

How can a destination resort development company be strategic in sustainable development?

Carmen Turner and Archie Kasnet

Blekinge Institute of Technology

2005

Examination thesis for completion of *Master's in Strategic Leadership Towards Sustainability*

Abstract:

Although sustainable development is becoming a strategic priority for some organizations, many do not apply it as a business strategy like traditional objectives. Sustainability requires a calculated and streamlined approach, specifically, a clear vision of success and a comprehensive plan to achieve success. Intrawest Corporation is currently looking at integrating sustainable development into their practices in both their real estate and resort divisions. Whistler Blackcomb, implemented several environmental and community-based initiatives but has yet to take a company-wide approach to sustainable development. In this study, Whistler Blackcomb and Intrawest's sustainability initiatives were evaluated based on a scientific definition of sustainability. The paper explores how a resort destination company can strategically integrate sustainability into their business operations. The objective is to highlight Whistler Blackcomb and Intrawest as case studies to understand how a company can gauge their awareness, identify challenges and opportunities, and move towards being a more environmentally excellent, socially just and economically viable company.

Keywords:

Sustainable Development, resort destination, strategic-sustainability, employee engagement & participation, green development, best-practices

Acknowledgements

June 20, 2005

The authors would like to thank the Blekinge Institute of Technology for initiating the sustainability Master's program. Such a program is going to greatly advance the dissemination of knowledge to shape the leaders of today and tomorrow.

Thanks to David Waldron for his structural guidance, tireless editing and numerous recommendations to ensure the completion of this body of work. Thank you also to Dr. Karl-Henrik Robèrt, whose passion for sustainability continuously excites and elicits action from people the world over.

Thank you to Joe Houssian, President, CEO and Chairman of Intrawest, for his support behind this research from the very initial stages until the end. We would like to thank Alanna Hamm, Environmental Coordinator and Doug Forseth, VP Operations at Whistler Blackcomb for their time and patience and for opening the doors that allowed us to conduct such a thorough research in hopes of re-igniting Whistler Blackcomb's sustainability momentum. A big "thank you" to the all the participants who took time out of their busy schedules to participate in the focus groups and interviews.

Finally, thank you to Margaret Floyd, Director of Advisory Services at Canadian Business for Social Responsibility (CBSR) for her guidance on this project and for providing the imperative business perspective to balance the academic concepts.

Executive Summary

Overview

Several organizations employ a model derived from a scientifically based, principled definition of sustainability to guide their sustainable development initiatives. This model, known as “The Natural Step Framework”, can be used as a compass to lead organizations towards sustainability. Whistler Blackcomb, a ski resort owned by the Intrawest Corporation, is an example of a company who has used The Natural Step Framework to guide their sustainable development planning. The company has the opportunity to be a model for the parent company’s other resort operations, as they are currently the most advanced Intrawest operation in terms of sustainability.

The Masters in Strategic Leadership Towards Sustainability at the Blekinge Institute of Technology, in Karlskrona, Sweden is based on The Natural Step framework. In this study, Whistler Blackcomb and Intrawest were used as case studies to understand how well the company is performing (based on a scientifically principled definition of sustainability). Based on this framework, we assessed the current challenges these companies are facing and identified the strategic steps they could take to align business operations with sustainable development.

Methods

The following thesis questions formed the basis of the study:

1. What are the basic characteristics of a sustainable destination resort and how is Whistler Blackcomb currently performing?
2. What are obstacles that Whistler Blackcomb and Intrawest are currently facing and are these problems keeping them from reaching their sustainability goals particularly with:
 - a. Engaging executives
 - b. Engaging employees
 - c. Green building design

3. What are some strategic steps that Whistler Blackcomb and Intrawest could follow to shift the business towards sustainability?

Interviews were conducted with employees and executives from Whistler Blackcomb as well as development executives at the parent company, Intrawest. Focus groups were also conducted with employees from all levels of Whistler Blackcomb's staff.

Key Findings

Challenges to sustainability

- The executives were familiar with the idea of The Natural Step Framework and felt comfortable with the training, however, they were unable to describe the relevance of the framework to the company
- Interviews indicated that there was a lack of vision and direction of sustainability for the company as a whole, mainly due to the lack of the parent company's position on sustainable development
- Employees wanted to hear more communication from the company and to see how sustainable development can be integrated into their daily work
- There is an opportunity to further implement sustainable development as the company is very efficient at implementing strategies once the initiative is decided from the upper levels of the organization
- Executives were not clear on the company's vision of sustainability
- The real estate market is not demanding green residence
- There is an increased cost and increased risk to develop green without market demand as there is a premium that must be paid at the beginning of such developments that is not present in mainstream developments

Strategic steps the company could follow towards sustainable development

- Create a common purpose and vision for sustainability among Intrawest and Whistler Blackcomb executives

- Conduct interviews and analysis with Intrust executives to gauge awareness and attitudes of sustainability in the company, understand the type of language that resonates with the management team and generate ideas for dismantling obstacles for change
- Lead a participatory dialogue session around the basic principles for success and for key executives from Intrust and Whistler Blackcomb
- Communicate the purpose and vision with staff and allow for co-creation and co-learning
- Incorporate sustainability in strategic planning and invite staff to participate in planning from initial stages
- Align infrastructure development with sustainability initiatives

Table of Contents

ACKNOWLEDGEMENTS	2
EXECUTIVE SUMMARY	3
1 INTRODUCTION	10
1.1.1 The System	11
1.1.2 Ski Resort Operation “Whistler Blackcomb”	20
1.1.3 Intrawest Real Estate “Placemaking “	20
1.1.4 Research Questions	22
2. METHODS	23
2.1 Characteristics of a sustainable resort and the company’s current performance.....	23
2.1.1 Characteristics of a sustainable resort.....	23
2.1.2 Employee perspective on company performance	23
2.2 Current challenges to sustainable development.....	24
2.2.1 Whistler Blackcomb executive interviews.....	25
2.2.2 Whistler Blackcomb employee focus groups.....	26
2.2.3 Whistler Blackcomb document and communications review	27
2.2.4 Market perspective of green building	28
2.3 Strategic steps towards sustainable development	28
2.3.1 Whistler Blackcomb’s executives’ perceived steps to sustainable development	28
2.3.2 Whistler Blackcomb’s employee’s perceived steps to sustainable development	29
2.3.3 Market perspective on implementing green building	29
2.3.4 Ski resort “best practices”	29
3 RESULTS	30

3.1 Characteristics of a sustainable resort and Whistler Blackcomb's current performance.....	30
3.1.1 Characteristics of a sustainable resort.....	30
3.1.2 Employee perspective on how the company is performing .	33
3.2 Challenges to sustainable development.....	37
3.2.1 Executives' awareness, perceptions and concerns.....	37
3.2.2 Employees' awareness, perceptions and concerns	45
3.2.3 Intrawest challenges to implementing green building	48
3.3 Strategic steps the company could take towards sustainability	50
3.3.1 Whistler Blackcomb executives' perceived steps the company should take towards sustainability.....	51
3.3.2 Whistler Blackcomb employee perceived steps the company should take towards sustainability	52
3.3.3 Real estate executives' perceived steps the industry should take towards sustainability	55
3.3.4 Ski resort strategic steps.....	58
4 DISCUSSION	59
4.1 Dismantling obstacles to change and creating a common purpose	59
4.1.1 Dismantling obstacles to change	60
4.1.2 Creating a common purpose.....	61
4.2 Challenges to sustainability	63
4.2.1 Teaching the common purpose.....	63
4.2.2 Aligning the sustainability vision across divisions.....	64
4.3 Sustainability - a strategic business goal and opportunity	65
4.3.1 Transitioning Whistler Blackcomb and Intrawest toward sustainability	65
4.3.2 Green building background and potential benefits for Intrawest.....	67
4.4 Strategic steps towards sustainability	78
4.4.1 Characteristics of a sustainable resort.....	78

5 CONCLUSION.....80

REFERENCES83

APPENDIX.....86

Appendix A: Executive Interview Questions86

Appendix B: Real Estate Industry Interview Questions.....88

Appendix C: Ski Resort Best Practices93

**Appendix D: Leisure & Travel Group Sample Sustainability
Policy101**

List of Figures and Tables

List of Figures

<i>Figure 1.1. The Funnel Metaphor</i>	<i>12</i>
<i>Figure 3.1. Executives' perceived barriers to sustainability.....</i>	<i>43</i>
<i>Figure 4.1. Financial Benefits of Green Building.....</i>	<i>71</i>

List of Tables

<i>Table 3.1. Focus groups' average rating of the company's performance in sustainable development.</i>	<i>34</i>
<i>Table 3.2. Results of employees' definitions of sustainability.....</i>	<i>45</i>

1 Introduction

Over the past decade, due to complex issues caused by globalization, poverty, environmental degradation and global challenges, a new business perspective has emerged where organizations are increasingly pressured and expected to go beyond the financial aspect. No longer solely responsible for healthy shareholder returns, organizations are starting to integrate sustainable business practices throughout their operations. Understanding that mere “responsible” practices may not be enough to avoid the risks and implications of current global trends, some companies have gone even further and have adopted scientifically relevant principles for sustainability that help outline how their organization will operate in a new economy [1]. This study focuses on two trends in the sustainable development field. The first is that companies who have adopted this principled definition of sustainability may not have implemented the principles throughout their organization nor done so in the most strategic way. Second, real estate developers are beginning to understand the benefits of sustainable designs but few are taking the initiative to implement these features into their business practices.

