good, which constitute a portfolio of companies that are ‘Best in Sector’ in environmental and social performance to guide their investment decisions (Knoepfel 2001, Collison et al 2007).

Negative Screening is the oldest type of screening, which was developed in the 18th century when investors excluded tobacco and alcohol related firms of their portfolios for religious reasons (Kinder 1993, Domini 2001, 52-60, Henningsen 2002). Later, this type of screening was made popular by the boycott of companies negotiating with the Apartheid regime in South Africa (Domini 2001, 34-40, Henningsen 2002). When utilizing Negative Screening, portfolios are built using standard financial analysis, but will
exclude companies or industries that do not correspond to the investor’s morals and values.

Often used as a complementary strategy to screening, some investors participate actively as shareholders, advocating on issues of their concern (SIF 2006). Shareholder Advocacy consists of engaging in dialogue with the board of directors and the company’s management, and releasing shareholder resolutions at annual meetings on suggested topics of action (e.g. gender equality, pollution, environmental questions, governance etc.). Through these actions, investors can influence or pressure the company to act in a responsible manner, which is meant to increase shareholder value and financial performance (Henningsen 2002, MacDonagh 2007).

The third strategy of SRI is to direct capital to communities usually ignored by the regular investment industry (Domini 2001; Camejo 2002; 118 Henningsen 2002, 117-126; SIF 2006). Community Investing creates opportunities for local business development; access to credit; and training to low-income people. Sometimes misinterpreted as philanthropy, community development investments make great business sense with good return on investment and a balanced risk (Henningsen 2002, SIF 2006).

According to the Social Investment Forum (2006), the most common strategy of SRI funds is Screening (73%), followed by Shareholder Advocacy (31%), while only a small portion uses Community Investing (1%). It should be noted that some funds employ more than one of these strategies (Screening and Advocacy), so some overlap exists. Demand for SRI strategies has seen exceptional growth in recent history. Between 1995 and 2005, SRI assets grew 258% to result in total assets worth USD 2.29 trillion in the United States, the world largest financial market, slightly outperforming the growth of general assets (SIF 2006, iv).

Reduced risk is one of the great benefits of SRI, as non-financial indicators can point to weaknesses in the organization that lead to previously unidentified investment risks (Camejo 2002, 67, 130). For example, a tobacco company may present great financial reports, but because of the nature of its business, it accepts very high risks of market pressure, boycotts, lawsuits, and governmental regulations. Funds that screen out tobacco companies mitigate their exposure to these specific risks.
Corporations have responded to the demands from SRI firms and other stakeholders, and have started to report on some of their corporate responsibility practices. Companies have different ways of reporting their Corporate Social Responsibility (CSR) performance. Many simply create their own CSR documents, reporting on the items or indicators they find most adequate; others use international standards like the Global Reporting Initiative (GRI)\(^4\); and, many companies are included in more issue-specific lists and ranks such as the Carbon Disclosure Project (CDP)\(^5\).

The social, environmental and/or governance performance of a corporation, when properly communicated, should alleviate some of the pressure coming from the stakeholders. As most governments have not yet adopted regulations on CSR reports, adequate accountability is not always performed. This lack of accountability gives space for greenwashing, which is the false claim of environmentalism or the “disinformation disseminated by an organization so as to present an environmentally responsible public image” (Beder 1997, Bruno 1997, Laufer 2003, Ramus and Montiel 2005).

\(^4\) The Global Reporting Initiative (GRI) is a multi-stakeholder governed institution collaborating to provide the global standards in sustainability reporting. Its guidelines are the world’s de facto standard in sustainability reporting guidelines. More than 1000 organizations from 60 countries use the Guidelines to produce their sustainability reports.

\(^5\) The Carbon Disclosure Project (CDP) is an independent not-for-profit organization aiming to create a lasting relationship between shareholders and corporations regarding climate change. CDP provides a coordinating secretariat for Institutional Investors with combined assets of over $57 trillion under management. Over 8 years CDP has become the gold standard for carbon disclosure methodology and process. The CDP website is the largest repository of corporate greenhouse gas emissions data in the world.
The current SRI System can be synthesized as a causal loop (Figure 1.6) where stakeholders (investors) pressure for ethical behaviour of publicly traded companies by the use of different strategies. These companies respond by reporting their progress in ethical related issues in CSR reports. These reports should demonstrate compliance to stakeholder demands, which should reduce their pressure over the compliant company. However, the SRI system does not always operate this way due to companies’ questionable progress or greenwashing, which will be discussed in the following section.

Figure 1.6. SRI Causal Loop Diagram

1.7 Gap Identification and Analysis

SRI mechanisms and motives are largely criticized (Anderson 1996, MacKenzie 1998, Sparkes 2001, Entine 2003, Hawken 2004). It is agreed that SRI is not perfect, that it is not aligned to a specific vision, and that it is not leading society to a sustainable future.

Although SRI contributes to basic levels of CSR, it does not create a self-reinforcing loop of constant movement towards sustainability. The current SRI model results in a balancing feedback loop, as previously outlined. Once companies have satisfied basic stakeholder demands by reporting their ethical improvements, advocacy groups often move on to new targets, decreasing the pressure over a certain company in a particular issue. Moreover, by neglecting to assess the financial benefits of sustainability investments, CSR initiatives are usually disconnected from bottom-line performance, and can be viewed as bothersome costs by top management.
Paul Hawken (2004) outlines ten gaps with the SRI industry (Appendix B). One argument against SRI relating to sustainable development is that ethical investors have little to no positive impact on moving the market in a sustainable direction. In Paul Hawken’s words, “the cumulative investment portfolio of the combined SRI mutual funds is virtually no different than the combined portfolio of conventional mutual funds” (Hawken 2004). Likely, it is due to this flaw that SRI-related indexes and funds such as FTSE4Good and the Dow Jones Sustainability Index (DJSI) behave as the general market indexes\(^6\) such as S&P500, NASDAQ or Dow Jones, demonstrating similar returns on investment (UNEP-FI 2007).

Instead of ethical motives that drive Socially Responsible Investors and the purely financial drivers of traditional investments, investors must take sustainability aspects into account to move society in that direction. To make accurate investment decisions in the context of Strategic Sustainable Investing (SSI), Money Managers will rely on a set of financial and non-financial reports, preferably correlated to each other, where the movement towards sustainability is highlighted in relation to positive bottom line results (Table 1.1).

Another disparity between traditional investing and the envisioned SSI practices is the exposure to risk. Using SSI, sustainability related issues are avoided and their consequential sustainability related risk exposures are also reduced. To a certain degree, that is also true for SRI, but the lack of agreement in regard to the criteria to select the investments voids that advantage (Hawken 2004) (Table 1.1).

\[^6\text{A Market Index is a metric for the average performance of a market portfolio. It is built based on the weighted performance of a basket of selected stocks – usually from companies with large capitalization, or the most negotiated in a certain period.}\]
Table 1.1. Traditional Investing and SRI Gaps to reach SSI

<table>
<thead>
<tr>
<th></th>
<th>Traditional</th>
<th>SRI</th>
<th>SSI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sustainability Definition</strong></td>
<td>Sustainability is not considered</td>
<td>Lack of clear definition of Sustainability</td>
<td>A definition based on scientific consensus</td>
</tr>
<tr>
<td><strong>Primary Driver</strong></td>
<td>Maximize Return on Investment</td>
<td>Ethical Values</td>
<td>Movement towards Sustainability</td>
</tr>
<tr>
<td><strong>Analysis Performed</strong></td>
<td>Financial Analysis</td>
<td>ESG Analysis</td>
<td>ESG Analysis Financial Analysis Strategy Analysis</td>
</tr>
<tr>
<td><strong>Sustainability Risk Exposure</strong></td>
<td>Higher Exposure</td>
<td>Variable Exposure</td>
<td>Lower Exposure</td>
</tr>
</tbody>
</table>

These gaps must be considered for the establishment of a more sustainable investment industry. That effort also demands the development of a forward looking set of tools, which helps to identify and gauge true movement towards sustainability, and assess the link between actions related to this movement and bottom line financial benefits.

The investment industry already has very sophisticated ways of assessing financial performance of companies, and recently has started paying attention to non-financial data as well. The SRI movement has encouraged the development of a set of screening and analysis tools to make better sense of all non-financial indicators, mainly related to ethical aspects of an organization’s operations. However, gaps exist when trying to understand and measure the strategic movement of a company towards sustainability and its financial benefits. Investors do not have the adequate tools to understand the short, medium, and long-term financial effects of sustainability-oriented actions by companies. As well, sustainability initiatives and reporting are still viewed as a cost by many companies, with no direct link to increased financial performance.

Therefore, to overcome the gaps between the current reality of Traditional and Socially Responsible Investments to a Strategic Sustainable Investment industry, Researchers, Analysts and Money Managers require the
development of tools and concepts that allow them to recognize true movement towards sustainability, and the link between this movement and stock value.

1.8 Research Question

The purpose of this thesis is to explore the identified gaps between the Traditional Investing and Socially Responsible Investing systems, and the proposed Strategic Sustainable Investing system. The area of focus for this report is to investigate how a Strategic Sustainable Development perspective can assist with the recognition of companies with leading strategies for transitional change. In turn, providing information that can assist Institutional Investors to make educated investment-decisions regarding sustainability related issues. Hence, the following research question is asked:

*In what ways can Institutional Investors use a Strategic Sustainable Development perspective to recognize value in transitional leadership towards sustainability?*
2 Methods

This section outlines the methodological approach of this study. Six steps were taken in order to answer the thesis question: Exploratory Research; Data Analysis; Tool Creation; Expert Feedback; Tool Testing; and Discussion and Debrief (Figure 2.1).

<table>
<thead>
<tr>
<th>Exploratory Research</th>
<th>Data Analysis: Identifying the Gaps</th>
<th>Addressing the Gaps: Tool Creation</th>
<th>Expert Feedback</th>
<th>Tool Testing</th>
<th>Discussion and Debrief</th>
</tr>
</thead>
</table>

Figure 2.1. Research Steps

2.1 Research Approach

Appropriate research questions and methods were developed using a process supported by an Interactive Model for Research Design (Maxwell 2005). Information came from a combination of literature and journal reviews, and interviews with professionals involved in the fields of Socially Responsible Investing and Strategic Sustainable Development. Two different types of interviews were carried out: exploratory interviews, where the interviewer is permitted to explore ideas and concepts freely; and structured interviews, where a structured questionnaire is followed.

2.1.1 Validity

Validity is an important characteristic for the evidence gathered (Maxwell 2005). It is important to state that the selection procedure for the chosen thesis methodology is essential, as there is a potential for errors that arise from using a biased procedure (Staley 2004). Specific plausible alternatives to the conclusions of the thesis were not ruled out; rather they exist in support of this study. The aim was to suggest ‘ways’, as opposed to ‘the way’ in which a Strategic Sustainable Development (SSD) perspective can recognize value in transitional leadership towards sustainability.
Data was collected through a variety of methods and from a diverse range of sources (Maxwell 2005). Author bias was addressed through constant communication and critical thinking among the three authors involved, as well as outside support from sustainability and investment experts, supervisors, and peer groups. Data was collected based on a preliminary process of examining the quality of the documents, using Scott's four criteria for assessing document quality (1990):

i. Authenticity: the evidence gathered for the thesis is genuine and of unquestionable origin

ii. Credibility: the evidence gathered is free from error and distortion

iii. Representation: the evidence obtained is typical

iv. Meaning: evidence gathered is clear and comprehensible

### 2.1.2 Exploratory Research

A variety of methods were used, including a broad literature review and interviews.

**Literature Review**

Relevant materials were reviewed in the fields of traditional investing, Socially Responsible Investing, business strategy, neo-classical economics, ecological economics, Corporate Social Responsibility, risk analysis, corporate leadership, sustainability, sustainable development, and Strategic Sustainable Development. Three main areas were searched: academia through universities and peer-reviewed journals, corporate organizations through reports, and non-governmental organizations through publications.

The following information searching resources were used: Libris (provided by the National Library of Sweden), BTH Library Catalogue, and Google Scholar.
**Exploratory Interviews**

Interviews were conducted with professionals who work in the fields of Socially Responsible Investing and Sustainability. The goals of the exploratory interviews were to access current information, personal experiences, impressions, and insight beyond those that have been published, as well as to discuss and explore ideas considered in the thesis theory. This information contributed to the development of the first version of the Strategic Sustainable Investment Analysis Tool. Interviews were performed via telephone and all verbal interviews were recorded.

The selection of questions depended on the background and current activities of the interviewee. The data gathered was used to expand upon the background information from the literature review, provide a better understanding of practical applications and industry limitations, and support the proposed ways SSD can assist with investment decision-making.

### 2.1.3 Data Analysis: Identifying the Gaps

The Framework for Strategic Sustainable Development (FSSD) can be used for a neutral study of a human system, and as a structured approach to planning that embraces a whole-systems view and avoids reductionism (Holmberg and Robèrt, 2000). The framework has been shown to be very useful for Strategic Planning in complex systems towards sustainability and is designed to reveal the gaps between the current reality and the ideal concept of a fully sustainable society. It is a framework to facilitate planning and decision-making, and has a variety of applications in a variety of contexts.

After obtaining an understanding of the Traditional and Socially Responsible Investing (SRI) systems, the concept of Backcasting from Sustainability Principles was utilized to derive a new concept of investing – Strategic Sustainable Investing (SSI). The characteristics of SSI were then used as a lens to assess the current practices in the Traditional Investing and SRI systems to identify gaps between the present reality and the envisioned ideal. By using this lens, it was possible to assess the strengths, weaknesses, and limitations of the two current investment styles within the context of Strategic Sustainable Development in a systematic way. This gap analysis was used to inform the creation of the first version of the
Strategic Sustainable Investment Analysis Tool, which captures SSI ideas and concepts, and makes them practical.

2.1.4 Addressing the Gap: Tool Creation

Once the limitations of the SRI industry were identified, innovative solutions became necessary. A variety of brainstorming methods were utilized, including the Double Diamond approach for creative thought development (Itin 2002), ‘business walks’ in nature, and various co-creation techniques. The authors took turns playing the roles of leader, supporter, and critic. Sessions would extend over a number of days, to give time for digestion of new ideas and concepts. The result was the development of the first version of the Strategic Sustainable Investment Analysis Tool (Appendix C).

2.1.5 Expert Feedback

Structured interviews were conducted with a panel of eleven experts on the fields of Responsible Investing, Socially Responsible Investing, Corporate Responsibility, Private Equity, Financial Research and Sustainability. In order to eliminate bias, the selection of professionals to compose the panel followed the criteria of gender balance, diversity of countries, and diverse areas of focus within the investment industry. The names, positions, organizations, and countries of the experts interviewed are listed in Appendix D.

The objective of these interviews was to check the logic of the conceptual framework, obtain the experts’ impression of the first version of the tool, and in turn answering the main research question by:

- Measuring the level of interest;
- Gauging its usefulness; and
- Identifying how it can be improved.

In advance of the interview, each interviewee was presented with a document outlining the basic assumptions and science in which the Strategic Sustainable Investment (SSI) Analysis Tool is based, and a brief
description and illustration of each section of the Tool. The experts’ feedback was facilitated by a set of structured statements, and their responses were gathered through verbal interviews and transcribed.

2.1.6 Tool Testing

A partnership with Jantzi Research, an independent investment research firm based out of Toronto, Canada, was developed through the Expert Feedback Step in order to test the SSI Analysis Tool. Two meetings were conducted with Nancy Palardy, Senior Analyst and Team Leader, CSID, in order to:

- Obtain professional advice in regard to filling in the sectoral ESI chart from a Senior Sector Analyst;
- Obtain critical feedback in regard to the process of using the SSI Tool, and the information conveyed by the SSI Tool, and;
- Determine the effectiveness and clarity of the proposed format for displaying the information.

The Unconventional Oil & Gas Sector in Canada was used as the example sector for the sectoral ESI chart, and three companies within this market sector were used for the Strategy Analysis component (Appendix E).

2.1.7 Discussion and Debrief

The preliminary SSI Analysis Tool was reviewed based on the feedback and advice given by the experts. The test results were also reviewed based on the feedback from the Senior Sector Analyst. The results were then analyzed from different points of view and improvements were then incorporated to develop the SSI Analysis Tool 2.0 (Appendix F).
3 Results

After constructing the conceptual framework from the information gathered through theory, publications, reports, and interviews with professionals working in the fields of Socially Responsible Investing and Sustainability (Steps 1 and 2), sufficient data was obtained from identifying the links between Strategic Sustainable Development and investment-making decisions (Step 3) to answer the main research question: “In what ways can Institutional Investors use a Strategic Sustainable Development perspective to recognize value in transitional leadership towards sustainability?”.

The results are presented in three sections:

Section 1: Preliminary version of the Strategic Sustainable Investment Analysis Tool

Section 2: Expert Feedback

Section 3: Testing the Tool

3.1 Section 1: Preliminary Version of the Strategic Sustainable Investment Analysis Tool

During the exploratory interview step, insights were gained that helped the Tool creation process. Sommer (2008), a sustainability Analyst at Fortis Investments, describes how his company uses a “Sustainability Radar” tool to target companies that are leaders in providing solutions for Emerging Sustainability Issues (ESI). Issues are labelled as ‘Emerging’ if there is growing momentum behind scientific, political, and public enquiry. He argues that markets have still not taken into account companies’ performance regarding these issues, resulting in overpricing of the “losers” and underpricing of the “winners”. Fortis uses this analysis to help guide their investment decisions towards opportunistic companies that are offering products and/or services that will benefit from the emerging of these issues. Interestingly, the data upon which their investment decisions are made is based on forecasting from past trends. The identification of
ESIs is based on recent exposure in the scientific community and media, and uses a reactive framework that forecasts increasing support and public pressure for the issue.

Willard (2008) described the need for a process of identifying companies that are leaders in the transition to sustainability based on the belief that risk avoidance is a key aspect of the business case for sustainability and a driver for transitional change. Moreover, he verified the idea that many of the risks associated with unsustainable actions are measurable on a sector-by-sector basis, and argued that the SRI industry would benefit from a principled definition of sustainability (Willard 2005).

MacDonagh (2008) was extremely helpful for setting the context of current SRI practices, and outlined the need for an analysis tool that measures a company’s strategy for transition. He used the analogy of society as a boat on a river headed towards the waterfall of social and ecological disaster. Companies have a variety of sustainability strategies that include: speeding up the boat by making things worse; going with the flow of the river by performing business as usual; slowing down the boat by implementing incremental improvements over time; and consciously turning the boat around and heading in a new direction by changing business models and actively avoiding unsustainable behaviour. These perspectives helped set the context, and were valuable for creating the components of the Strategic Sustainable Investment Analysis Tool (Appendix C) outlined below.

3.1.1 Sectoral Emerging Sustainability Issue (ESI) Chart

The sectoral Emerging Sustainability Issue (ESI) chart is used to identify which unsustainable actions within a subject sector will form the foundation for the most prominent Emerging Sustainability Issue(s) within a market sector. In the common sense, an issue is called ‘emergent’ when it gets media exposure. Instead, the Tool relies on scientific Principles of Sustainability to identify what is emergent.

The sectoral ESI chart highlights the areas that represent greatest risk for the subject sector in the near future by assessing which Sustainability Issues, amongst the ones related to the sector, are more pressing to companies. Decision-making often relies upon strategic tradeoffs, and the
most pressing sustainability issues are evaluated against criteria such as potential magnitude, time perspective, and relative contribution to the issue (Ny et al. 2006, 67). Language was adapted to better suit the financial community: potential magnitude is communicated as “Severity”, time perspective as “Urgency”, and the sector’s contribution to the overall problem as “Systematic Contribution”.

For investors, it is important to understand and predict what kind of challenges the owned company or companies will face in the near future, as that will impact share value and the expected return on the investment. With the sectoral ESI chart, those sustainability challenges are identified, and the fundaments of strategy analysis are framed. This aspect of the Tool identifies the highest risks in terms of sustainability.

Much has already been done to identify companies that provide solutions to mitigate Emerging Sustainability Issues (Sommer 2008, Frisk 2008). However, the determination of ESIs has been based on a subjective approach of observing media coverage and public perceptions. The sectoral ESI chart relies on the strength and impartiality of the Sustainability Principles and the assumption that a systematic contribution to the violation of those principles determines an unsustainable behaviour.

From this assumption, it is possible to list the Unsustainable Actions within the subject sector’s business models. The Unsustainable Actions refer to those actions that contribute to the violation of at least one of the Sustainability Principles, with no limit on the number of Unsustainable Actions a sector may be performing. On the next column of the chart, each Unsustainable Action is associated with one or more Sustainability Principle. An action must involve at least one Sustainability Principle to be defined as unsustainable; as well, an Unsustainable Action can involve the violation of multiple Sustainability Principles.

In the end, the Assessment Categories column is divided into three sub-columns to assist with prioritizing the subject sectors unsustainable actions, which will lead to the identification of sectoral Emerging Sustainability Issues.
The chart is to be constructed by Sector Experts, and updated as needed. The initial gathering of information will demand most of the work, while keeping it up-to-date as a living document will require less effort. The Experts will follow the process flow represented in Figure 3.1 and described below.

![ESI Chart Workflow](image)

**Figure 3.1. ESI Chart Workflow**

Once a sector is selected for an ESI analysis, a list of relevant violations of Sustainability Principles is assembled. Akin to the “B” step in the ABCD process (Appendix A), this Baseline Analysis will highlight the sectoral actions that contribute to un-sustainability. Since many actions involve the violation of multiple Sustainability Principles, each affected Sustainability Principle is assessed independently. It is important for Analysts to validate their claims of un-sustainability by providing a scientific explanation of how the particular action violates the relevant Sustainability Principle. This validation will strengthen the legitimacy of the business risk, while also ensuring that the Analysts have the scientific foundation to perform the following assessment.

For each sub-column of the sectoral ESI chart, Severity, Urgency, and Systematic Contribution, a prioritization colour is assigned to each
unsustainable action: Red for Very High Priority; Orange for High Priority; Yellow for Medium Priority, and Green for Low Priority. Prioritization is determined uniquely for each sub-column.

The Severity sub-column assesses the seriousness of the issue, in terms of its potential consequences for the biosphere, society, and companies within that sector. In this assessment, the Sector Expert asks the questions: How extensive is the Issue’s impact on society and the Biosphere? What are the potential consequences of continued systematic violation?

To answer the first question, the Researcher should use a scientific understanding of the system being affected. If the issue is impacting the biosphere, then a consideration needs to be given to the ability of ecosystems to absorb the impact. For a material extracted from the Earth’s crust (SP1), the natural abundance level of the material will help determine how extensive the impact is. For a material produced by society (SP2), the persistence, or length of time it will take an ecosystem to break down the material, should be considered. With physical degradation (SP3), the natural rate of regeneration of the ecosystem will help determine the extensiveness. If the impact is affecting society (SP4), then the Researcher needs to identify which human needs are being undermined. The prioritization colour is also informed by determining the worst-case scenario of continued systematic violation. When dealing with Issues affecting the biosphere, the Researcher should judge the extent of potential damage it could cause: Will it result in an ecosystem collapse? Does it imply ecosystem degradation? Is it an isolated Issue? Is it within natural limits? If the Issue is affecting society, the Researcher should ask similar questions: Will it result in extensive death? Will it cause suffering? Does it inhibit needs? Are no needs inhibited? Together, the answers to these questions should provide a strong reasoning behind which colour gets chosen.

The Urgency sub-column analyses the time frame pressing each issue. It estimates the length of time until the repercussions of a certain Emerging Sustainability Issue affects companies within the sector. It asks the questions: What are the main sources of pressure? What is the expected time-frame for the emergence of the Issue? The first question is answered by considering the existence of pressure from various stakeholders. Government legislation and consumer demand have been identified as the
primary stakeholder pressures affecting a company’s bottom-line. Therefore, the Researcher needs to ask questions that gauge the timeliness of these pressures by asking questions such as: Is there pending legislation? Is the legislation being debated? Have neighbouring regions take action? Are consumer prices increasing? Is there media coverage of the Issue? Is there pressure from NGOs?

Depending on the Issue, various other stakeholders will play a role in speeding up its emergence. Any additional pressure coming from other stakeholders should be noted as well.

After considering the various pressures affecting the sector, the Researcher will determine the expected time frame for the emergence of the Issue. This time frame will determine which colour is used to fill in the chart. Red is used if the Issue is expected to emerge in less than two years. Orange is used if it will emerge in two to five years. Yellow is used for between five and fifteen years. Green is used if it expected to take longer than fifteen years for the Issue to emerge.

The *Systematic Contribution* sub column is used to gauge the sector’s contribution to the overall issue. It asks the question: What is the sector’s share of responsibility for the overall sustainability Issue? Since some Issues have only a local impact, while others are more global in nature, two separate scales are used to determine the colour. Each scale determines the percentage of the sector’s contribution to the overall Issue.

**Local Issues:**

Red: +50%  Orange: 20-50%  Yellow: 1-20%  Green: < 1%

**Global Issues:**

Red: +10%  Orange: 4-10%  Yellow: 0.2-4%  Green: < 0.2%
The chart composes the cover of the Tool report. When filled in by the Researcher, the colourful Emerging Sustainability Issue chart (Figure 3.2) will allow the Analyst to see, at a glance, which actions represent high risks for the companies within the sector in the short-term; as well as which issues will be emerging in the short, medium, and long-term as the most pressing in that specific sector.

![Figure 3.2. Sectoral Emerging Sustainability Issues (ESI) Chart](image)

### 3.1.2 Strategy Analysis Component

The Strategy Analysis component of the SSI Analysis Tool assesses an individual subject company’s strategy for dealing with the identified ESI. The goal of this component is to compare the subject company’s strategy to the Backcasting strategy mentioned in section 1.4. This analysis involves reviewing the end goal addressed in the ‘Strategic Plan’ section, and the recent actions that are being taken to move towards the goal, which are addressed in the ‘Strategic Actions’ section. The ‘Strategy Analysis Graph’ is intended to combine the subject company’s plan and recent actions in relation to the ESI. This graph provides a summarized visual that plots the current and planned progress of the subject company for with dealing with the ESI, and displays its exposure to the sustainability risk. This
information is then used by the Analyst to understand, at a glance, how bold and comprehensive the subject company’s targets are, and how effective the current actions are at moving the subject company towards its goal. Overall, the Strategy Analysis component assesses whether or not the subject company is ‘walking the talk’ in regard to the identified ESI. The information in this component of the SSI Tool should be updated as needed by the Researcher.

The Strategic Plan section assesses the subject company’s end goal, which is the subject company’s long-term desired future state in relation to the ESI. The Researcher will use publicly available information to compose and write a qualitative description of the subject company’s plan for the Analyst to use when assessing the subject company. The qualitative description should include, but is not limited to, information regarding public commitments, planned operational and business initiatives, political action/lobbying, and third-party partnerships (with non-governmental organizations, consulting firms, etc.). The Researcher should also emphasize and comment on the subject company’s core business in relation to the ESI, as this will assist in determining the subject company’s exposure to the potential risk.