Whistler Blackcomb is one of ten mountain operations owned by the parent company, Intrawest Corporation. Intrawest is a leading operator and developer of village-centered resorts. What makes this thesis topic unique is that although Whistler Blackcomb has engaged in sustainability initiatives and has won several awards for their Environmental Management System, their parent company has not yet adopted similar sustainability mandates. This raises the question of how strategic is the sustainability program at Whistler Blackcomb and how can Intrawest be strategic in sustainable development?

What does strategic sustainable development mean? Being strategic about sustainability begins with taking a whole systems view of a situation. Individuals within organizations, within society within the biosphere as a whole, must see how their actions aggregate from a small scale to a larger scale, and thus understand their role in an overall movement towards sustainability [2]. To ensure that an organization operates efficiently as a unit and where the implementation of sustainability is successful, there must be a shared mental model, much like a game of hockey or soccer. If sustainability is the goal, then a future sustainable society would be defined by basic principles that act as constraints to actions and scenarios

that move towards the goal. An optimal operation, where the organization, or team, capitalizes on individual strengths but functions as one intelligent organization, rather than a group of individuals, requires all the parts have the same overall perception of what sustainability, or the game, is about - a non-negotiable set of rules. Basic principles for sustainability (the “system conditions”) have been developed to act as the company’s constraints and guide the organization towards success [3]. They are:

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 subject to conditions that systematically undermine their capacity to meet their needs.

Before arriving at a principled definition of sustainability, there must first be enough knowledge about the system, in this case the biosphere, human societies and the organization and an understanding regarding the interactions of flows and materials between the two.

1.1.1 The System

The characteristics of a non-sustainable resort must be identified before moving forward with sustainable resort characteristics. The environmental crisis created within the last century has evolved into a highly complex, global issue. The complexity is linked to a number of reasons such as global environmental conditions, long time spans, from cause to effect and an increase in actors involved [4]. However, if we are to create solutions that will lead us towards a sustainable society, humanity’s greatest challenge, spanning across nations borders and affecting all people, organizations, and companies worldwide, a systems perspective is required. At a systems level, an organization exists within the characteristics of a society and its place within the greater biosphere.

The basic laws of science, such as the first and second laws of thermodynamics, biogeochemical cycles, ecology and the primary production of photosynthesis, determine the constraints of which society must follow in order to live sustainably. The social aspect also determines the constraints, where understanding complex interrelationships, basic human needs, participation, honesty, responsibility and transparency contribute to “the rules of the game”.

The complexity of today’s problems facing organizations stemming from the use of natural resources and the effects on the environment from the human population can be illustrated using a metaphor of a funnel [5]. The funnel is visualized as society’s current course - entering deeper into a funnel. As society moves forward in time and space problems such as, extreme poverty, environmental degradation, loss of topsoil, and decreased water supplies are some common issues throughout the world. Due to the decrease in natural resources and the increase in pollution, population and social unrest, the room for opportunities for organizational change becomes increasingly restricted (Fig. 1.1). The space to change behavior becomes constrained over time per capita, due to decreased options.

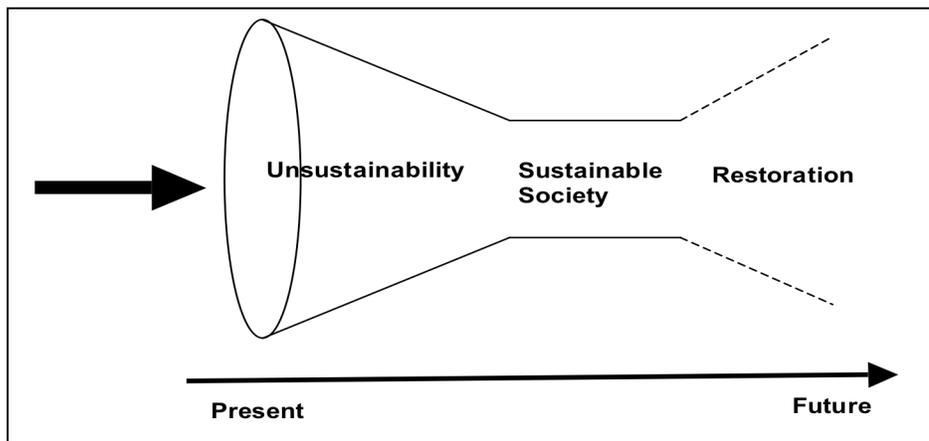


Figure 1.1 *The Funnel Metaphor*¹

¹ The Funnel demonstrates the decrease in opportunities for society today and for the future that creates a message for organizations to direct operations and investments into the opening of the funnel.

Using the funnel metaphor, hitting the walls of the funnel may appear as increased costs for waste management, higher taxes and insurance premiums, increased costs for natural resources, increased costs for environmental regulations, loss of market opportunities to companies with advanced technologies, and lost investments due to under-performing measures and blind alleys. Ultimately, the effects of the above-mentioned operating climate negatively impacts businesses, organizations, governments, and society that rely upon the services and resources provided by the natural systems.

To understand complex issues and their possible effects on an organization requires a crosscutting and integrative approach. Systems thinking is a process of understanding patterns and relationships of complex problems. The process gathers and analyzes information from a broad range of disciplines such as ecology, political science, economics, sociology, geography, history, public health and many others. For example, military intervention and force on countries identified as terrorist threats not only undermines international cooperation and basic human rights, but it fails to address the root causes of global insecurity such as environmental degradation and poverty. In linking environmental, health, population, migration and other issues as the dynamics that lead to instability, a more effective diagnosis to complex issues such as global security can emerge [6].

A similar approach can be taken when understanding the possible threats that an organization may face. Awareness of the larger system allows an assessment of the risks in order to plan and respond to new challenges. Future threats that Intrawest's winter operations may face include a change in weather patterns (climate change), changing tourism patterns, and increasing health and safety risks. A recent discussion paper sites additional challenges that the community of Whistler will likely face such as increasing globalization, declining resource availability, and ecosystem quality [7]. These global trends consequently translate into "hitting the walls of the funnel" and could directly impact Whistler Blackcomb's financial performance. For example, the glaciers in the Garibaldi area (where Whistler is located) have significantly decreased in the last three decades. As Whistler Blackcomb hosts numerous ski and snowboard camps on the glacier during the summer months, the receding glaciers could prevent the camps from operating and generating revenue during this period.

Assuming society continues on its present course, several current and future scenarios could pose significant risks to the ski industry. As noted above, climate change effects may include the loss of glaciers, change in weather patterns, increased risk of forest fire, increased risk of flooding during winter and drought during summer, all of which leads to increased insurance premiums. Depletion of non-renewable resources like fossil fuels on a wider scale could compromise the energy supply for transport and cause problems in generating electricity in certain areas, increase price uncertainty for materials, which would lead to an increase in operational costs. Health and safety could be a future risk as well. The global spread of disease and terrorism will threaten the health and security of the community that could lead to a decrease in travel to regions affected by disease and terrorism.

Such a threat may have negative implications to the company brand. At the social level, ski resorts tend to have a mono-demographic as only a small percentage of people can afford to live where ski resorts are generally located. This can cause a community to become devoid of “bio-diversity” within the local population leading to problems such as high property values and pricing the locals and workers out of the community [8]. Such a situation creates problems for resort managers to find workers to carry out operations.

An organization that chooses to ignore these current trends may face a number of problems (i.e. “hitting the walls of the funnel”): increased prices for natural resources, increased costs for waste management, increased insurance premiums, increased taxes and loans (for practices that align with the characterization of “hitting the walls of the funnel,” loss of reputation (which may lead to loss of employees and loss of investors) and loss of market share to innovative companies who develop new strategies and solutions. One may argue that the timing of when such events may occur is difficult to forecast. However, the risk lies in the organizations that are dependant on the inherently unsustainable practices since an organization cannot change its operations quickly [9]. Intelligent investors will eventually direct their investments towards the opening of the funnel and make themselves less economically dependent on the very practices that hit the walls of the funnel.

Success as sustainability

In this study, success for future organizations can be defined as operating within a sustainable society. The environmental and social conflicts created by today's current global trends are complex. Therefore, it would be beneficial for an organization to be strategic when planning to operate in a sustainable society. The Natural Step defines a principled description of sustainability based on scientific consensus. These principles for sustainability are unique in that they are designed for "backcasting". Backcasting is a planning methodology that is particularly useful when the challenges at hand are highly complex and when the present trends contribute to the overall problem [5]. It is a concept designed to envision a desired future and formulate a strategy for its realization. It is a useful tool in the search for sustainable business activities [10]. Looking at the drivers of non-sustainability in the ski industry we see the current trends that contribute to the current problem such as the industry's dependence on fossil fuels, its generation of significant amounts of pollution in often ecologically sensitive areas, its degradation of large pieces of land and its use of large amounts of energy [8]. If these factors are used as determinants for future planning, then it is likely that they will continue to contribute to the problem rather than aiding to find alternative solutions [5]. Backcasting can help an organisation in not only avoiding risks but also creating business opportunities by planning for future changes in legislation and the marketplace. For example, for an organization that does not want to be part of the problem in the system, a logical use of the conditions would be:

The sustainability principles of an organization are to:

1. ...eliminate its contribution to systematic increases in concentrations extracted from the earth's crust.
2. ...eliminate its contribution to systematic increases in concentrations of substances produced by society.
3. ...eliminate its contribution to systematic physical degradation of nature.
4. ...eliminate its contribution to the systematic undermining of human's ability to meet their needs worldwide.

When an organisation chooses to be strategic and moves forward with a shared vision of success, the principles for sustainability act as constraints

and allows the company to make calculated and planned “moves”. These moves lead the organization closer towards sustainability, are flexible platforms and meet short term and long-term economic goals. Short-term economic gains, or “low-hanging fruit”, that moves the organization towards sustainability should be chosen first, where measures would give an early return on investment. For an organization to be successful in sustainable development stakeholders should be engaged and they should have a shared mental model, or framework [2]. The first step for an organization during its transition towards sustainability is to define success by translating their own principles for sustainability [9].

Once success has been identified, it can be used to plan a strategic approach to sustainable development (termed “backcasting from principles”). The strategic planning for the organization then comes into play. From a future perspective, one can look at today’s operations’ reality and assess how the organization is violating the principles for sustainability. This strategy is termed the ABCD process and is comprised of four different steps. The A step involves creating awareness of the framework, including the system conditions, how to comply with them and business motivation to do so strategically. The B step involves understanding where the company is today by listing all the current flows and practices that are problematic when compared to sustainability concepts. The C step is the visioning step where solutions for tomorrow are brainstormed and listed by using the sustainability constraints. The D step involves setting and managing priorities, where items from the C step are chosen that would enable smart decisions and begin concrete actions to initiate the sustainability program.

A desired future (i.e. “vision”), within the constraints of the sustainability principles can be envisioned, Building the company vision is an important aspect of strategy. For example, Whistler Blackcomb has described the vision in their 2004-05 Employee Handbook as such: “Begin with the end in mind. Shared understanding of where we are going is essential for our organization to be collectively energized and realize our full potential...We work with a high level of interaction within and between departments that allows input and feedback to generate new ideas and opportunities.”

The vision in the management system determines the end goal of the organization, it is the starting point for both short and long-term planning

and it should indicate the direction in which the organization is evolving. Creating the vision is all about answering the question, “what does success look like”. A key characteristic of a successful organization is that there is a shared vision of how a company will look like in the future once it has succeeded and there is a shared strategy of how to get there. According to Collins and Porras, organizations with this shared vision “display a remarkable resiliency, an ability to bounce back from adversity” and as a result they “attain extraordinary long-term performance”. For strategic sustainable business management, the vision is built with a stable core and a flexible part (Fig. 1.2).

The stable core consists of:

1. The sustainability principles – they are the same for all organizations and define the constraints within which the organization is operating when it’s sustainable
2. The core purpose – communicates the timeless and enduring benefits of the organization
3. The core values – clarify the personality of the organization. They describe what the company represents today and what its members would like it to look like in the future

The flexible part consists of:

4. The strategic goals. Although they represent what the customer values, or what the business charges money for, they should be related to the core purpose.

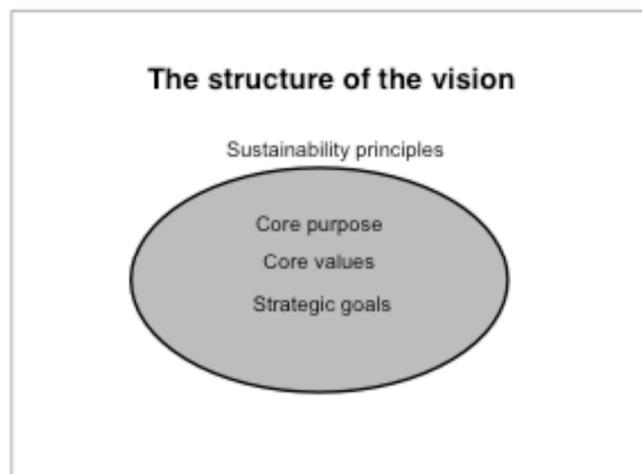


Figure 1.2 The structure of the vision [9]

Once the vision for a desired future is identified, a brainstormed list of steps the organization could take to reach success (a sustainable company) is created. When the list of steps is made, the steps are prioritized into what will actually be implemented.

Once the business objectives are identified, the established guidelines help to inform a strategic approach to identify characteristics of a sustainable resort and set priorities for future investments. Solutions to arrive at sustainability must be analyzed by answering three questions that inform the decisions to move strategically to sustainability. These include: (1) is this measure a step in the right direction (is the step really a move towards the sustainability principles)? (2) Is this measure a flexible platform for future improvements? (3) Is the measure likely to produce a sufficient return on investment? [5]. In this case, Whistler Blackcomb can gauge their awareness of the system, baseline their business operations, backcast from a vision of success, and set and manage their priorities [5].

This strategy informs the actions the company will take and the tools they will use to get them there. And so the game of strategic sustainable development plays out - always focusing back to look at situations (i.e. “bird’s eye view”) from a system’s perspective and keeping the vision of success in mind.

The 5 Level Model is a generic model for strategic planning in complex systems. It is strategic because it defines success, and begins with the end in mind. The model acts as a shared mental model, with non-negotiable rules for all players to follow. When the game is played, the principles act as constraints, allowing for creativity and co-creation. The framework for sustainable development consists of the following levels:

1. The System. At this level, a “bird’s eye view” perspective is taken as the system is described with all its parts, processes, interrelationships and functions. The basic science explains why the system operates as it does.
2. The Success Level. Here, success is described and how one can achieve it. The System Conditions are derived from basic science and are requirements for sustainability. To define their own version of success, or what they will do to be successful, an

organization can use the system conditions to create their own principles for success.

3. The Strategy Level. This is the level where backcasting from principles occurs and where the organization can be strategic about what their sustainability plan will look like by using the ABCD process.
4. The Actions Level. This level represents the concrete steps an organization takes, or what tangibly occurs on their path towards sustainability. It is important that all actions are taken with a perspective that “zooms out” to the bird’s eye view, or with understanding that the action is in line with the strategy that fits with success described in the system.
5. The Tools Level. This level describes the (5) tools that can help the (4) actions to be (3) strategic to arrive at (2) success in the (1) system.

The above principled definition of sustainability and accompanying framework ensures a strategic approach to help an organization transition to sustainability. However, it is not the only important factor that will help a company align operations and achieve sustainability. *Built to Last*, a book by Collins and Porras, investigates the role of teamwork and how large organizations become successful. There were several key findings that most successful organizations all shared: (a) people working within the company all had the same idea of the “core values”, or what is important to the company (b) people in the company were equipped to reach the company’s core objectives, thus giving the objective purpose, and (c) the organizations that allowed for co-learning and co-creation were more likely to be successful. Therefore, to successfully implement sustainable development as a core objective, people within an organization need to be engaged [2]. Successful engagement first requires a shared mental model, or a blueprint, for the game, based on a set of non-negotiable rules, or the sustainability principles, so the players involved all have the same perception of what the game is about.