When composing this section, the Researcher will use the ‘Vision Gauge’ as a mental guideline when formulating the available information. The ‘Vision Gauge’ consists of four levels intended to provide guidance for the Researcher to understand what entails an optimal vision, as opposed to an inadequate vision. The levels are described as:

Level 4 – The subject company has a demonstrated principled understanding of the ESI and has a vision in place for eliminating its contribution to the intensification of the ESI. (‘Principled Understanding’ means that the subject company’s understanding of the ESI is based on consensus-based, scientific principles)

---

7 Mental guidelines are used to frame an individual’s thought process and perceptions.
Level 3 – The subject company has an unprincipled understanding of the ESI and has a vision in place for ‘Sustainable Development’ in a broader context.

Level 2 – The subject company demonstrates a basic understanding of the ESI.

Level 1 – The subject company demonstrates no understanding of the ESI.

The *Strategic Actions* component assesses the subject company’s recent actions taken in relation to the ESI. The Researcher will use publicly available information and should include initiatives that contribute to the intensification of the ESI, as well as those that mitigate it. There are many different types of actions that a company can take, depending upon the ESI and the subject company’s strategy. Some typical areas of action that are common for movement towards sustainability include, but not limited to: commercial operations (energy and resource efficiency, new equipment and infrastructure); education and training (sustainability workshops and courses); product and service development (innovative customer solutions); and brand enhancement (philanthropic and public relations initiatives). The Analyst will use this information to determine whether the subject company is ‘walking the talk’ in comparison to its goals outlined in the ‘Strategic Plan’ section.

When reviewing this section the Analyst needs to view the subject company’s actions through the lens of Strategic Sustainable Development to understand how comprehensive and proficient the action plan is. Thus, three questions are emphasized as a mental guideline for the Analyst when considering the effectiveness of the Strategic Actions:

1. **Does this action provide a competitive Return on Investment (ROI)?**

An action that provides a strong ROI should be given priority in order to ensure financial stability during transition. Too often, investments in sustainability are measured only as liabilities when in fact they are financially prudent. By focusing on the ROI aspect of actions, Analysts can determine which companies have integrated ESI strategies with their overall financial strategy.
2. Is this action taking the subject company in the right direction?

An action that moves the subject company towards their stated vision, which should incorporate the four Sustainability Principles, is seen as moving them in the ‘right direction’. If the action moves them away from their vision, then it shows potential confusion or misinterpretation surrounding the vision. Discretion needs to be used, however, because a successful strategy can sometimes temporarily lead away from the vision in the short-term in order to better position the subject company to achieve their vision in the long-term. The Researcher needs to describe the direction of the subject company’s action, and how it fits into their overall strategy.

3. Is this action versatile?

An action is considered ‘versatile’ if it can be used as a launching pad for further initiatives. For example, actions that require investing large amounts of capital into a technology might prove cumbersome if that technology does not achieve the end goal. The subject company’s progress could plateau, leaving them in a vulnerable position. Only by building off of previous actions can a company hope to achieve their end goal. Therefore, actions taken should be versatile, especially during the early phases of transition.

The Strategy Analysis Graph integrates the information described in the ‘Strategic Plan’ and ‘Strategic Actions’ sections into a single visual component. It is illustrated in the middle of the Strategy Analysis component page and intended for an at a glance reference for the Analyst. The graph shows the subject company’s planned path for dealing with the ESI (i.e. dotted line in figure 3.3), as well as tangible progress made (i.e. vertical bars in figure 3.3). The Researcher will use publicly available information to determine the subject company’s current and previous actions, as well as the subject company’s planned goals, to plot the information on the graph.
The Analyst will be able to identify the subject company’s time-scale and unit of measurement (i.e. emissions, percentage, intensity, etc.) at a glance of the relevant axis. The Analyst should be aware of which unit of measurement is best suited for a particular strategy. For example, with greenhouse gas emissions, intensity targets are more appropriate for a sector that is rapidly growing, whereas absolute emission targets are a better indicator for mature sectors.

The trajectory of the subject company’s planned path reveals the extent of their future risk exposure; as companies that lower their contribution to the intensification of the ESI early will be less exposed. However, the Analyst should be aware that in some cases, the company’s performance might get worse initially, in order to make rapid gains afterwards. As the Analyst gets comfortable viewing the Strategy Analysis Graph, they will be able to identify which strategies are most likely to be successful.

3.2 Section 2: Expert Feedback

The thesis question is answered by the development of the Strategic Sustainable Investment Analysis Tool. The following section presents the main ideas and logic behind the preliminary version of the SSI Analysis Tool, and how it addressed the thesis question. The statements employed for the structured interviews with the panel of experts were used to verify
the logic of the conceptual framework, obtain the experts’ reaction, and in turn answer the main research question by:

- Measuring the level of interest
- Gauging its usefulness
- Identifying improvement opportunities

The statements are presented in a simple way, providing clear, easy, and quick reading for the experts.

The statements are:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>To deal with emerging social and environmental issues, society needs companies to plan strategically for a transition to a sustainable future.</td>
</tr>
<tr>
<td>2.</td>
<td>Identifying and measuring a company’s strategy for dealing with emerging sustainability issues is relevant for investment decision-making.</td>
</tr>
<tr>
<td>3.</td>
<td>Our tool helps to identify companies with leading strategies for transitioning towards sustainability.</td>
</tr>
<tr>
<td>4.</td>
<td>The document is clear and concise. (Introduction, Emerging Sustainability Issue chart, Strategy Analysis)</td>
</tr>
</tbody>
</table>

In order to assess the hypothesis and make improvements, the SSI Analysis Tool was sent to eleven experts working in the Investment and Sustainability fields. The experts are from five countries, and they encompass the categories of Responsible Investing, Socially Responsible Investing, Corporate Responsibility, Private Equity, Financial Research, and Sustainability (Appendix D). The statements probed for agreement or disagreement with the logic and reflections on the usefulness of the Tool. The following section summarizes the most important ideas given in the feedback, statement by statement.
Statement 1: To deal with emerging social and environmental issues, society needs companies to plan strategically for a transition to a sustainable future.

There is general agreement with this statement amongst the experts. However, one expert feels that companies need to transition for their own sake, regardless of the greater social need (Lins 2008), while another expert argues that the social desire to move towards sustainability cannot override the company’s responsibility to maximize financial returns for its investors (Gelfgren 2008). Regardless, all experts recognize the connection between the greater social transition towards sustainability and the corporate one. The relationship between these two systems, however, is not as clear. Coleman (2008) describes the scope of the corporate universe as so large that society will be “missing a big piece” if companies are not included in the transition.

There is debate amongst the experts as to whether markets are predominantly proactive in helping society transition, or if they simply react to social pressures. Most experts agree, however, that it is a combination of both. According to Lins (2008), most companies are reactive either to internal (shareholders) or external (media, NGOs, etc) pressure. However, this perspective may be geographically biased because Wehrle (2008) believes that the SRI industry in Brazil is still in its infancy and that many Analysts still do not understand sustainability. In Canada, smaller companies are identified as more adaptable, and thus more effective at influencing individuals and society. These smaller companies display leadership by transitioning quickly and profitably, thus enticing large companies to mimic their strategy or even acquire the more sustainable company for their expertise (Curry 2008).

Interestingly, one expert suggests the substitution of the word ‘transition’ with ‘transformation’ (Willard 2008). He feels that the changes involved

---

8 For example, Curry (2008) related the story of Kraft’s attempt to enter the organic jam market. Since they needed such large amounts of organic product to sell, it was easier for them to acquire a smaller organic jam producer that already had the knowledge and expertise.
for a traditional company to become sustainable are so profound that ‘transformation’ is more appropriate.

Statement 2: Identifying and measuring a company’s strategy for dealing with emerging sustainability issues is relevant for investment decision-making.

Most experts agree with this statement in principle, but there is an overwhelming consensus that mainstream investors do not currently practice it. Ranney (2008) describes the search for a definitive link between positive sustainability performance and enhanced bottom-line financial performance as akin to the quest for the “Holy Grail”. The predominant attitude amongst the experts is that this assessment is relevant, but that sustainability is still not on the radar of financial Analysts.

Some experts question the materiality of the impacts of unsustainable actions to business, while others clearly outline how sustainability initiatives reduce a company’s exposure to risk. The risks most strongly associated with movement towards sustainability are increasing government legislation and the deterioration of a company’s reputation. Moreover, Curry (2008) believes that proactive strategies demonstrate a company’s good management, and thus make it a good investment. Ranney (2008) reinforces this belief, stating that policies and programs that address sustainability can have a positive impact on stock performance, especially in the longer term. These links need to be strengthened by further study, and by linking sustainability initiatives to traditional financial metrics, such as the Weighted Average Cost of Capital and cash flow generation (Gelfgren 2008). In forging this link, profitability becomes an important characteristic of a sustainable business. According to Wehrle (2008), “being profitable is part of being sustainable. To me it goes hand-in-hand, and you can’t be sustainable if you do not make profit or if you create liabilities for the future”.

Since this link between movement towards sustainability and a company’s profitability is not yet widely accepted in the investment community, some experts have described this gap as an informational asymmetry. Henderson (2008) feels that the internalization of externalities will help make the markets more efficient, while Sommer (2008) recognizes the “hidden value of dealing with sustainability issues”. As more investors discover the
importance of sustainability, markets will correct stock prices by reflecting this new information. The main problem, as identified by the more traditional experts, is that the time horizon used by many Institutional Investors is too short to plan for these corrections. Fortunately, new investment strategies are being implemented, as suggested by the United Nations Principles for Responsible Investing, incorporating environmental and social sustainability into a longer-term horizon. According to Coleman (2008), Institutional Investors need more information regarding companies’ sustainability strategies: “There is a definite misalignment [between] the purpose and missions of some companies…with their actual investments”.

Statement 3: *Our Tool helps to identify companies with leading strategies for transitioning towards sustainability.*

Professionals in the realm of Social Responsible Investment (SRI) found the Tool very useful. MacDonagh (2008) feels that the Tool’s forward-looking approach gives it the strategic perspective needed in the SRI field, while at the same time recognizing the importance of acknowledging companies’ tangible actions in relation to sustainability issues. The positive actions should also be recognized, emphasizes Willard (2008), as there is an established scepticism in the market towards strategic plans.

The need to correlate the information gathered in the Tool to material financial metrics is a common concern amongst many experts. To become relevant for investors, most experts agree that strategy analysis needs to complement, and be linked to, financial information. This link is conceptually still missing from the Tool.

Sommer (2008) draws attention to the fragility of the fourth Sustainability Principle, as well as the lack of a governance assessment, which would demand the complementation of the Tool with social and governance considerations.

Other considerations are in relation to the availability and credibility of the Tool’s source of information. According to Gelfgren (2008), the reliance on publicly available information may be a drawback, if it is not assured by a third-party. Communication from the company needs to be properly verified, or a financial impact assessment should be performed.
Statement 4: The document is clear and concise.

The explanations included in the document of the Strategic Sustainable Investment (SSI) Analysis Tool, mainly in relation to the Tool’s operational mental flow and premises, are not completely clear. Most professionals felt the need for more insights on these matters. The lack of clear explanations gave the impression of a very qualitative assessment tool, which is sometimes considered a weakness in the financial sphere. These impressions were aimed mainly at the Emerging Sustainability Issues (ESI) chart.

The language used on the sectoral ESI chart also represented an issue. Willard (2008) suggests changing “Severity” to “Impact”, or “Consequence”, or other. Lins (2008) shows that the use of the word “action” on the sectoral ESI chart creates confusion as companies, not sectors, perform actions. Amongst other interviewed professionals, Lins (2008) recommends the replacement of “unsustainable actions” with “sustainability issue” or “sustainability impact”.

The use of financial language, as well as the framing of the Tool to better communicate and serve its users, were elements emphasized by many of the experts, as they found the language too scientific. Wehrle (2008) praises the scientific basis of the Tool, arguing that the use of scientific definitions of sustainability turns sustainability into something objective instead of philosophical or emotional. Some other strong points of the Tool, according to MacDonagh (2008), are the logical flow and the straightforwardness of the document, while Coleman (2008) stresses the importance of the visual resources used.

Some other improvement suggestions include: attention to the formatting of the strategic assessment section as the central location of the graph may be confusing (Wehrle 2008); the plot of a correlation graph between the columns of severity and urgency on the sectoral ESI chart (Willard 2008); and the inclusion of a government regulations curve on the Strategy Analysis Graph (Davies 2008).

Due to the nature of the SSI Analysis Tool, and the backgrounds and passionate interests of the professionals interviewed; several comments
were made that are relevant, but do not fall under the previously mentioned statements. They have been included as follows:

The vast majority of the experts commented on how a practical example of the SSI Analysis Tool would be a great advantage when explaining how it works. There is a general feeling that by including an example of a sector for the Emerging Sustainability Issue chart, and a company within that sector for the Strategy Analysis component, would add credibility and context to the Tool.

Willard (2008) also points out that the association with the term SRI may be a weakness to the Tool, and advises that it be excluded because, “it certainly has all the right intentions, and it just became a suspect label”.

The issue regarding the source of content information is also brought into reflection by several interviewees. However, this Tool is based on the assumption of increasing transparency, which is confirmed by one of the experts (Henderson 2008). Another interesting point about transparency is raised by Coleman (2008) when explaining how a Confidence Level is incorporated into sustainability research at Highwater Research. The Confidence Level provides a score from one to five, which illustrates the confidence in the available information: “It provides a context to our analysis. We scan not only publicly [available] information by companies, but also NGO information, news articles, [and] anything like that, that can support our analysis” (Coleman 2008).

### 3.3 Section 3: Testing the Tool

To further answer the research question, the SSI Analysis Tool is tested with the help of Nancy Palardy, the Oil & Gas Sector Analyst from Jantzi Research. The following section describes the main thoughts and ideas resulting from a telephone interview with Palardy (2008). The outcomes of the application of the tool are presented in Appendix E.

During the interview with the Sector Analyst, the following statements were considered:
The conversation did not follow a strict structure, but was allowed to flow freely around Palardy’s comments and concerns.

The initial concern with this type of forward-looking analysis tool is the availability of information. When comparing the strategic planning aspects of different companies in the Oil & Gas Sector, it is evident that companies are not thinking ahead and setting long-term social or environmental targets: “The reality is that there are not a lot of companies that are setting [forward-looking] targets. If they were doing that, then I would look at it positively” (Palardy 2008).

Palardy felt that a clear explanation of the process for deciding which sectoral Emerging Sustainability Issues are the most pressing would help contextualize the analysis. Since there is no weighting associated to the sub-categories of Severity, Urgency, and Systematic Contribution, it was difficult to understand how the most pressing Issues are identified. Moreover, the Analyst noticed that the same sectoral ESI chart prefaces each company’s Strategy Analysis. She suggests that, as companies employ different processes in different geographical locations, subtle changes in the ESI chart are required.

The most helpful comment relates to the Researcher’s voice and context throughout the analysis. Palardy suggests identifying the key components of a company’s strategy that are necessary for successful Strategic Plans and Actions. She encourages the use of a checklist so that the Researcher knows exactly what to look for. Instead of accepting whatever information the subject company is providing, the Researcher will be able to identify whether these key strategic components are included or not. This process will add consistency to the analysis, and will allow for easier comparison between companies.

To make the document clearer, a consistent voice is required. With three different Researchers working on these analyses, different writing styles are employed. Palardy recommends standardizing the analysis language, and
to never use the voice of the company. Moreover, she feels that clarification is required to better understand when the strategy for the entire company is being discussed, and when it is a specific division of the company being analyzed. Several companies operating in the Unconventional Oil & Gas Sector are multinational corporations with various branches in different fields. Palardy felt it was unclear whether a Strategic Action pertained to the entire company, or just to the branch operating in the Alberta oil sands. She recommends focusing on the specific operation, in this case Unconventional Oil & Gas. Moreover, she suggests performing a deeper sustainability analysis of specific actions, such as Carbon Capture & Sequestration, being implemented by some companies in the sector.

Finally, Palardy comments on the language being used. She feels that the Sustainability Principles look confusing at first glance, and that the scientific language is difficult for Analysts to immediately understand. Moreover, she recommends using risk-based language in the Strategy Analysis that appeals to Traditional Analysts. She comments that Jantzi Research uses the words ‘strengths’ and ‘concerns’ to describe a company’s performance, and affirms that an Analyst need not worry about being too negative when describing a company’s behaviour.
4 Discussion

4.1 Boundaries

The scope of this work was designed to be an important leverage point for transforming society towards sustainability. Most companies acknowledge their shareholders as one of the most important sources of influence on their decisions (Clarke 2007, 83 and Lins 2008); specifically, the ones with an active voice on the board of directors. For that reason, it was determined that Institutional Investors are a relevant force to move society towards a sustainable future. It is also important to account for the fiduciary power that pension funds and other Institutional Investors hold in the world economy (OECD 2006). To have part of that money directed to corporations leading the way towards sustainability would be a big step in the right direction.

During the interviews with the expert panel, the possibility of scope expansion beyond Institutional Investors was discussed. Primarily, it was identified that there was a great potential for the adaptation of the SSI Analysis Tool to private equity investors. It was also recognized that it could be used to back up government actions, as well as be applied by the companies themselves to gauge the effectiveness of internal strategies. If the company is willing, and aspiring, to be ahead of their competition, they can plan strategically in relation to dealing with the Emerging Sustainability Issues by framing their planning and actions through the lens of SSD with the aid of SSI Analysis Tool.

The boundaries of the work are defined by a series of assumptions. It is assumed that increasing transparency from companies is an important step in the right direction towards sustainability – a more detailed discussion on transparency issues is exposed below. The authors recognize that society needs companies to move towards sustainability (as exposed in the first statement presented to experts). Although most of the players in the market behave reactively, the few proactive actors must be recognized as such, and rewarded with a higher flow of capital and a lower Weighted Average Cost of Capital (WACC). This allocation will use the leverage force of
Institutional Investors in recognizing value in transitional leaders towards sustainability.

A third assumption is the importance of identifying and measuring a company’s strategy in dealing with Emerging Sustainability Issues to investment decision-making. This assumption was often commented on and criticized by experts that see the benefits for investors of such information as limited or “nebulous”. However, the authors believe that the relation exists, and that it demands a greater effort in terms of research. To make this assumption is to recognize the desire for the existence of a SSI system that reinforces itself, justifying the relevancy of investments in the leaders on the transition towards sustainability.

4.2 Validity

In discussing the results, the variety of experts, as well as their different cultural and professional backgrounds, enhances the validity of the findings. It is agreed that, due to the psychological nature of market behaviour, the most logical method of testing an argument is by asking the opinions of experts with professional experience in the field. However, the authors feel that a bias towards SRI emerged, due to the predominance of experts from this field in the panel. Although one expert, Eric Gelfgren, did a very good job of describing the Traditional Investing perspective, the authors feel that this area was under-represented in the panel. It is felt that making the link to more traditional financial analysis is crucial to the acceptance of many of the ideas put forth in this paper.

4.3 Implication of Results

Interview results were organized using the four statements presented to the panel of experts to structure the talks. Each statement is addressed separately below.
4.3.1 Statement 1

To deal with emerging social and environmental issues, society needs companies to plan strategically for a transition to a sustainable future.

There is a general agreement amongst the authors in the logic behind this statement. However, the logic is predicated on the assumption that capitalism will remain the dominant economic system. As Hazel Henderson (2008) puts it, “I don’t think that capitalism is going away anytime soon, and so the only game in town is to make it more ethical” (Henderson, Sethi and Lovins, 2007). Although the authors agree with this statement, they feel that society, by and large, does not understand this need for transition. There is the lack of a systems-based understanding that businesses are part of society and the biosphere, not separate from them. The authors believe that it is only a matter of time before this understanding becomes widespread.

The traditional view that individuals within the institution are separate from the institution itself, but take solace that corporate culture is starting to be valued more heavily. As institutional decision-making becomes more in line with individual conceptions and processes, and more individuals understand the growing need for sustainable investments, recognition of these highly important social and environmental issues will play a larger role in institutional strategies.

An important factor in the rate of change for this paradigm shift is geographic area. The authors all agree that Europe is the furthest ahead in this broader social transition, with stricter government legislation and stronger public pressure from consumers and NGOs. Canada and USA are considered to be about five years behind, but with a strong desire to catch up. An expert in Brazil describes the SRI industry as still in its infancy. However, most of the unwanted baggage and unfavourable associations with SRI are also lacking in Brazil, providing a great opportunity for Strategic Sustainable Investing to grow in its place.

Finally, the authors are intrigued by Bob Willard’s suggestion to replace the term ‘transition’ with ‘transformation’. Unfortunately, it is felt that ‘transformation’ may be too harsh for traditional investors, as it implies a painful process that happens over a short period of time. Instead,
‘evolution’ implies a more appropriate term. It displays a combination of quantitative growth and qualitative development, while inferring that there is a continual positive improvement.

4.3.2 Statement 2

*Identifying and measuring a company's strategy for dealing with emerging sustainability issues is relevant for investment decision-making.*

In discussing the feedback generated from the second statement, the authors appreciate the notion that linking movement towards sustainability to traditional financial metrics is referred to as the “Holy Grail”. All of the experts agreed with the statement in principle, but believe that it is not yet being done. The authors concur with this belief, and highlight the need for more time, resources, and research to strengthen this link. It is felt that there is not one definitive link, but a series of different relations that will cumulatively create a strong argument. Furthermore, due to market behaviour relying on psychological impacts, it is important that enough people believe in this link, regardless of whether the evidence is conclusive or not.

The authors agree with the notion put forth by experts that the lack of information regarding sustainability, strategies, and performance represents an informational asymmetry, and therefore inefficiency in the marketplace. As more and more investors consider these issues in their decision-making process, the market will correct itself, providing above-average returns to companies that have the best sustainability strategies. Since Institutional Investors carry the most weight in terms of assets in the market, their transition to this new paradigm is the most significant, and will have the largest impact on stock prices.

With the recent signing of the United Nation’s Principles for Responsible Investing, many large Institutional Investors have pledged to take social and environmental criteria into account. However, the authors agree with Holly Coleman’s assertion that there is a misalignment between the desires and actions of signatories. Simply put, they want to start transitioning towards sustainability, but are unsure of how to do it. So far, big returns have been made on companies’ communication of sustainability initiatives, without much consideration of actual actions. The authors feel that this return on
communication is short-lived, and that, as more companies claim to be ‘green’, pressure will mount for them to ‘walk-the-talk’ and prove that they are living up to these claims. Companies’ reputations will hinge on the authenticity of their claims, and greenwashing will hurt consumer trust in brands.

4.3.3 Statement 3

Our Tool helps to identify companies with leading strategies for transitioning towards sustainability.

The authors are very reassured by the positive comments of experts regarding the importance and uniqueness of the Tool. It is felt that it contains historical data and trends, as well as forward-looking assessments, which contributes to its distinct nature. However, as the time horizon extends into the future, uncertainty increases, and the limitations of the Tool in foreseeing unpredictable events become clear. The authors acknowledge that the Tool should be applied in conjunction with traditional financial assessments to be most effective.

The need to include social criteria, not just environmental criteria, is mentioned by an expert, and the authors admit that the Tool is lacking in this social sustainability area. The Tool depends upon the Sustainability Principles (SP) for its scientific foundation, and the SP dealing with social needs is still under development. Further refinements of this Principle are to be included in future versions of the Tool.

Governance issues are not mentioned in the Sustainability Principles, but the authors feel that good governance is implied in the assumption of greater transparency over time. Furthermore, although governance issues exist outside the scope of this paper, the Tool must be complimentary to existing governance analyses. Overall, the authors are confident that the Tool is effective at identifying transitional leaders, and uses clear communication techniques.
4.3.4 Statement 4

The document is clear and concise.

The authors are aware that communication of ideas and information is a high priority, and are pleased with the suggestions and recommendations from experts to make it more clear and concise. It is felt that further explanations and the possibly of footnotes in the Tool introduction would help to clarify definitions and terms. Moreover, the authors are eager to change the language of ‘Unsustainable Actions’ in the Emerging Sustainability Issues chart to ‘Sustainability Issues’.

Using a definition for ‘sustainability’ based on scientific principles is an advantage for the Tool because it provides a stable foundation on which to base the analysis. Since this foundation is broad and strong, the authors acknowledge the possibility of adapting the Tool for other types of companies. Instead of focusing only on large-capitalization companies that are transitioning away from unsustainable practices, the Tool could be used to assess the plans and actions of cleantech companies and For Benefit Corporations\(^9\) that are trying to create solutions for Emerging Sustainability Issues.

Positive feedback was received for the visuals incorporated into the Tool, and the authors are interested in making the sectoral ESI chart even more coherent by experimenting with different methods of visually representing the data. Different charts and images are possible, and the clarity of the information can be improved.

---

\(^9\) B-Corporations or For Benefit Corporations are purpose-driven and create benefit for other stakeholders beyond shareholders. For example, Pura Vida Coffee sells 100% organic, fair trade and shade grown coffee and other beverages to individual and institutional customers throughout the United States and its mission is to bring compassion and capitalism together in order to "Create Good™" for children living in coffee communities around the world.
4.4 Other Suggestions

Almost every expert expressed interest in seeing concrete examples of the Tool, but the authors are happy that they were not included in the first version. The experts’ desire for seeing a practical application is understood, and the authors intend to include some examples in the second version.

With a deeper understanding of the stigma attached to SRI in the traditional investment community, the authors feel that it is important to distance the Tool from the notions of ‘Socially Responsible’ and ‘Ethical’ investing. Strategic Sustainable Investing must find its own niche in the investment world, and must appeal to traditional financial Analysts. It is felt that, if traditional investors can appreciate and incorporate SSI strategies, then SRI and Ethical investors will follow suit happily. However, if the Tool gets the wrong label, traditional Analysts will dismiss it. Therefore, it is crucial that upcoming versions of the Tool use language that appeals primarily to more traditional ideologies.

The authors feel that the SSI Analysis Tool could be expanded to assess other types of risks, strategies, and actions. Strategy assessment is a beneficial activity in the business world, extending beyond the sustainability realm.

4.5 Transparency

Transparency is one of the most important assumptions for the SSI Analysis Tool. It is based on the belief that a more sustainable society demands more transparent systems. This assumption is reflected in the idea to use only publicly disclosed information, and Coleman (2008) suggests the incorporation of a Confidence Level measurement to avoid problems with manipulated data. The Confidence Level measurement would indicate the Researcher’s confidence in relation to the information used to develop the report (i.e. if the information used is from a third-party audited report, it would score a higher Confidence Level than an unverified report from the company’s Public Relations Department). Confidence in a company’s reported information is crucial to an accurate assessment, and by including
an assurance gauge, a caveat will be stated for companies who do not verify their data before disclosing it.