Intrawest is organized in two divisions – the first is the Leisure and Travel Group, which includes all mountain and warm-weather resort operations as well as their vacation ownership business. The second is

“Placemaking,” the real estate division that operates the development and sales of properties. Both Intrawest divisions will be analyzed in this research project.

1.1.2 Ski Resort Operation “Whistler Blackcomb”

With the help of the environmental management team at Whistler Blackcomb, the program’s opportunities and challenges, from a strategic approach to sustainable development, were identified. The following have been highlighted as major barriers, specifically seen from the environmental management team:

- Lack of time and resources to train seasonal staff (currently there is one person responsible for training the seasonal staff (around 3,000 people));
- Lack of understanding of the issues and the system (above);
- It is difficult to engage employees without understanding their varying scales of values and attitudes towards sustainability;
- It is difficult to receive support from the executive level where employees are not encouraged to attend training, meetings and other sustainability initiatives.

This leads us to believe that Whistler Blackcomb could improve their sustainability program because they do not have these initiatives embedded throughout the company. For environmental procedures and initiatives to be successful, the support and commitment of employees is of paramount importance [11]. Assuming that the company would like to one day arrive at success, a situation where the organization no longer violates the principles for sustainability, key staff and individuals in the organization would share a common vision of their sustainability plan and employees would be engaged in a way where they can see sustainability playing a role in their day-to-day work. This may be a case of limited awareness and knowledge of the issues.

1.1.3 Intrawest Real Estate “Placemaking “

The Placemaking division is responsible for developing the infrastructure for the resorts. They build and sell residential units as part of their village-centered business, including condo-hotel units, town home units, and single-family lots. In 2004, 57% of Intrawest’s revenues were derived

from their real estate operations, however none of their developments have any type of green building standard [14].

“Green” or “sustainable” buildings are described as buildings that are sensitive to the environment by decreasing resource and energy consumption while creating financial benefits [12]. These ecologically designed projects are “demonstrating that integrated elements of green development better serve the occupants, the developer, society at large, and the environment” [13].

In centuries past, homes and communities were built to maximize the inherent efficiencies of the land a resources nature provided, however since the industrial revolution, our mechanized society has moved away from such efficient practices. Today, green building incorporates efficient designs used through the ages while incorporating new technologies to maximize the overall efficiency of the structures. Such designs can be incorporated into a broad strategy to move individuals, communities, businesses, and countries towards a sustainable society. As a stand-alone initiative, green building is effective in minimizing impacts; however when it is used as part of a company-wide sustainability policy or in combination with a community sustainability plan, ecological design can be a strategic tool to move strategically towards a sustainable society. Some of the tangible benefits of green building include: energy reductions and cost savings, increased use of recycled materials, decreased dependence on natural resources, and increased health of building inhabitants [12].

Due to the number of properties that Intrawest develops and sells as well as the infrastructure needed to house business operations throughout all Intrawest resort operations, it is our belief that Intrawest could dramatically bolster its move towards sustainability by developing green buildings. Such an approach will decrease operating costs by saving energy and other natural resources. In addition, properties developed using a sustainable approach will provide properties that are inherently less damaging and energy intensive, creating another selling point to discerning clientele. Such an approach will further differentiate Intrawest properties over its competitors.

1.1.4 Research Questions

The purpose of the study is to understand how a resort development company, Intrawest, can be more strategic about integrating sustainability into their business operations. In addition, a structured overview of sustainable development and its applicability to Whistler Blackcomb (one of their operations) was conducted by analyzing the roles of organizational change and green building design. The scope of our paper includes research methods by means of interviews, focus groups and internal document reviews. Our interviews mainly focused on understanding the awareness of the company to assess where they are on their journey towards sustainability. The research questions are:

1. What are the basic characteristics of a sustainable destination resort and how is Whistler Blackcomb currently performing?
2. What are challenges that Whistler Blackcomb and Intrawest are currently facing and are these problems keeping them from reaching their sustainability goals particularly relating to:
 - a. Engaging executives;
 - b. Engaging employees;
 - c. Green building design.
3. What are some strategic steps that Whistler Blackcomb and Intrawest could follow to shift the business towards sustainability?

2. Methods

This case study was based on the method “backcasting” from principles of socio-ecological sustainability to describe a sustainable resort and obstacles to achieving it (outlined above) [5]. Methods were divided into two parts to answer the first thesis question.

2.1 Characteristics of a sustainable resort and the company’s current performance

2.1.1 Characteristics of a sustainable resort

Creating the vision, the “C step”, was carried through in this process by the authors. The visioning, constrained only by the sustainability principles, allowed for brainstorming to occur for all the possible operational solutions and visions for a sustainable resort. The characteristics of a resort in a sustainable society were discussed, and a list was created of attributes a sustainable resort would have. The detailed aspects of the operations were beyond the scope of the study and the general operations of a typical ski resort were identified.

2.1.2 Employee perspective on company performance

Assessing where the company was today, the “B step” was the next process. Employees participated in focus groups and answered questions to better understand the employee perspective of sustainability performance at Whistler Blackcomb. In total, 37 employees participated in the focus groups. The only group that did not have the attendance goal of between 10-15 participants was the seasonal staff group. This was mainly due to members of the seasonal staff having limited access to a phone and email (confirming attendance was difficult). There were time constraints as some had already been working fewer hours or were laid off due to the shorter ski season. Additionally, they were the last to be contacted due to logistics in arranging staff contact lists.

In this step, it was observed how the organization was performing in terms of the sustainability principles. Initial conversations with key contacts at the case study company, identified specific areas that needed

improvement, specifically, employee and executive engagement and understanding Intrawest's real estate division. Interviews with senior executives were conducted, focus groups with employees were facilitated, and the environmental team's communications were reviewed. Finally, the process looked at the perception of how a typical ski resort violates the principles for sustainability (above).

2.2 Current challenges to sustainable development

Continuing with the "B step", the second thesis question was answered by interacting with the organization to understand their commitment and strategy towards sustainable development. Whistler Blackcomb's commitment and strategy towards sustainability was assessed through executive interviews, employee focus groups and a review of company communications. The organization's level of awareness and understanding was unknown; therefore the interviews focused on assessing the operation's awareness and understanding to better measure their sustainability performance (where they are in their transition towards sustainability). According to Klinkers and Nelissen, some setbacks to implementing environmental initiatives, for example, may be due to lack of knowledge and awareness; employees who understand the issues and why they need to address them are more likely to support new initiatives [11]. The environmental team indicated that the strategic planning was minimal. A more general approach was therefore taken to understand their sustainability strategy. For example, did they have a shared mental model for their strategy? Did they have a company vision for sustainability? What strategic planning did they use for their sustainability initiatives?

The "Five Level Model" was used as a guide to understand where the company is operating from a strategic perspective. For example, are they operating in all levels interchangeably, or are they operating in one level? Questions were formulated from the model and addressed awareness (i.e. how much they knew of the system), goals (i.e. do they understand and have they identified success) what strategies have they taken towards sustainability, specific actions and tools they use.

According to a study on employee engagement in environmental initiatives, the first step to employee engagement and participation is to ascertain the awareness, concerns, needs and any barriers perceived by

those involved [15]. In addition, concerns of employees should be sought prior to the development of new processes and tools, this being the minimum level of participation. Therefore, the questions were created to suit an interview style that allows for the interviewer to ask the “why’s” behind the questions. Understanding the “why’s” provides greater detail of the interviewee’s perceptions and concerns towards the issues.

2.2.1 Whistler Blackcomb executive interviews

Interviews were conducted with the company executives (“Senior Leadership Team”) to understand what obstacles the company is currently facing and whether the obstacles are preventing them from reaching their sustainability goals. Questions were based on levels of the “Five Level Model” (above) with a strong focus on understanding their awareness (level 1) that included their perceptions, attitudes and perceived barriers to change. The questions (Appendix A) were structured in the following areas:

1. (Level 1) The current awareness and understanding of sustainability by key individuals at Whistler Blackcomb (WB) (understand language that resonates with WB management).
2. Perceptions and attitudes towards sustainability
 - a. Importance of sustainability;
 - b. Concerns of implementing sustainability;
 - c. Barriers to implementing sustainability.
3. (Level 2, Level 3) Whistler Blackcomb’s sustainability positioning, vision and direction.
4. (Level 4) The strengths and weaknesses of the current sustainability program (actions), how it can be improved.
5. (Level 5) The needs, as an executive, in terms of knowledge about how sustainability affects their day-to-day work and what kind of support they need to further imbed sustainability.