The authors believe that as the kind of assessment proposed by the SSI Analysis Tool becomes more popular, it will influence corporations’ transparency policies to become more rigorous. As well, if large Institutions adapt a form of this type of SSI assessment when allocating capital, it will influence corporations to improve their standing for the assessment categories, in order to be eligible for capital allocation.

4.6 Practical Application

Performing a practical application, or testing the Tool, provided valuable insights that contribute to a deeper understanding of the SSI Analysis process and outcome.

The authors are pleased with the decision to perform a practical application of the Tool after receiving feedback on its logic and structure from the panel of experts. It is noticed that including an example of a specific sectoral ESI chart and company analyses brought the discussion with Nancy Palardy, Analyst and Team Leader CSID at Jantzi Research, straight into the details. The overarching framework process of the Tool was barely mentioned, and the authors cringe at the thought of having this type of detail-oriented interview with multiple experts. Feedback is directed at the small points rather than considering the usefulness of the broad strategy.

Building on this discussion of detail-oriented feedback, the authors recognize the need to pay closer attention to the use of numerical data. In the financial industry, details count. Criticism of statistical inaccuracies is to be expected, and Researchers must perform deliberate due diligence to ensure absolute accuracy.

Based on Palardy’s comment that slight differences should be noted in the ESI chart based on a company’s specific location and processes, the scope of the ESI chart needs to be better defined. More research is required into the nature of market sectors, groups, industries, and other classifications. Although there are a very limited number of market sectors, it is admitted that more ESI charts are required. Companies in different geographic
locations using different processes cannot be lumped into a single category and be assigned the same sectoral ESI chart. More flexibility for nuances is necessary.

The authors recognize their limitations in regards to knowledge of sector-specific processes in relation to sustainability. Although much was learned about the unsustainable actions of the Canadian Unconventional Oil & Gas Sector, the help of experts within this field is extremely valuable. Instead of performing the baseline analysis based only on publicly available information, speaking with experienced members of the industry would help enhance the depth and credibility of the analysis. This dialogue would help communicate what constitutes an ‘unsustainable action’ to companies within the sector, while strengthening the identification of pressing Emerging Sustainability Issues.

A particular topic that emerged from the analysis of the Unconventional Oil & Gas Sector is the viability of performing a sustainability analysis on a sector whose core business is clearly unsustainable. Each of the Emerging Sustainability Issues listed in the baseline analysis are the direct result of the extraction of bitumen from the Earth’s crust, which is a contribution to the violation of the first Sustainability Principle. Is it even worth listing the downstream Issues? The authors feel that this core activity needs to be stated immediately in the report, and a disclaimer should be added in relation to its un-sustainability. Some investors will be promptly turned off from allocating capital to this sector, but for those who still wish to invest, the ESI chart and Strategy Analysis will be performed.

The primary Strategy Analysis should focus on whether the company is transitioning away from this unsustainable core business. For example, many companies in the Oil & Gas Sector are rebranding themselves as ‘Energy’ companies rather than ‘Oil & Gas’ companies. Investors need to consider what the sector could look like in a sustainable society, and ask themselves if there is room for this company in their SSI portfolio. Since the sector’s core business activity cannot continue indefinitely, companies that are not transitioning away from it are not suited for a long-term investment. The authors also discussed the differences between SSI and ethical investing. Often, this distinction becomes blurred when discussing sectors such as Weapons and Armaments, which have strong implications for both strategies.
The most helpful feedback received from the conversation with Palardy is the idea of identifying the key components of a successful Strategic Plan and Action, and comparing a company’s performance to these standards. A checklist was suggested to allow for more consistency in the reports, and for easier comparison between companies. The authors are reluctant to use a checklist because it does not allow for flexibility. Instead, a method could be created to guide the Researcher to search for specific components. The characteristics of a company that is actively moving in a new direction can be identified if the transitional objectives are properly defined. In describing the preferred transitional strategy, Researchers will know precisely what they are looking for. The preferred strategy is currently Backcasting, but other successful options are possible. However, based on current knowledge, the authors feel that Backcasting is the most adequate strategy, because it is framed for Strategic Sustainable Development.

4.7 Refinements for SSI Analysis Tool

The discussion ends with a list of changes to be made for the next version of the SSI Analysis Tool. The authors feel that a process of continuous evolution for the Tool is necessary. For the purposes of this thesis, the second version is included in Appendix F. The following issues have been addressed in its development:

Sectoral ESI Chart

- Include a methods section on how to assign colours to the chart
- Be flexible to allow for subtle changes within a sector
- Remove the SPs from the sectoral ESI chart

Strategy Analysis

- Include a government regulation curve on Strategy Analysis Graph
- Include an assurance assessment relating to the company’s information
- Integrate strategies for solutions to ESIs instead of just strategies for mitigation
- Remove the Vision Gauge
Vocabulary Changes

- Remove the scientific background introduction
- Substitute the term ‘Unsustainable Action’ with ‘Sustainability Issue’ on the sectoral ESI chart
- Place ‘Urgency’ as the first sub-column on the sectoral ESI chart
- Use the term ‘Versatile Platform’ in the Strategic Actions section of the Strategy Analysis
5 Conclusion

Enough theoretical support and practical examples was obtained to show ways in which Institutional Investors can use a Strategic Sustainable Development perspective to recognize value in transitional leadership towards sustainability. The core concepts of SSD provide a new context for filling the gaps in the processes of Traditional and Socially Responsible Investing, while helping to guide financial markets towards sustainability. The general conclusions regarding how each of these concepts can assist Institutional Investors are as follows:

- **Sustainability Principles** can help identify which sectoral actions are unsustainable. Using consensus-based scientific principles to define sustainability provides the foundation and rigor needed to determine which actions are unsustainable.

- **A whole-systems approach** provides a perspective that helps Analysts to understand the interconnectedness between sectoral Emerging Sustainability Issues (ESI). This over-arching understanding of how different systems interact can inform better decisions.

- **Backcasting** can be used as the preferred strategy for dealing with sectoral ESIs, and companies’ strategies can be compared against it. By combining past information with forward-looking planning, a more comprehensive strategy can be implemented.

- **The SSI Analysis Tool** offers a way of gauging a company’s strategy against Backcasting. It can be used to guide investment decisions, or by the companies themselves to communicate their strategies. The Tool also provides the foundation for other types of adaptations when an assessment of a strategy is required.

- **The identification of sectoral ESIs and the assessment of companies’ strategies** for dealing with them help to strengthen the link between a company’s movement towards sustainability and increased financial return to investors.
Collectively, these conclusions describe how a SSD perspective is relevant and useful for investment decision-making that aims to provide a competitive financial return; while encouraging the transition of publicly-traded companies towards sustainability. By continuously applying and evolving the SSI Analysis Tool, financial markets are able to pro-actively contribute to the creation of a wealthy and sustainable future.

5.1 Recommendations

Further Research

It is recommended to further investigate the links between a company’s strategy for moving towards sustainability and their share price performance. Moreover, the analysis of different successful strategies would be extremely beneficial. Great potential exists for the application of SSD in the investment community. Strategic Sustainable Investing is a new concept, and more information is required to guide the process.

Speaking Their Language

When communicating with Researchers, Analysts, and Money Managers, it is extremely important to use language that communicates complex sustainability issues in a financially relevant manner. Additional work can be done translating the scientific wording of SSD concepts into language that inspires the financial community.

Further Practical Application

Although the first application of the SSI Analysis Tool has been performed, further testing in different market sectors will provide additional results that can strengthen the effectiveness of the Tool. Identifying how this Tool can be used with different investment strategies will help to spread the practice of Backcasting. Moreover, discovering how organizations can use this Tool internally to identify the most relevant ESIs, and to help develop their strategy for addressing these Issues would be a very valuable contribution.
References


Appendix A: Backcasting from Principles using the ABCD Methodology

An adapted ABCD Methodology (Holmberg and Robèrt 2000, 298) was used consisting of four steps that guide decision makers (i.e. Money Managers) to formulate a strategic action plan. It is a non-linear approach that should routinely be used to ensure the continual development of actions that enable a movement towards success.

The A Step consists of a shared understanding of the system (SSI), and its constraints and mechanisms. The technique of Backcasting within a system from principles of success (i.e. the financial investment must offer a competitive return and/or risk avoidance, and the financial investment must not contribute to violating the four Sustainability Principles) is introduced at this stage.

The B Step consists of developing a baseline of the current reality. This step is performed by scrutinizing the current situation through the perspective of the Principles for Sustainability. The result is a list of problems, which are principally wrong from a sustainable future viewpoint, as well as a list of strengths, which are principally correct from a sustainable future viewpoint.

The C Step consists of brainstorming all actions and solutions that would bridge the gaps from the current reality (B Step) to comply with the vision for success within the system (A Step). Also, strengths outlined in the B Step can be further developed upon. This step is meant to foster creativity, with the only barriers being what is principally outlined in the definition of success. All solutions and actions should be noted without being scrutinized against the “realities of today”, as this step facilitates the creation of the innovations of the desired future.

The D Step consists of prioritizing the actions and solutions formulated in the C Step for implementation. The prioritization is based on three primary questions; actions and solutions are selected where “yes” can be answered:
I. Is the action, or solution, bringing us closer (i.e. moving in the right direction) to compliance with all the principles of success?

II. Is the action, or solution, a flexible platform that can be developed further in order to remain strategic?

III. Does the action, or solution, generate an adequate return on investment (i.e. financial, social, political capital)?
### Appendix B: SRI Gaps (Hawken 2004)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The cumulative investment portfolio of the combined SRI mutual funds is virtually no different than the combined portfolio of conventional mutual funds.</td>
</tr>
<tr>
<td>2</td>
<td>The screening methodologies and exceptions employed by most SRI mutual funds allow practically any publicly-held corporation to be considered as an SRI portfolio company.</td>
</tr>
<tr>
<td>3</td>
<td>Fund names and literature can be deceptive, not reflecting the actual investment strategy of the managers.</td>
</tr>
<tr>
<td>4</td>
<td>SRI fund advertising caters to people’s desires to improve the world by avoiding bad actors in the corporate world, but it can be misleading and often times has little correlation to portfolio holdings.</td>
</tr>
<tr>
<td>5</td>
<td>There is lack of transparency and accountability in screening and portfolio selection.</td>
</tr>
<tr>
<td>6</td>
<td>The ability for investors to do market basket comparisons of different funds is difficult if not impossible.</td>
</tr>
<tr>
<td>7</td>
<td>There is a strong bias towards companies that aggressively pursue globalization of brands, products and regulations.</td>
</tr>
<tr>
<td>8</td>
<td>The environmental screens used by portfolio managers are loose and do little to help the environment.</td>
</tr>
<tr>
<td>9</td>
<td>The language used to describe SRI mutual funds, including the term “SRI” itself is vague and indiscriminate and leads to misperception and distortion of investor goals.</td>
</tr>
<tr>
<td>10</td>
<td>Although shareholder activism is cited as a reason to invest in SRI mutual funds, few SRI mutual funds engage in shareholder advocacy or sponsor activist shareholder resolutions.</td>
</tr>
</tbody>
</table>
Appendix C: Strategic Sustainable Investment Analysis Tool
Dear Reader,

Thank you for taking the time to read and appraise our work.

We are a thesis group of students completing a Master’s in Strategic Leadership towards Sustainability at the Blekinge Institute of Technology in Karlskrona, Sweden (www.bth.se/msls). We have created a tool that helps institutional investors identify which sustainability issues are the most critical in a sector, and assesses the strategies public companies are using to deal with these issues. Our goals are to concurrently recognize wise long-term investments and to provide capital to companies that are truly leading society towards sustainability.

It is acknowledged that gaps exist in the assessment of publicly traded companies in relation to their strategic movement towards sustainability. Investors still lack the adequate tools to understand the short and long-term effects of sustainability-oriented actions by companies.

Although different definitions for ‘Sustainability’ exist, we utilize a set of principles that are backed by consensus from the scientific community. This definition is contained by the boundaries of the Sustainability Principles (SPs)\(^1\,2\,3\).

In the sustainable society, nature is *not* subject to systematically increasing:

i. Concentrations of substances extracted from the Earth’s crust
ii. Concentrations of substances produced by society
iii. Degradation by physical means and, in that society . . .
iv. People are *not* subject to conditions that systematically undermine their capacity to meet their needs.

Using this definition, we create the vision of a ‘Sustainable Company’. Since this ‘Sustainable Company’ does not yet exist, we must return to a present-day understanding of a ‘Business as Usual’ Company, and determine how to accomplish the transition. This strategy is often referred to as ‘Backcasting’\(^4\,5\).

We have developed an analysis tool that measures both qualitative and quantitative aspects of a company’s strategy for addressing Emerging Sustainability Issues. It will allow investors to recognize which publicly traded companies are leading the transition in a new direction, and which are most likely to be strong performers in tomorrow’s market.

The Emerging Sustainability Issue Chart is used to identify which unsustainable actions within a subject sector will form the foundation for the most prominent Emerging Sustainability Issue(s). In turn, the Emerging Sustainability Issue(s) will highlight the areas which represent greatest risk for the subject sector in the near future. The chart is designed to be filled in by sector experts who should update it as needed.

The following includes a description of the chart headings and instructions for using the Emerging Sustainability Issue Chart.

**Sector’s Unsustainable Actions:** This column involves listing the different actions within the subject sector that are unsustainable (“unsustainable action” refers to an action that contributes to the violation of at least one of the Sustainability Principles). * Note that there is no limit in regard to how many unsustainable actions a subject sector may be performing.