2.2.2 Whistler Blackcomb employee focus groups

Questions (Appendix A) for the focus groups were mainly structured around understanding the employees' awareness (Level 1). Focus groups were facilitated with Whistler Blackcomb staff to determine:

1. Employee awareness and understanding of sustainability
2. Perceptions and attitudes towards sustainability:
 - a. How employees perceive the mountain is performing in terms of sustainability;
 - b. The level of importance of sustainability;
 - c. Employee concerns associated with sustainability.
3. The needs of individuals and divisions in terms of knowledge about how sustainability affects their day-to-day work and what the support they require to engage employees.
4. How do employees want to be engaged?

To ensure the participants of each focus group were at approximately the same level of the company, the focus groups were split into four categories; seasonal staff, permanent staff, supervisors and managers. In total, thirty-seven randomly picked employees volunteered to participate in the focus groups. The employees were picked from an employee list. From the selected sample, participants were invited (email from the Senior Vice President of Operations) to attend. Although a sample size was selected, the final groups of participants came on a volunteer basis.

The focus group methodology was used because they are thought to be useful to understand the perceptions and opinions of individuals. They focus on detailed descriptions and allow for individuals' perceptions and values to come through via the interaction with others. The findings can be useful to inform, initiate and further embed the development of new initiatives such as employee engagement and/or training in a way that reflects employees' concerns, language and interests [16].

In order for a focus group to be effective and to obtain the most valuable information from participants, the following guidelines were used².

² Focus Group guidelines were provided by Margaret Floyd, Canadian Business for Social Responsibility Director of Advisory Services and thesis External Advisor

1. The selection of participants must be random.
2. The participants involved should hold positions of approximately the same level during a single session. For example, avoid having managers and employees in the same room during the question period.
3. The focus group should be conducted in a safe environment, where the participants feel free to voice concerns, opinions and criticism.
4. The participants should be informed of the desired outcomes, how their input will be used, and to what end.
5. The facilitator should be external to the organisation, and employees involved in or directly impacted by the outcome of the study should not be present.

It is also recommended that groups be between 10 – 15 people, with sessions lasting no longer than 2 hours. To ensure that 10 – 15 people volunteered to attend each session, emails were sent to 35-40 people per employee group and each email was followed up with a phone call to confirm their attendance.

To minimize participants' bias (i.e. attracting only employees who are known to be interested in sustainability initiatives) an incentive was offered to encourage randomly selected employees to participate. It was communicated to all selected employees that the focus groups would be held on employee's work time and refreshments were to be provided to all participants.

2.2.3 Whistler Blackcomb document and communications review

In this step, internal documents pertaining to existing sustainability programs, studies and measures of success within Whistler Blackcomb and future plans for the sustainability program were reviewed. There was a particular focus on how the company communicates with employees on sustainability issues and how it engages staff.

2.2.4 Market perspective of green building

To understand the market's perspective of green building, interviews were conducted with executives at Intrawest and three other executives in the real estate development industry. Interview questions (Appendix B) were formed based on a literature review and knowledge of individual experience. These questions were created to understand the current state of sustainability in the real estate market and in development companies. The objectives were to understand the current barriers to green developments and the drivers that could lead developers to sustainable design in their future projects.

The executive interviews included participants from a conventional, large scale, development operation (Intrawest), an institutional developer and real estate manager (ING Real Estate Development), a progressive developer (Dockside Green) and an individual developer (Ted Raymond). The interviews were conducted to identify:

1. Real Estate Development business operations;
2. The current awareness and understanding of sustainability by executives and how it relates to their business practices;
3. Challenges to implementing sustainability.

The purpose of the interviews was three fold. Firstly, the conversations helped identify the challenges that are facing the resort destination industry to implement sustainability initiatives. Secondly, the conversations helped identify current trends in the market that Intrawest is using to make decisions. Finally, the conversations identified current problems facing the adoption of sustainability initiatives into the real estate sector.

2.3 Strategic steps towards sustainable development

2.3.1 Whistler Blackcomb's executives' perceived steps to sustainable development

In this part of the study, the "D step" approach was taken to understand what strategic steps could be done to move the organization towards sustainability. Executives were asked what steps the organization would need to take towards sustainable development.

2.3.2 Whistler Blackcomb's employee's perceived steps to sustainable development

Employees were asked what steps the company must take to help engage employees in sustainable development.

2.3.3 Market perspective on implementing green building

Executives at Intrawest were asked a number of questions what factors impede the adoption of sustainable real estate development strategies within their business operations. The industry executives were asked a number of questions regarding issues with the adoption of green building strategies in real estate development.

2.3.4 Ski resort "best practices"

To answer the third thesis question, "What are the strategic steps that Whistler Blackcomb and Intrawest must do to shift the business towards sustainability?" a list of possible solutions that comply with the principles of success were brainstormed (i.e. solutions such as new energy systems, materials, procurement, etc.). This informed the first question as well as helped identify impact areas that could be strategic if implemented with a sustainability policy. The "best practices" list is a culmination of resort companies implementing minimizing solutions.

3 Results

The first question (1) was answered using the preceding methodology to describe the characteristics of a sustainable resort destination and understand where Whistler Blackcomb is currently performing in terms of their overall sustainability program. The second two questions; (2) what are the obstacles, and (3) what are the strategic steps that Whistler Blackcomb and Intrawest must take to achieve sustainability, were answered by assessing three categories: (a) executive engagement, (b) employee engagement, and (c) green building and design. The results for the executive engagement and employee engagement were based on assessing the sustainability program at Whistler Blackcomb. The green building and design interviews revealed the current sustainability initiatives in the real estate division at the parent company, Intrawest. Interviews and a literature review described the current reality and readiness of the real estate market to adopt green building standards.

3.1 Characteristics of a sustainable resort and Whistler Blackcomb's current performance

3.1.1 Characteristics of a sustainable resort

To illustrate what a sustainable resort of the future might look like, we provide some examples here. It should be noted that these specific characteristics are for illustration of what COULD be, rather proposed as THE vision. The future sustainable scenario of the ski industry sees many changes in all aspects, from management resort operations to how people physically arrive at the resort. A sustainable ski resort in the future has characteristics different from today's businesses. Future viability as a business relies upon the decisions made today. It is important to envision such a future sustainable business in the "present tense" as a clear vision from which to backcast.

As a future sustainable business, Whistler Blackcomb makes strategic decisions to address the myriad of challenges facing them in the year 2005. Placing constraints on the system enables Whistler Blackcomb to move towards sustainability by making informed decisions (Level 4), in a

defined strategy (Level 3), will ensure success (Level 2) in the system (Level 1). The company's operations in the year 2035 include diversified tourism amenities. Warmer temperatures lead to a shortened ski season and therefore, necessitate other attractions for the guests such as hiking, biking and climbing in the alpine environment. Changes to the local environment are unavoidable due to climate change; some species of animals migrate away from the area as others arrive, attracting a different type of clientele. Economic well-being is addressed by catering to the changes in demographics and protecting the local ecosystem through a number of business initiatives.

A renewable energy initiative combats the high prices of electricity generation. The resort switches to and develops infrastructure for renewable energy generation such as cogeneration plants, solar, wind, and biomass production. On-site electricity curtails the effects of high-energy prices and creates self-sufficiency. Specific solutions include Micro-Hydro technology that attach to the snow making system, green procurement from the local utility, durable photovoltaic arrays, wind energy in suitable areas, and a cogeneration power station powered by municipal waste streams that power all resort operations.

All new and remodeled buildings are developed as "living buildings". Buildings both new and remodeled have zero net impacts on the environment from an operational standpoint. Rainwater is captured for use and ecological wastewater treatment systems treat water for non-potable use within the building, renewable energy supplies all the buildings energy requirements, and native landscaping requires little irrigation.

In the future, transportation infrastructure changes rapidly due to the high costs of fuel. A super efficient train system is built throughout the Pacific Northwest corridor, bringing customers to the resort and surrounding community. All resort vehicles, busses, and transport carriers run on biofuels, fuel cells, and Hydrogen technology, requiring little to no polluting fossil fuels. Customers support the hydrogen technology and clean solutions through their purchasing power and sequentially fill the parking lot with fossil free cars.

A procurement initiative is started due to the high cost of shipping and desire by customers to have sustainable and organic local food. Local

organic farmers produce all food requirements for business operations while they reduce transport distances and supporting the local economy. Suppliers provide sustainably produced, fair trade goods and materials for all business operations. The breadth of the initiatives started by Whistler Blackcomb are recognized throughout the resort industry and adopted by many resort operators. This requires major suppliers to re-develop and re-organize partnerships within the supply chain.

A Natural Resource initiative is started to ensure used items are returned to the re-manufacturing cycle. All materials are recycled or shipped back to the manufacturer to be reclaimed, re-developed, and rebuilt for the next useful life. Operations have strict guidelines regarding recycling and all materials are collected for re-use. Buildings are recycled and new buildings are designed for end-of-life re-use. All organic materials are captured for compost.

Decreased amounts of snowfall and water shortages due to the shifting weather patterns caused by Global Warming significantly impact water management. A water conservation and capture initiative is in place to ensure water resources remain throughout the year. The possibility of more precipitation in the winter and spring, and more rain than snow requires a significant redesign of the water infrastructure. Capture and storage of rainwater and spring runoff are vital. Buildings are efficient and require minimal water use to perform basic functions. They capture and store rainwater for later use and the drainage system is designed to allow runoff to flow back into the environment to continue the natural water cycle to the surrounding ecosystem. Managing natural flood plains and protecting important watersheds are paramount to ensure water quality for the local community.

Solid Waste Management is integrated into the local community, making efficient use of bio-solids through co-generation to create energy for the community.

Technologies are rapidly adopted to increase efficiencies throughout operations. New technologies help to transition Whistler Blackcomb away from dependence on fossil fuels to sustainable operations. These technologies continue to be implemented to transform the sustainable resort into a regenerating resort, whereby the resort operations become part of the natural ecological cycles (not removed from them).

There are many actions that resort operators use to minimize the impacts on the local environment and surrounding community. The Environmental Charter established in 2000, also known as “Sustainable Slopes Charter” to establish a standard throughout the ski industry compiles and tracks the initiatives of different resorts throughout the ski industry. The Charter addresses environmental concerns of the ski industry and creates a voluntary industry-wide initiative to preserve the alpine environment [17]. The “Sustainable Slopes” Charter combined with sustainability reports from the Aspen Ski Corporation helps to create a broad list of “best practices.” This list is neither definitive nor representative of all solutions that are currently used in operations, but helps to highlight actionable initiatives resort operators in the ski industry are using to preserve the alpine environment. As stand alone practices these are only “minimizing” and “less impacting” solutions. Only when these actions are combined with a specific vision and framework can they strategically move ski resorts towards sustainability (see Appendix C).

3.1.2 Employee perspective on how the company is performing

Assessment of the current situation, or the “B step”, was continued by understanding employees’ perspectives on how the company is performing. In addition to understanding staff perceptions and attitudes towards sustainability, the focus groups allowed participants to present new ideas. They worked together as a group, generated some intriguing new ideas and expressed interest in learning more to help improve the company’s commitment to sustainability. It is important to note that the purpose of the focus groups was to understand sustainability at Whistler Blackcomb from an employee perspective. Therefore, the questions were asked in a way that would help participants “open up” and feel comfortable discussing in a participatory dialog and not in a manner where they felt they were being tested on their knowledge. From previous conversations with the environmental team, it was assumed that most participants had not had any previous sustainability training. The benefit of facilitating focus groups was that if the facilitator felt that one group’s knowledge of sustainability was higher than another group, they could probe for more information by asking additional questions.

To determine the company’s performance from employees’ perspective, participants were asked to rate how they perceived the company to be performing in terms of sustainable development. The rating was based on a five-point scale, where 1 was poor performance and 5 was excellent (Table 3.1). Participants were asked to write down their rating, and then share with the group with any additional comments.

Table 3.1. Focus groups’ average rating of the company’s performance in sustainable development.

Focus Group	Average rating of group
Seasonal staff	3
Permanent staff	3
Supervisors	3.5
Managers	2.8

Seasonal staff rated the company a three in terms of their sustainability performance. Participants felt that the company was on the right track and involved in many good initiatives; however, employees felt that these initiatives were sometimes inconsistent. There was inconsistency in running the programs and communication. One example they gave was the coffee mug program; it took a few months to be implemented after the initiative actually began. It was also mentioned that several departments did not have formal infrastructure in place for recycling as well as formal recycling training.

The year-round staff gave an average mark of three. Participants said that they think the mountain has active programs, but that they do not communicate them to the employees and thus employees are not involved. The staff wants to hear more about what the mountain is doing and know exactly what their impact is on the environment. They want to hear from the company what their stand is. One participant said, “we talk a four but we really pull off a two”.

Supervisors gave the company an average mark of 3.5. Participants believed the environmental department is performing well, but they need more help, specifically the Environmental Coordinator. They also recognized that the company has a ways to go but is on the right track. Participants suggested that communication on sustainability to staff,

guests and the community should be improved. For example, one employee said, “The general information on this is lacking, i.e. I didn't know that food and beverage is composting now and other initiatives, so communication is very slow”. An important areas to supervisors was understanding if the company was looking into why long-term staff have left in recent years and perhaps looking at the long-term economic feasibility of employees being able to live in Whistler.

Managers rated the company's sustainability performance as a 2.8. There was a general understanding that the company has improved, that they are on the right track and that it will eventually improve, but that they still have a ways to go. Managers were confused as to how the company was actually performing compared to other resorts and companies. They thought that communication on this should be improved. There was also concern that they know the company has a commitment to sustainability in their core values, but they do not see this in their jobs, “We do a lot but one thing we're not doing is communicating it as well as we could. Also, do we all understand what everyone is doing in sustainability in our respective areas (do we understand how sustainability effects our job)? No, we don't” and “we could be a 4 but I just don't know. If we don't hear what's going on how do we know”. Some participants originally graded the company with a lower mark but changed after hearing about the company's initiatives from the focus group session, “I originally said 2.5, but now I would say 3 only because I had no idea all of these initiatives were going on until I sat and listened to you guys”.

Managers said that the company has improved greatly with sustainable development, and some suggested that if it is going to be a principle it should be part of company strategic planning just like other business goals. They suggested using planning to understand and see how sustainability is used in their everyday tasks, and also to measure financial benefits. Managers stressed that it would be useful and easier to implement if they put it into goals and objectives; however, they wondered how they could add more to their already full workload.

When asked what the best way to communicate with them, they thought in-person presentations and orientations at the beginning of the season. They also suggested adding sustainability to weekly meetings and coming up with division's individual sustainability goals.

The managers group said that the company would receive a better grade if the message were clearly communicated from the top of the organization. They mentioned that sustainability is being driven from certain individuals in the organization, and that these people are participating because of a personal commitment to sustainability rather than a strategic business objective. For example, one manager suggested that ‘It needs to be part of [the company’s] vision, the underlying principles, if it is, we need to understand that the people above us are 100% committed to this, is this a big goal? Some people are driving this more than others in their department so it's almost sort of a personal thing for them”.

The employees’ perspective and view on the importance of sustainable development to resorts and at the company was assessed. Each focus group was asked how important they believe it is for resorts to be engaged in sustainable development? How important it is to the company? And how important it is to them that they work for a company engaged in sustainable development? All of the groups believed it is important for resorts to engage in sustainability, that it is an important issue, and it should be a priority. The managers were more likely to describe the risks of not engaging in sustainable development. Some of their perceived risks include avoiding eco-terrorism as well as climate change implications. Participants believed it is also important for the company to reach out to the community as they are sometimes perceived as the “big bad” company. For example, one employee said, “The effort that our company has done to cope with a bad season to keep the rest of the community going has been recognized by people who usually look at us like we're the bad guys”. Managers also believed that because the company is similar to one operating in a mining town (a town with one company as the primary employer), it is essential that the company communicate to the community and guests about their sustainability initiatives and that they are perceived by the community to be responsible. For example, one manager said, “Yes we are held accountable for any sort of environmental problem. The public perception is the larger the company; the more likely they are to be poor (environmental performers). So we need to do a lot more than we do (communication) for the guests and staff because they don't have a clue”. Participants stressed that improved communication to employees, guests and the community could help improve Whistler Blackcomb’s image and educate people on their initiatives.

There was agreement with all participants that although sustainability is important to the company, it needs to be communicated more clearly. For example, there was confusion on what the future of sustainability is at the company. There was also confusion between what was being communicated from the company and what was being communicated from “Whistler, It’s Our Nature”, a local non-governmental organization. Participants said the best way for the company to communicate their commitment with the staff was through pre-season orientations and presentations. They recommended that a training module take place for employees at all levels.

All of the focus groups said that it is important to them that they work for a company that is environmentally and socially responsible. Participants (in particular supervisors and managers) wanted to know what their impact as a company is on the environment. They wanted to know more about long-term plans and where the company is going, what issues they are addressing and what is a priority, "Sometimes we deal with little things but the bigger issues we don't even want to address".