**Relevant Sustainability Principle(s):** This column involves associating a Sustainability Principle(s) (In the form of SP1, SP2, SP3, and SP4) with the listed subject sectors unsustainable action. * Note that an unsustainable action must involve at least one Sustainability Principle to be unsustainable; as well, an unsustainable action can involve multiple Sustainability Principles.

**Assessment Categories:** This column is divided into three sub-columns to assist with prioritizing the subject sectors unsustainable actions, which will lead to the identification of Emerging Sustainability Issues. There are four colors used to prioritize the unsustainable actions within the three sub-columns:

- **Red** = Very High Priority
- **Orange** = High Priority
- **Yellow** = Medium Priority
- **Green** = Low Priority

The following questions will be considered when filling in a cell with a color:

**Severity:**
Based on a scientific understanding of the issue, how severe are the potential consequences of this issue? Are there thresholds that, once crossed, will limit the ability to reverse the problem?

**Urgency:**
How quickly will the repercussions of this issue manifest themselves? How long will it take to naturally remediate? How intense is public pressure, and will it soon lead to government legislation?

**Systematic Contribution:**
To what extent is the subject sector contributing to global systematic increases?

The following page is the template for the Emerging Sustainability Issue Chart.
**Sample**

<table>
<thead>
<tr>
<th>Unsustainable Action</th>
<th>Relevant System Principle(s)</th>
<th>Severity</th>
<th>Urgency</th>
<th>Systematic Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>(specific action)</td>
<td>(SP1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(SP3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(SP4)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(specific action)</td>
<td>(SP2)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(specific action)</td>
<td>(SP1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(SP2)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(SP3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(SP4)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(specific action)</td>
<td>(SP2)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(SP4)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(specific action)</td>
<td>(SP1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(SP3)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sustainability Principles for the subject sector:

SP 1. Contribution to systematic increases in concentrations of substances from the Earth’s crust.

SP 2. Contribution to systematic increases in concentrations of substances produced by society.

SP 3. Contribution to systematic physical degradation of nature.

SP 4. Contribution to the systematic undermining of human’s ability to meet their needs worldwide.
The **STRATEGIC PLAN** component looks at assessing the subject company’s vision in relation to the Emerging Sustainability Issue (ESI). The vision, or ‘end goal’, is the subject company’s long-term desired future state in relation to the ESI. The Researcher will use publicly available information to compose and write a qualitative description of the subject company’s vision for the Analyst to use when assessing the subject company.

The qualitative description should include, but is not limited to, information regarding: public commitments, planned operational and business initiatives, political action/lobbying, and third party partnerships (with NGOs, consultative firms etc.). The Researcher should also emphasize and comment on the subject company’s core business in relation to the ESI; as this will assist in determining the subject company’s exposure to the potential risk.

When composing this section, the Researcher will use the “Vision Gauge” as a mental guideline when formulating the available information and associating a “level”. The Researcher should use their judgment and be aware that the majority of companies will not fall directly under one of the “Vision Gauge” categories; rather, most companies will fall between two of the levels.

### THE “VISION GAUGE”:

#### Level 4:
The subject company has a demonstrated principled understanding of the ESI and has a vision in place for eliminating its contribution to the intensification of the ESI. (“Principled understanding” means that the subject company’s understanding of the ESI is based on consensus-based, scientific principles)

#### Level 3:
The subject company has an unprincipled understanding of the ESI and has a vision in place for “sustainable development” in a broader context.

#### Level 2:
The subject company demonstrates a basic understanding of the ESI.

#### Level 1:
The subject company demonstrates no understanding of the ESI.

The **STRATEGIC ACTIONS** component looks at assessing the subject company’s recent actions in relation to the Emerging Sustainability Issue (ESI). The Researcher should include initiatives that contribute to the intensification of the ESI, as well as those that mitigate it. There are many different types of actions that a company can take, depending upon the ESI and the subject company’s strategy. Some typical areas of action that are common for movement towards sustainability include, but not limited to: Commercial Operations (energy and resource efficiency, new equipment and infrastructure); Education & Training (sustainability workshops and courses); Product & Service Development (innovative customer solutions); and Brand Enhancement (philanthropic and public relations initiatives).

The Analyst needs to view the subject company’s actions through the lens of Strategic Sustainable Development, and thus three questions are emphasized:

1. **Does this action provide a competitive Return on Investment (ROI)?** - Actions that provide a strong ROI should be given priority, in order to ensure financial stability during transition. Too often, investments in sustainability are measured only as liabilities when in fact they are financially prudent. By focusing on the ROI aspect of actions, Analysts can determine which companies have combined their ESI strategies with their overall financial strategy.

2. **Is this action taking the subject company in the right direction?** - An action that moves the subject company towards their stated vision is seen as moving them in the ‘right direction’. If the action moves them away from their vision, then it shows potential confusion or misinterpretation of the vision. Discretion needs to be used, however, because a successful strategy can sometimes temporarily lead away from the vision in the short-term in order to better position the subject company to achieve the vision in the long-term. The Researcher needs to describe the direction of the subject company’s action, and how it fits into their overall strategy.

3. **Is this action versatile?** - An action is considered ‘versatile’ if it can be used as a launching pad for further initiatives. Actions that require investing large amounts of capital into a technology might prove cumbersome if that technology does not achieve the end goal. The subject company’s progress could plateau, leaving them in a vulnerable position. Only by building off of previous actions can a company hope to achieve their vision. Therefore, actions taken should be versatile, especially during the early phases of transition.
NICK BLANDFORD

Nick is from the west coast of Canada, where he acquired a Bachelor of Arts in Economics and Psychology from the University of Victoria. For the past two years Nick has been employed with Schneider Electric, a world leader in electrical distribution and control. He was involved with the selling, marketing, and business development aspects of their energy management solutions. Nick is also involved with Surf Aid International, a non-profit humanitarian aid organization that focuses on improving the health of people living in isolated regions around the world, through a sustainable community-based approach. He expresses a passionate interest in the Socially Responsible Investing industry, and strongly believes that investors play a key role in the transition towards sustainability. His enthusiasm for being active in the outdoors, combined with his life experiences, translates into a strong proactive approach for a sustainable future.

nick_blandford@hotmail.com

TIMOTHY NASH

Timothy is from London, Canada and spent four years in Nova Scotia earning his Bachelor’s of Economics from Dalhousie University. He has worked for various NGOs including the Concerned for Working Children in Bangalore, India and doing research and outreach for the Natural Capital Institute’s WiserEarth.org project. Timothy enjoys playing many games and sports, and has coached rugby at the high school and university levels. He loves to explore new regions and is always up for a new challenge! Having recently completed the Canadian Securities Course, Timothy hopes to find work in the investment industry, promoting sustainable and responsible investing, and aspires to eventually become an institutional money manager.

timothyjacknash@gmail.com

ANDRÉ WINTER

André holds a Bachelor’s of Business from the Federal University of Minas Gerais (UFMG) and has a professional career marked by his work in management consultancy. Born and raised in Belo Horizonte, Brazil, André worked at UCJ as a consultant in marketing and finance for small business, at IPEAD-MG he provided consultancy in logistics for the government and, most recently, working for CONSIST he coached several companies in Brazil in strategy management and IT. For many years, André has been a volunteer with CISV, an international NGO meant to build global friendship amongst children and youth, which granted him many friends from all over the world. André has always been passionate about strategy, curious about technology, and very concerned about environmental issues. Sustainability synthesizes his life aspirations.

ribeiro.winter@gmail.com
## Appendix D: List of Experts Interviewed

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Organization</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Holly Coleman</td>
<td>Managing Director</td>
<td>Highwater Research</td>
<td>USA</td>
</tr>
<tr>
<td>Michael Curry</td>
<td>Managing Partner</td>
<td>InvestEco Capital</td>
<td>Canada</td>
</tr>
<tr>
<td>Rachel Davies</td>
<td>Analyst</td>
<td>Acuity Investment Management</td>
<td>Canada</td>
</tr>
<tr>
<td>Eric Gelfgren</td>
<td>Principal of the Responsible Investment in Europe, Middle East and Africa</td>
<td>Mercer Investment Consulting</td>
<td>Sweden</td>
</tr>
<tr>
<td>Hazel Henderson</td>
<td>Author, Futurist, President</td>
<td>Ethical Markets Media, LLC</td>
<td>USA</td>
</tr>
<tr>
<td>Clarissa Lins</td>
<td>Executive Director</td>
<td>Fundação Brasileira para o Desenvolvimento Sustentável</td>
<td>Brazil</td>
</tr>
<tr>
<td>Jeffrey MacDonagh</td>
<td>SRI Portfolio Manager</td>
<td>Domini Social Investments LLC</td>
<td>USA</td>
</tr>
<tr>
<td>Kevin Ranney</td>
<td>Managing Partner / Director of Research</td>
<td>Jantzi Research</td>
<td>Canada</td>
</tr>
<tr>
<td>Florian Sommer</td>
<td>Head of sustainability Research</td>
<td>Fortis Investments</td>
<td>Germany</td>
</tr>
<tr>
<td>Ralph Wehrle</td>
<td>Chairman of Advisory Board</td>
<td>Axial Participações e Projetos</td>
<td>Brazil</td>
</tr>
<tr>
<td>Bob Willard</td>
<td>Author</td>
<td>sustainability Advantage</td>
<td>Canada</td>
</tr>
</tbody>
</table>
Appendix E: Application of the SSI Analysis Tool on the Unconventional Oil and Gas Sector in Canada
### Emerging Sustainability Issue Chart: Unconventional Oil & Gas in Canada

<table>
<thead>
<tr>
<th>Sustainability Issues</th>
<th>Relevant Sustainability Principle(s)</th>
<th>Assessment Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depletion of Natural Water Reserves</td>
<td>3</td>
<td>Urgency: 3, Severity: 4, Systematic Contribution: Red</td>
</tr>
<tr>
<td>Water Effluents</td>
<td>2</td>
<td>Urgency: 4, Severity: 4, Systematic Contribution: Orange</td>
</tr>
<tr>
<td>Nitrogen Oxide Emissions</td>
<td>2</td>
<td>Urgency: 4, Severity: 4, Systematic Contribution: Yellow</td>
</tr>
<tr>
<td>Sulphur Dioxide Emissions</td>
<td>2</td>
<td>Urgency: 4, Severity: 4, Systematic Contribution: Green</td>
</tr>
<tr>
<td>Boreal Forest Encroachment</td>
<td>3</td>
<td>Urgency: Medium, Severity: Medium, Systematic Contribution: Low</td>
</tr>
<tr>
<td>Biodiversity Loss</td>
<td>3</td>
<td>Urgency: Medium, Severity: Medium, Systematic Contribution: Low</td>
</tr>
<tr>
<td>Fossil Fuel Extraction (Bitumen)</td>
<td>1</td>
<td>Urgency: Low, Severity: Low, Systematic Contribution: Green</td>
</tr>
<tr>
<td>Land Use (Not forest)</td>
<td>3</td>
<td>Urgency: Medium, Severity: Medium, Systematic Contribution: Low</td>
</tr>
<tr>
<td>GHG Emissions (CO₂; CH₄; N₂O; HFC; PFC; SF₆)</td>
<td>2</td>
<td>Urgency: Medium, Severity: Medium, Systematic Contribution: Low</td>
</tr>
<tr>
<td>Workforce Conditions</td>
<td>4</td>
<td>Urgency: High, Severity: High, Systematic Contribution: Red</td>
</tr>
</tbody>
</table>

**Red** = Very High Priority  
**Orange** = High Priority  
**Yellow** = Medium Priority  
**Green** = Low Priority

Sustainability Principles for the subject sector:

1. **SP 1. Contribution to systematic increases in concentrations of substances from the Earth’s crust.**
2. **SP 2. Contribution to systematic increases in concentrations of substances produced by society.**
3. **SP 3. Contribution to systematic physical degradation of nature.**
4. **SP 4. Contribution to the systematic undermining of human’s ability to meet their needs worldwide.**

According to this analysis, the most pressing Emerging Sustainability Issues for the Unconventional Oil & Gas Sector in Canada are: **Greenhouse Gas Emissions, Depletion of Natural Water Reserves, Water Effluents, and Indigenous Rights.**

The Extraction of Bitumen is also identified as an Emerging Sustainability Issue, as it is the sector’s main activity.

---

Assessment prepared by: Blandford N, Nash T, and Winter A  
Karlskrona, May 2008
STRATEGIC PLAN

Since Petro-Canada’s core business is energy from the combustion of fossil fuels, GHG Emissions represents a very pressing Emerging Sustainability Issue. As this issue continues to emerge, Petro-Canada will be exposed to increased levels of risk.

In relation to the ESI, Petro-Canada acknowledges the importance of monitoring and reporting GHG, and participates in the Carbon Disclosure Project. They participate with the WBCSD to better understand this issue as well as other sustainability-oriented issues, and Petro-Canada states that they are engaged with independent consultants to review their methodology and calculations for their reporting releases of GHG emissions. However, Petro-Canada does not publicly disclose absolute or intensity reduction targets for GHG emissions. As for Petro-Canada’s strategy for long-term reduction of GHG emissions, their focus is on pursuing effective longer term technology solutions, and building a portfolio of external mitigation opportunities. Since Petro-Canada fails to describe these technological solutions and mitigation opportunities further, and they are mainly looking in these two directions, a red flag should be raised.