3.2 Challenges to sustainable development

3.2.1 Executives’ awareness, perceptions and concerns

The company’s senior management was assessed on their awareness, perceptions and concerns of sustainability. Results indicate how executives currently perceive sustainability in their organisation. Interviewees defined sustainability and its meaning at the company. From their definitions of sustainable development, five common themes emerged: (1) the executives believe that their business success depends on the environment, (2) they almost always described sustainability as “minimizing” their impact on the environment, (3) they believe they must balance sustainable development with economic aspects, (4) the Natural Step framework is common language when referring to sustainability and (5) there was confusion as to how the company defines sustainability (what sustainability means at the company or how sustainable development relates to the company). Interviewees also explained their concerns with implementing sustainable practices, or what they believe must be considered when advancing a sustainable development agenda.

The executives believe that their operations depend on the health of the environment and that it is part of the product they sell. For example, one interviewee stated, “We sell experiences and memories, all of those experiences and memories that we sell on the mountain really have to do with the environment. So if we don't have the beautiful physical environment, if we destroy it, we have nothing to sell and market”.

Reducing and minimizing their impact is important. Interviewees stressed the importance of “reducing their footprint” and reducing their impact as much as possible. In several cases the interviewees defined sustainability as “ensuring that we minimize our impact on the environment and reducing our impact in a balanced way, or, in a way that's good for business”. One interviewee defined sustainability as understanding how their operations can be “circular in nature” rather than just reducing their impact as described by other interviewees.

Sustainable development is a cost. The majority of interviewees related sustainability to ensuring sustainable development was balanced with the financial aspect of operating a business. For example, “You need a balanced approach to the economic, social, environmental, but you can't miss one of them”. The “Triple Bottom Line” concept, where companies believe it is important to include environmental, social and economic parts of operating a business, was often referred to. One interviewee described sustainability as the “ability to continue to be successful from a business point of view, without overusing natural resources”. There was a general understanding that environmental issues and initiatives are very important for them to pursue, however, they believe it must be done in a way that is financially suitable for the organization as there is a cost to sustainable development.

Connecting The Natural Step to Sustainability. The Natural Step was a common reference in the executives' definition of sustainability. Although they would not go into the basics of the framework, there was an overall “buy-in” and understanding that the framework made sense to their business. As one interviewee described it, “we subscribe to the Natural Step, the environmental side is one part of it, and the social and economic side, we try to balance those three”.

Lack of clarity on what the company means by sustainable development. Although executives understood the more basic concept of sustainability

and that many of their sustainability initiatives were built around the Natural Step Framework, interviewees lacked the ability to clearly define what sustainability, or the framework, means to the company. Some executives felt they had a clear understanding of sustainability, however, others did not. For example, one interviewee said, “It’s not as clear as it should be because we’re wrestling with what a balanced approach is”. Without specifying the basics of the “Natural Step Framework”, one interviewee described his understanding of sustainable development in the company as, “[using] sustainability in a number of different ways, but I’m familiar with TNS and the framework, they use it and I think that’s the most applicable one for us”. When asked what sustainability meant to them and in the context of Whistler Blackcomb, one interviewee admitted “not a whole bunch to be honest, it’s not something that’s in my being, it’s obviously doing the right things and the world will last longer, big picture thing, and doing the right things for the right reasons”.

Results of executives’ concerns and attitudes towards sustainability. Sustainability is believed to be important in the company, should be a priority. All participants agreed that it is important for today’s mountain operations to engage in sustainability. For example, one interviewee said, “Sustainability is critical, a given, it has to be part of what they do, make decisions, it’s necessary for part of business”. The interviewees believed that sustainable development is an important issue for the mountain and that this part has been well communicated. For example, one participant stated that “this is the part that has been made fairly clear to us, it is a focus, and probably one of the most important things we’re doing in how we’re impacting the environment on the mountain, and how we’re perceived by the community is that we have our resorts right and that we have a super high level of responsibility in being a complete leader in implementing programs that deal with sustainability in everything that we do”.

One interviewee said, “It’s hugely important for a number of reasons one is customers are that much more savvy and are demanding it from most corporations. Also greenhouse gas has a huge impact on us, our glaciers etc. It’s also important to our staff that we minimize our impact on the environment”.

Concerns about following through with actions. Interviewees stated concerns they would like to take into consideration when implementing

sustainable development. Some executives thought it was important to be able to do what they say they are doing. For example, one executive said one concern is that “I can walk the talk, you can't really be (directing) people in a given direction without believing that you yourself can support that same approach. I need to be able to walk the talk and set the tone around the whole issue of sustainability”.

Concern that the costs of sustainable development would exceed the benefits. There was a concern about the cost of sustainable development; for example, one executive said “being a leader of business, you need to maintain a balance and pragmatic approach to sustainability. If you take it to the extreme and don't understand the outcome, you can end up in a place where the finance is not good. You need a balanced approach to the economic, social, environmental, but you can't miss one of them”. One executive expressed that his biggest concern was time, and the financial commitment. He also explained because sustainability is such a new business concept, there is a level of ignorance, fear of not knowing the future and what sustainability means to the bottom line. Fear of what it will mean financially as everything is very much shareholder driven. Another executive stated that because of the fear of the implementation cost, the change must be driven from the top; “What's the cost, we've always done it this way so change will cost more. How will this affect the bottom line? We're starting to change from the top but that's where it has to come from”.

Concerns about communicating sustainable development to their staff. There were concerns about how to communicate sustainable development to their staff. For example, one interviewee asked “what do you know what to communicate and how?” In addition, interviewees believed that there must be a priority to make sure sustainability is properly communicated. The participant stated that embedding new initiatives is part of leadership, however, there is always resistance when something new is introduced and new concepts can create conflict. The participant stated that the concern is that they're an organisation that's going through some significant change, trying to embed a lot of new concepts and a new approach to the way they do business. He described it as “an opportunity in one sense, that changes a foot so people are aware that change is happening, so incremental change doesn't seem as dramatic”. Along with significant change comes the concern that “in the same sense there are so many messages out there for our employees to discern what is truly

important is difficult. So that will be very challenging”. It was also important to interviewees to ensure that the commitment is communicated with the shareholders and that they understand that there may be extra initial costs in sustainability. This was thought to be achieved through educating shareholders on the company’s sustainable development goals.

Concern that the individual will not relate to the information that is being communicated. To understand how sustainable development applies to the employees at the company, the executives believed that it is important that the science is not presented in a way that is too difficult to understand. One participant suggested to “make it easy and clear for people to get it. Where it's not going to take time, that it's fun enough where people will react and be accountable to it, because I find it dry and boring, ... It has to be simple, easy, clearly communicated and therefore expectations are laid out and we can be clear on how we keep ourselves accountable to it. If you start with the scientific charts, papers, reports, it's like that's great but what's the bottom line here, what can we seriously impact here”.

The executives’ perceived barriers to sustainable development. The barriers to sustainability were identified by asking the interviewees their perceived barriers of sustainable development, or what they believe is preventing sustainability from progressing in the company. The financial aspect (cost) of sustainability was the most common perceived barrier among executives while communication was the second most commonly perceived barrier (Figure 3.1). The interviewees’ perceived barriers included:

Staff training. The interviewees believed it is “difficult to train transient staff”. As the company hires a high number of staff specifically for their winter season, there is a high turn over rate of employees who must be trained every year. The staff schedules make it difficult to train employees all at once. For example, staff at the company do not work the average 9am – 5pm day as schedules span 24 hours a day over 7 days a week.

Communication (i.e. policy, reporting, stakeholder communications). There is a reluctance to communicate their initiatives and commitment to stakeholders. One senior executive said, “[the company] should continue to do things that we're doing, expand opportunities for eco-tourism, take

advantage of gems on the property. We need to keep doing what we're doing, don't wave the flag but do what you do because there are always things we can be doing better. So we want to lead with action instead of talk". However, there was recognition that a policy would help communicate the sustainability commitment. For example, one executive said, "I think most people in this organisation are waiting for us to state more clearly what our environmental policy is, what the principles are, we've said the Natural Step but we haven't invested the time to create common sense and what that actually means".

Common understanding of sustainability and fear of what it means. Some executives felt that they did not have enough knowledge to implement sustainability. For example, one executive said, "Knowledge is a barrier, we don't know enough about sustainable development"... "We don't know what we mean by it, that's why I think the culture needs to be built, what do we mean by environment and sustainability that effects individuals, and that they can effect, how do you make it real for that person?" A senior executive also explained that there is a fear with senior management as to what sustainability will mean to the company, and that they lack a personal understanding of sustainable development from a business and individual perspective.