STRATEGIC ACTIONS

In 2006, Petro-Canada began developing an environmental information management system, with an initial focus on GHGs and primary air pollutants, and in 2007 Petro-Canada completed the systems first phase. In Canada, provincial and federal governments are positioning themselves to manage climate change with legislation that was released in the spring of 2007. Petro-Canada is currently working to understand the impact of this legislation, since they have a mix of new facilities, older operations and proposed projects. With this added clarity, they indicate that they will have a platform to begin developing long-term plans. Petro-Canada indicates that they believe in energy efficiency and want to be a part of the solution. Although Petro-Canada may be performing actions in regard to their GHG emissions, particularly around energy efficiency, they fail to communicate them. This then sparks the question: “Why aren’t they communicating these specific actions?” In turn, this inspires very little confidence that they are actually performing these strategic actions. By failing to communicate these actions, Petro-Canada is sacrificing ROI from potential public relation and consumer demand opportunities.

Petro-Canada could be performing actions that are moving it towards a sustainable future, and that are versatile in nature as to be a stepping stone in that right direction, but this is unclear due to the lack of information communicated regarding their strategic actions.

NOTE ABOUT THE STRATEGY ANALYSIS GRAPH

These emissions represent the total greenhouse gas emissions from Petro-Canada operated facilities regardless of whether they fall below the minimum threshold for regulatory reporting purposes. They do not include the emissions from facilities which are operated by other parties. They do include all indirect emissions from purchased power. This strategy is limited and incorporates a lot of uncertainty as it is dependent upon underdeveloped technology. At the same time, Petro-Canada is actively working through their industry associations with both levels of government to help define GHG emission targets and principles, and to develop practical approaches to regulation and trading regimes.

A goal for 2007 mentioned in their “Report to Communities”, is to strengthen environmental stewardship by developing specific commitments and indicators for air, land, and water management. This goal does not specifically state that it will incorporate GHG. However, a goal for 2006 was to strengthen internal controls and data management practices for GHG emissions and primary air pollutants.

VISION

Although Petro-Canada does not explicitly describe a vision for which they are moving towards, they do state their ‘Principles for Responsible Investment and Operations’. These Principles are intended to guide their decision-making processes and actions, and provide a framework for tracking their performance. These Principles include four main categories (that are defined by multiple statements for how Petro-Canada incorporates them): Business Conduct, Community, Environment and Working Conditions and Human Rights.

Petro-Canada doesn’t have a principled (based on science) understanding of the ESI or sustainable development. Within their own ‘Principles for Responsible Investment and Operations’ there is segregation between, the environment, social (community, working conditions, and human rights), and financial aspects. This demonstrates a lack of understanding of sustainable development in a broad context because these categories are inherently related to each other.

Assessment prepared by: Blandford N, Nash T, and Winter A
STRATEGIC PLAN

Large amounts of water are required to extract oil from the Oil Sands. Since the majority of Petro-Canada’s expansion is taking place in the Oil Sands, Water Depletion from the local water systems represents a pressing Emerging Sustainability Issue for the company. Moreover, there are many other companies competing for the use of this water. Therefore, Water Depletion represents an area of high risk for the continued growth of Petro-Canada.

In 2006, Petro-Canada initiated the development of a corporate water strategy which has evolved to creating corporate water principles. The intent of these principles is to provide their businesses with guidance on how to manage water-related challenges and opportunities consistent with their corporate priorities and responsibility strategies. The principles were scheduled to be reviewed by Petro-Canada’s executive in 2007. Following their implementation, each business will develop specific strategies to manage acquisition, use and disposal of water. The current goals for 2008 include: integrating the Water Principles into the environmental stewardship process, commence development of second phase of environmental information management system for water and waste management, and advance major water-related community partnership projects. They also plan to develop water indicators so they can encourage innovation at other Petro-Canada projects and businesses.

According to a Pembina Institute report, Petro-Canada is identified as a leader in regard to being the least water intensive per barrel of bitumen produced (this is for proposed projects).

Petro-Canada is an active participant with 20 other leading companies on a water project led by the World Business Council for Sustainable Development. The team is working to develop a Global Water Tool which will link a company’s global operations to key water supply data applicable to each area of operation. As well Petro-Canada supports The Centre for Affordable Water and Sanitation Technology (CAWST) and its Water for Life program.

Overall, Petro-Canada communicates multiple initiatives in regard to the Depletion of Natural Water Reserves, however, these initiatives appear to be in their infancy because there are few details available regarding the initiatives. This in turn inspires some confidence, and will continue to inspire more if these initiatives develop into tangible actions.

STRATEGIC ACTIONS

Petro-Canada has demonstrated multiple strategic actions in relation to this ESI. These include:

Work closely with the City of Edmonton and Strathcona County to adapt the Gold Bar wastewater treatment plant to supply recycled wastewater to their Edmonton Refinery. This means that 5.5 million liters of recycled wastewater are drawn from the Gold Bar plant each day instead of taking the equivalent amount of fresh water from the North Saskatchewan River. As well, this $25 million, award-winning project was the first of its kind in Canada and sets a new standard for environmental best practices. The membrane-treated water is cleaner than the wastewater formerly returned to the river at Gold Bar and this recycled water helps Petro-Canada meet new federal standards in fuel manufacturing to reduce vehicle emissions.

By adding a zero liquid discharge process to the water they do require, Petro-Canada uses 90% recycled water at their MacKay River in situ plant. Their steam oil ratio is one of the lowest in the region, which means they require less water for steaming to extract the bitumen than competing SAGD projects. The result is that for every barrel of heavy oil produced, they use about a third of a barrel of subsurface water — far less than conventional steam assisted recovery methods.

At the proposed Fort Hills Mine site, Petro-Canada recognizes the draw they’ll have on the Athabasca River and the concern for how the regional ecosystems may be stressed during periods of low seasonal flows. In conjunction with key stakeholders, they’ve developed a Northern water strategy which sees Petro-Canada storing water for possible low flow times in winter and working with other players to share this precious resource regionally.

These strategic actions have allowed Petro-Canada to showcase their success stories, in turn increasing potential public relations and consumer demand opportunities. These actions also demonstrate a movement in the right direction. However, these actions do not currently demonstrate versatility; as there is no information indicating that these current operations will be expanded upon, or that they will help influence other facilities and operations to continue to move towards minimizing their dependence on natural water systems.

NOTE ABOUT THE STRATEGY ANALYSIS GRAPH

There is currently no available information for Petro-Canada in relation to this ESI. Petro-Canada does indicate that they will extend the use of their integrated environmental management system (in use for the 2007 reporting year for air emissions) beyond air emissions to water and other ecosystem indicators.

Assessment prepared by: Blandford N, Nash T, and Winter A

Country: Canada
Ticker Symbol: TSX: PCA
Sector: Unconventional Oil & Gas
Issue: Depletion of Natural Water Resources

VISION

Although Petro-Canada does not explicitly describe a vision for which they are moving towards, they do state their ‘Principles for Responsible Investment and Operations’. These Principles are intended to guide their decision-making processes and actions, and provide a framework for tracking their performance. These Principles include four main categories (that are defined by multiple statements for how Petro-Canada incorporates them): Business Conduct, Community, Environment and Working Conditions and Human Rights.

Petro-Canada doesn’t have a principled (based on science) understanding of the ESI or sustainable development. Within their own ‘Principles for Responsible Investment and Operations’ there is segregation between, the environment, social (community, working conditions, and human rights), and financial aspects. This demonstrates a lack of understanding of sustainable development in a broad context because these categories are inherently related to each other.
Since Suncor’s core business is energy from the extraction of fossil fuels, GHG Emissions represents a very pressing Emerging Sustainability Issue.

Suncor has not set medium or long-term targets relating to GHG Emissions. In their response to the Carbon Disclosure Project, they state:

“Stakeholders are asking Suncor to set environmental performance targets. We agree: target setting is an important part of measuring our sustainability progress.

Suncor has nearly completed a major overhaul of our business processes and systems. This three-year project is expected to improve our ability to monitor and report performance across the company. As a result, we expect to publish targets for key performance indicators, including GHG emissions intensity, in 2008.”

Suncor has openly reported both absolute GHG emissions and GHG intensity per unit of output. However, they state in their 2007 Climate Change Report:

“We recognize many people feel intensity targets do not accurately reflect today’s climate change challenge. But Suncor believes setting and meeting emission intensity targets are the best first steps toward achieving longer term reductions in absolute GHGs. These intensity-based targets challenge industry to begin “bending the curve” on emissions growth and lay the groundwork for technologies required to stabilize and, ultimately, reduce absolute emissions.”

Suncor has developed a seven-point action plan to guide their climate change strategy:

- Manage our own greenhouse gas emissions;
- Develop renewable sources of energy;
- Invest in environmental and economic research for Carbon Capture & Storage techniques;
- Use domestic and international offsets;
- Collaborate on policy development;
- Educate employees and the public;
- Measure and report our progress.

This plan touches upon key issues for a successful transition towards sustainability, and provides a strong context for future actions.

**VISION**

Suncor’s vision statement:

“To Suncor, being a sustainable energy company means managing our business in a way that enhances social and economic benefits to society while minimizing the environmental impacts of resource development.”

Suncor’s vision hinges on the notion of an interconnect triple-bottom line of strong economy, healthy environment, and social well-being. Although it does not demonstrate a principled understanding of Sustainability, it does address Emerging Sustainability Issues in a broad context.

2004 through 2006 for effectively communicating climate change risk to investors.

Specific to the Oil Sands project, Suncor has undertaken several projects to reduce GHG Emissions, including: modifications to existing processes to limit the amount of hot water and steam loss; technology to remove excess hydrogen sulphide from fuel gas; and the substitution of natural and residue gas for petroleum coke.

There is a nice balance between actions providing immediate ROI, such as eco-efficiency projects, and those with a long-term ROI perspective, like the employee engagement and education initiatives. Moreover, these actions constitute steps in the right direction towards Suncor’s stated vision. Finally, Suncor has done a good job in diversifying their actions, especially by encouraging different forms of renewable energy. By acting simultaneously in several key areas, they are creating a versatile platform from which further movement towards sustainability is possible.
STRATEGIC PLAN

Large amounts of water are required to extract oil from the Oil Sands. Since the majority of Suncor’s expansion is taking place in the Oil Sands, Water Depletion from local water systems represents a pressing Emerging Sustainability Issue for the company. Moreover, there are many other companies competing for the use of this water. Therefore, Water Depletion represents an area of high risk for the continued growth of Suncor.

In their 2007 Sustainable Development Report, Suncor suggests that, when full rates of production are achieved, they expect a two to one water-to-bitumen ratio and recovery of about 95% of the water.

There is no expected time frame to meet these goals, nor is a strategy communicated. Suncor’s plan for dealing with this Issue is inadequate for inspiring confidence that these goals will be met. Furthermore, with the possibility of increasing draught conditions facing the region partly due to Climate Change, there is a large risk of a production slowdown if this Issue is not dealt with successfully.

VISION

Suncor’s vision statement:

“To Suncor, being a sustainable energy company means managing our business in a way that enhances social and economic benefits to society while minimizing the environmental impacts of resource development.”

Suncor’s vision hinges on the notion of an interconnect triple-bottom line of strong economy, healthy environment, and social well-being. Although it does not demonstrate a principled understanding of Sustainability, it does address Emerging Sustainability Issues in a broad context.

STRATEGIC ACTIONS

Suncor has worked hard to reduce the intensity of water use. In 2006, they used 51% less water per unit of production in the Oil Sands than in 2002.

Suncor has not communicated the specific actions that helped achieve this efficiency gain. Due to the lack of information, it is difficult to assess whether these initiatives have generated a competitive Return on Investment.

Suncor is certainly moving in the right direction by reducing the intensity of water use, but it is impossible to gauge how much further improvement can be made. Moreover, since the goal of a two to one water-to-bitumen ratio has nearly been met, it is difficult to imagine that these actions are versatile platforms for further movement towards sustainability.

Suncor’s strategy for dealing with Depletion of Natural Water Reserves does not inspire confidence that they can deal with this Emerging Sustainability Issue in the medium to long-term.
STRATEGIC PLAN

Shell Canada owns 60% of a joint venture partnership of the Athabasca Oil Sands Project. This project represents a major growth area for Shell, as it is not yet the principle source of revenue. Having accepted that climate change is a significant global issue, Shell Canada has committed to develop and implement responsible actions that contribute to emissions reductions.

In 2000, Shell Canada set a voluntary target for their oil sands base business to cut GHG emissions to 50 per cent below those estimated at startup by 2010. To help achieve this goal, the following initiatives are planned:

- Working to end continuous flaring;
- Improving energy efficiency;
- Factoring future costs of emitting GHGs into business decisions;
- Research and development of CO2 capture and storage;

STRATEGIC ACTIONS

Shell Canada has performed a number of tangible Actions to reduce GHG Emissions. These Actions include:

- The development of thin film solar technology;
- Second-generation bio-fuel development using woody materials and waste feedstocks from agriculture;
- Established Shell Hydrogen, which is involved in the research, development and eventual commercialization of hydrogen as a zero emission road transport fuel;
- Purchased stakes in international wind energy projects totaling 740 MW of operational capacity;
- Introduced carbon pricing of projects in 2000. This allows the future value of carbon to be incorporated into the economics of most new projects, driving the design towards optimal profitability in a carbon-constrained world;
- Measure GHG emissions worldwide in a consistent and transparent way;
- Support government legislation in this area;
- Reduce carbon footprint of products;
- Domestic and foreign carbon offsets;
- Employee incentives for energy efficiency and energy efficiency workshops.

Shell Canada’s plan for reducing GHG Emissions is comprehensive, but lacks the long-term targets needed to give it integrity. Without this extended vision, Shell Canada will continue to focus on short-term incremental improvements rather than long-term strategies to eliminate their contribution to GHG Emissions.

VISION

“We define SD as integrating economic, environmental and social considerations into our day-to-day activities and future plans. Using our SD principles, we work to address both short-term and long-term considerations so we can move toward meeting today’s energy needs without compromising the needs of future generations.”

Shell has demonstrated a strong vision for Sustainable Development, and has identified GHG Emissions as an important issue. Their goal is based on incremental improvements, not the elimination of their contribution to systematically increasing GHG Emissions.

Importance to investors is Shell Canada’s openness to working with various stakeholders. This initiative minimizes the likelihood of attacks from these groups.

Shell Canada recognizes that “for a business to be consistently profitable and to achieve robust growth, it must provide value to customers in a way that respects environmental and social concerns and contributes to the economic benefit of shareholders, employees and society at large”. Therefore, many of their actions forgo short-term Return On Investment and take a longer time to create value. With the potential for continued growth in the Athabasca Oil Sands Project, this strategy is wise.

These Actions all constitute movement in the right direction, towards Shell Canada’s vision. Moreover, by heavily diversifying their investments in renewable energy sources, Shell Canada is not dependant on any one technology. These actions constitute versatile first steps, leading to further Action in these areas.

Assessment prepared by:
Blandford N, Nash T, and Winter A
**STRATEGIC PLAN**

Shell presents no clear target or plan for water conservation. However, they state that it is a concern, and invest in conservation measures or increasing ability to recycle water. Shell also declared that they will include water management into their general Sustainable Development principles.

Shell’s water use is licensed by provincial and federal governments. Increased restrictions on the water use are acknowledged and expected by the company.

Shell’s Athabasca Oil Sands Project (AOSP) was the first Oil Sands Mine to receive environmental certification ISO 14000, stating continuous environmental improvements.

No more information on the company’s planned strategies for dealing with water resources has been disclosed.

**VISION**

"We define SD as integrating economic, environmental and social considerations into our day-to-day activities and future plans. Using our SD principles, we work to address both short-term and long-term considerations so we can move toward meeting today’s energy needs without compromising the needs of future generations."

Shell has demonstrated a strong vision for Sustainable Development, and uses principles that they developed to move towards their vision. However, these principles are not based on science.

**STRATEGIC ACTIONS**

River water use at the Muskeg River mine dropped from about 21.5 million cubic meters in 2005 to about 8.4 million cubic meters in 2006. The main reason for that anomaly was a major maintenance shutdown and an operational upset. It is expected that 2007 measures show around the same water withdrawal levels from the river in 2005.

Shell Canada Athabasca Oil Sands Project recycles up to 80 per cent of its process water and tailings pond water. High volumes of river water are still essential for boiler feed and cooling. Some actions taken to recycle water in site include pumping more water from the external tailings pond. Using tailing thickeners to recapture water from fine tailings before they are released to the tailings pond allows them to take less river water during low-flow periods. Also under construction is a closed loop cooling tower that has the potential to further reduce the amount of river water needed.

Shell Canada developed a new froth treatment technology that enables the removal of sand, fine clay particles, and other impurities from oil sands froth more efficiently. This new technology has reduced water needs by 10%.

Due to the high costs of technological research and development and the low costs of water use, Shell Canada’s initiatives to reduce water use have not generated a competitive Return On Investment. Furthermore, they are focused on small incremental improvements, rather than designing new processes to largely reduce or eliminate water depletion. Shell Canada has much work to do in developing a proper strategy to eliminate their contribution to this Emerging Sustainability Issue.
Appendix F: Second Version of SSI Analysis Tool
The Sectoral Emerging Sustainability Issues Chart identifies the most relevant and pressing Sustainability Issues on a sector-by-sector basis. It allows the Analyst to see, at a glance, which Sustainability Issues present high risks for companies within that sector in the short-term; as well as which Issues will be emerging in the medium and long-term as the most pressing in that specific sector. Due to differences within a Sector, the Sectoral ESI Chart should be flexible to account for various geographical locations and sub-Sector subtleties. It should be made as specific as needed for the subject Sector.

To fill out the Chart, Researchers will follow the process flow represented in the figure to the left. It is assumed that Sustainability Researchers and Analysts will understand the basic scientific aspects of Sustainability.

Once a sector is selected for an ESI analysis, a list of relevant Sustainability Issues is assembled. This Baseline Analysis will result in a list of Issues outlining the subject Sector’s strengths and concerns that impact society and the environment. It is important for Researchers to validate each potential Issue by providing a scientific explanation of how it relates to Sustainability. This validation will strengthen the legitimacy of the business risk, while also ensuring that the Researchers have the scientific foundation to perform the following assessment.

For each sub-column of the Sectoral ESI Chart, Urgency, Severity, and Systematic Contribution, a prioritization colour is assigned to each Sustainability Issue: Red for Very High Priority; Orange for High Priority; Yellow for Medium Priority, and Green for Low Priority. Prioritization is determined uniquely for each sub-column.

The Urgency sub-column assesses the time frame pressing each Issue. It estimates the length of time until the repercussions of a certain Emerging Sustainability Issue affects the sector. It asks the questions: “What are the main sources of pressure? What is the expected time-frame for the emergence of the Issue?” The first question is answered by considering the existence of pressure from various stakeholders. Government legislation and consumer demand have been identified as the primary stakeholder pressures affecting a company’s bottom-line. Therefore, the Researcher needs to ask questions that gauge the timeliness of these pressures by asking questions such as: “Is there existing legislation? Is the legislation being debated? Have neighbouring regions taken action? Are consumer prices increasing? Is there media coverage of the Issue? Is there pressure from NGOs?” Any additional pressure coming from other stakeholders should be noted as well. After considering the various pressures affecting the Sector, the Researcher will make an informed estimate of the expected time frame for the materialization of the Issue. This time frame will determine which colour is used to fill in the Chart.

- Red: < 2 Yrs
- Orange: 2-5 Yrs
- Yellow: 5-15 Yrs
- Green: +15 Yrs

The Severity sub-column assesses the seriousness of the Issue, in terms of its potential consequences for the Environment, Society, and companies within that sector. It asks, “How extensive is the Issue’s impact on Society and the Environment? What are the best/worst scenarios resulting from continued contribution to the issue?” If the Issue is impacting the Environment, then a consideration needs to be given to the Environment’s ability to absorb the
impact. If the Issue is affecting Society, then the Researcher needs to consider how human needs are being affected. The prioritization colour is also informed by determining the worst-case scenario of continued systematic violation.

### Environment:
- Red: Ecosystem collapse
- Orange: Ecosystem degradation
- Yellow: Approaching natural limits
- Green: Restorative

### Society:
- Red: Extensive death
- Orange: Suffering
- Yellow: Inhibits needs
- Green: Facilitates needs

The Systematic Contribution sub column is used to gauge the sector’s contribution to the overall Issue. It asks the question: “What is the sector’s share of responsibility for the overall Sustainability Issue?” The Researcher needs to assess if the affected system is local, global or both. Since some Issues impact only local systems, while others are more global in nature, two separate scales are used to determine the appropriate colour. Each scale determines the percentage of the Sector’s contribution to the overall Issue. If the Researcher determines that the ESI is both local and global, then the Systematic Contribution box can be split in half.

#### Local Issues:
- Red: +50%
- Orange: 20-50%
- Yellow: 1-20%
- Green: < 1%

#### Global Issues:
- Red: +10%
- Orange: 4-10%
- Yellow: 0.2-4%
- Green: < 0.2%

---

**Sample**

![Assessment Categories Table]

<table>
<thead>
<tr>
<th>Sustainability Issues</th>
<th>Urgency</th>
<th>Severity</th>
<th>Systematic Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>{Issue}</td>
<td></td>
<td></td>
<td>Local</td>
</tr>
<tr>
<td>{Issue}</td>
<td></td>
<td></td>
<td>Local</td>
</tr>
<tr>
<td>{Issue}</td>
<td></td>
<td></td>
<td>Global</td>
</tr>
<tr>
<td>{Issue}</td>
<td></td>
<td></td>
<td>Global</td>
</tr>
</tbody>
</table>
Company Name & Logo

<table>
<thead>
<tr>
<th>Country:</th>
<th>{Headquarters country}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ticker Symbol:</td>
<td>{SSI08}</td>
</tr>
<tr>
<td>Sector:</td>
<td>{industry name}</td>
</tr>
<tr>
<td>Issue:</td>
<td>{Sustainability Issue}</td>
</tr>
</tbody>
</table>

**STRATEGIC PLAN**

(The Strategic Plan component looks at assessing the subject company’s targets in relation to the Emerging Sustainability Issue (ESI). The final target, or end goal, is the subject company's long-term desired future state in relation to the ESI. The Researcher will use publicly available information to compose and write a qualitative description of the subject company’s targets for the Analyst to use when assessing the subject company.

The qualitative description should include, but is not limited to, information regarding: public commitments planned operational and business initiatives, political action/lobbying, and third party partnerships (with NGOs, consultative firms etc.). The Researcher should also emphasize and comment on the subject company’s core business in relation to the ESI, as this will assist in determining the subject company’s exposure to the emerging risk.

**STRATEGIC ACTIONS**

(The Strategic Actions component looks at assessing the subject company’s recent actions taken in relation to the Emerging Sustainability Issue (ESI). The Researcher should include initiatives that contribute to the intensification of the ESI, as well as those that mitigate it. There are many different types of actions that a company can take, depending upon the ESI and the subject company’s strategy. Some typical areas of action that are common for movement towards Sustainability include, but not limited to: Commercial Operations (energy and resource efficiency, new equipment and infrastructure); Education & Training (Sustainability workshops and courses); Product & Service Development (innovative customer solutions); and Brand Enhancement (philanthropic and public relations initiatives).

The Analyst will then use this information to determine whether the subject company is ‘walking the talk’ in comparison to the vision and goals outlined above.

The Researcher should also comment on the subject company’s strategic focus in relation to solution-oriented versus mitigation-oriented initiatives. This assessment will differentiate companies who are optimizing regeneration via positive initiatives from those who are incrementally minimizing their negative impacts. As well, it identifies companies that are demonstrating forward-looking approaches and taking advantage of emerging business opportunities.)

**ASSURANCE ASSESSMENT**

(This area is intended to provide the Analyst with an overall impression of the validity of the information gathered by the Researcher for the specific ESI. If the data is verified by an external third party, or if discrepancy is evident between different sources of information, then it should be noted here.)

The Analyst needs to view the subject company’s actions through the lens of Strategic Sustainable Development, and thus three questions are emphasized as a mental guideline:

1. **Does this action provide a competitive Return on Investment (ROI)?** - In order to ensure financial stability, actions that provide a strong ROI should be given priority. Too often, investments in Sustainability are measured only as liabilities when in fact they are financially prudent. By focusing on the ROI aspect of actions, Analysts can determine whether a company has combined ESI strategies with their overall business strategy.

2. **Is this action taking the subject company in the right direction?** - An action that moves the subject company towards their targets is seen as moving them in the ‘right direction’. If the action moves them away from their targets, then it shows potential confusion or misinterpretation of the goals. Discretion needs to be used; however, because a successful strategy can sometimes temporarily lead away from their targets in the short-term in order to better position the subject company to achieve their goal in the long-term. The Researcher needs to describe the direction of the subject company’s actions and whether it coincides with their overall strategy and specific targets.

3. **Is this action a versatile platform?** - An action is considered a ‘versatile platform’ if it can be used as a launching pad for further initiatives. Actions that require investing large amounts of capital into a technology could lead to a dead end if that technology does not achieve the end goal. The subject company’s progress could plateau, leaving them in a vulnerable position. Only by building off of previous actions can a company hope to achieve their targets. Therefore, actions taken should be versatile, especially during early phases.)
THESIS GROUP BIOGRAPHIES

NICK BLANDFORD

Nick is from the west coast of Canada, where he acquired a Bachelor of Arts in Economics and Psychology from the University of Victoria. For the past two years Nick has been employed with Schneider Electric, a world leader in electrical distribution and control. He was involved with the selling, marketing, and business development aspects of their energy management solutions. Nick is also involved with Surf Aid International, a non-profit humanitarian aid organization that focuses on improving the health of people living in isolated regions around the world, through a sustainable community-based approach. He expresses a passionate interest in the Socially Responsible Investing industry, and strongly believes that investors play a key role in the transition towards Sustainability. His enthusiasm for being active in the outdoors, combined with his life experiences, translates into a strong proactive approach for a sustainable future.

nick_blandford@hotmail.com

TIMOTHY NASH

Timothy is from London, Canada and spent four years in Nova Scotia earning his Bachelor’s of Economics from Dalhousie University. He has worked for various NGOs including the Concerned for Working Children in Bangalore, India and doing research and outreach for the Natural Capital Institute’s WiserEarth.org project. Timothy enjoys playing many games and sports, and has coached rugby at the high school and university levels. He loves to explore new regions and is always up for a new challenge! Having recently completed the Canadian Securities Course, Timothy hopes to find work in the investment industry, promoting sustainable and responsible investing, and aspires to eventually become an institutional money manager.

timothyjacknash@gmail.com

ANDRÉ WINTER

André holds a Bachelor’s of Business from the Federal University of Minas Gerais (UFMG) and has a professional career marked by his work in management consultancy. Born and raised in Belo Horizonte, Brazil, André worked at UCJ as a consultant in marketing and finance for small business, at IPEAD-MG he provided consultancy in logistics for the government and, most recently, working for CONSIST he coached several companies in Brazil in strategy management and IT. For many years, André has been a volunteer with CISV, an international NGO meant to build global friendship amongst children and youth, which granted him many friends from all over the world. André has always been passionate about strategy, curious about technology, and very concerned about environmental Issues. Sustainability synthesizes his life aspirations.

ribeiro.winter@gmail.com