Financial commitment (cost exceeds benefit). The financial commitment to sustainable development was the most common perceived barrier among the executives. Understanding the financial commitment was one perceived barrier as the interviewee explained the business is very much "shareholder driven". Another interviewee explained that understanding the cost and benefit of sustainability was a barrier, "Finding the balance of the cost vs. benefit, it's a double edged sword". One interviewee explained that some of the choices they would like to do are not economically feasible. For example, he said, "Costs are obviously a barrier. To put in a ground pump heating systems would be very expensive".

Critical mass is not there to support sustainable development (i.e. community energy plans). One perceived barrier was that because the company operates in a smaller community, they do not have the critical mass to utilize renewable energy plans that a larger community would be able to support.

Company accountability to sustainability. According to one interviewee, the company could build more accountability, “I think we need to build a better culture so we can stand up behind what we say we're doing and do it”. One of the main perceived barriers to one executive was the company’s accountability to what they say they are doing and how they measure their initiatives and impacts. “Our accountability to it (is a main barrier to sustainability). There are no measures there to say we're doing well or not doing well”. Another executive said, “eventually I would like to see us embrace it whole heartedly. We have embraced it whole heartedly but that's different from enacting it whole heartedly and measuring our performance”.

Company does not have a common vision. For example, one executive said, “I have to say I do not have a clear vision of the company’s sustainability goals. I think I can conceptualize TNS principles fairly well. And we've gone through to a certain extent but have we described what WB will look like in 20 years from an environmental perspective solely? No we haven't, like we're going to use wind power to power our lifts”.

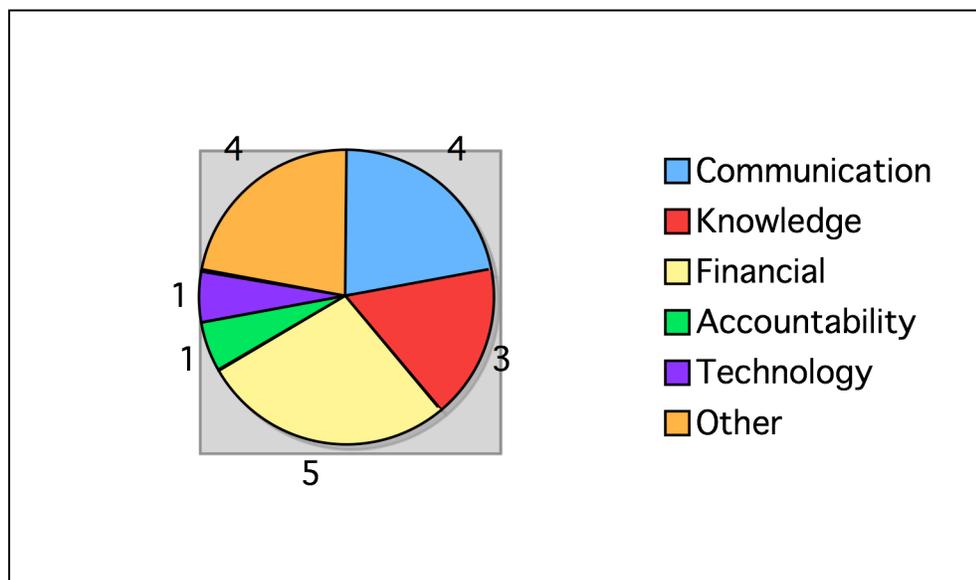


Figure 3.1 Executives’ perceived barriers to sustainability

Parent company does not have a position on sustainability and this creates a conflict. According to the interviewees, the parent company has not formally communicated its commitment to sustainability. “[The ski resort] is a part of the parent company, and the parent company needs to take more of a position on sustainability, they need to take a stronger position because otherwise there can be a conflict with what commitment is”.

Time commitment. One perceived barrier is that it is difficult to add more work to peoples’ already “full plates”. For example, one interviewee asked “how do you balance that with stuff we already have to do? We all know it has to be there for the longer term but the reality is today, I don't know how we can as we need to do a lot more investment, research, training so what does that mean over the other things that we have to do. It's adding onto more work, it's still down on the list of things to do”.

The company’s sustainability vision. Interview questions addressed the organization’s vision of success for sustainability. Among the executives, there was a lack of understanding of what sustainability means to the company. This lack of a clear definition of sustainability at the senior levels translates to confusion at the lower levels of the organization. For example, one interviewee stated, “I don't know where they want to go, so maybe that vision and direction is not clear. Because where it lies in priority, I'm not an environmentalist, I have other things I do, so it's not there”. Two of the senior executives felt they had a clear understanding of the company’s sustainability vision while seven did not. Of the two senior executives who felt that they had a clear sense, one of them admitted that he probably had a clearer sense because he is at a more senior level, “I think I do but probably because I'm at a senior level. Having said that it probably does have a little twist to each individual person. It's like the word is spread around and once it comes full circle everyone has altered it a bit. So that's a challenge, how do you communicate it?” One of the most senior executives did not feel that he had a good sense of what sustainability means at the company as he said sustainability is “not as clear as it should be because we're wrestling with what a balanced approach is, also with the community. Our business now is not positive so we try to do what we can do”.

There was a lack of clear sense of direction for sustainability at the company. For example, one interviewee said, “I have to say no. I think I

can conceptualize TNS principles fairly well. And we've gone through to a certain extent but have we described what the resort operation will look like in 20 years from an environmental perspective solely, no we haven't, like we're going to use wind power to power our lifts". Another interviewee stated, "I don't know where they want to go, so maybe that vision and direction is not clear. Because where it lies in priority, I'm not an environmentalist, I have other things I do, so it's not there".

3.2.2 Employees' awareness, perceptions and concerns

The "B step", analysis of where the company is today, was continued by understanding the employees' awareness, perceptions and concerns with sustainability. The participants had many different definitions of sustainability (Table 3.2). Employees most frequently associated sustainability with recycling, composting and waste. Although the groups frequently linked sustainability with environmental issues, the supervisor's focus group was more likely to discuss the social aspect of sustainability, such as the cost of living in the community, employee retention, housing issues and job security. Employees at all levels had a difficult time understanding the concept of sustainability and its association to the company. For example, one participant asked what sustainability even means, does it mean social, economic or environment and how does the company define it. Another employee asked if there was an assumption that environmental sustainability was well known at the mountain, as it was the first time that she had heard about it. After supervisors responded that they did not feel well informed, one participant said, "It gets painted too easily on top of everything, it gets lost and doesn't seem like it's an effective word anymore, kind of what [the word] "extreme" went through in the early 90's. What is it, what does it mean?"

Table 3.2 Results of employees' definitions of sustainability

Employee Focus Group	Sustainability Definitions
Seasonal Staff	Growth, maintain, balance, environment, education, reduce waste, toxins, recycle, re-use products, damage as little as possible, efficient resource use, water, composting, forests, disappearing nature, fuel and natural gases

Employee Focus Group	Sustainability Definitions
Permanent Staff	Environmental protection, staff and community education, emerging (global) issues and concerns, long-term planning, healthy workforce, renewable energy, renewable resources, climate change, bear habitat and awareness, fuel prices, recycling, composting, measuring their impact on the environment, car pooling, developing the mountain-bike park, reducing the footprint, efficient resource use and housing issues
Supervisors	Recycling, social aspect, cost of living, staying in Whistler, population increasing, housing, job security, receding glaciers, the bear program, garbage, responsibility, growing the business, nature, trees, waste, protecting the environment, reducing impact, show others in the community to recycle
Managers	Continue, build, maintain, green initiatives, reduction of water, garbage, energy, recycling, reusing, responsibility to community and bigger world as a whole, opportunities, boundaries, limits to our operations, environmental awareness, impact on environment, limits, economic sustainability to locals, population, sharing of information around a sustainability plan, more communication, renewable resources, exploring energy savings, paradigm shift, communicating our direction with our staff, economic challenges, global warming and annual snowfall, buy-in, global thinking and opportunity to lead, promote and educate

Participants identified the following as specific examples of sustainability at the company: recycling, composting, clean up day, a materials exchange program, a program to send used ski outfits to an eastern

European country, employee environmental fund, run of the river project, power and energy savings initiatives, waste and water reduction, spill response (to hazardous waste).

Participants felt that individually they could only name a few actions and examples of sustainability at the mountain, but collectively they shared and learned more from each other on the company's current initiatives. The majority of the participants felt that they were not well informed of the company's commitment to sustainability. They wanted to hear more about the company's program and actions and how they can apply sustainability at work and on a more personal level. They mentioned the best way to communicate with them was through presentations, email, posters, but most importantly, by more than one means of communication. Year-round staff felt they wanted to know more about basic procedures such as recycling and incorporating sustainability into the "how-to's" of day-to-day work.

There were several concerns in the focus groups about sustainable development at the company. Participants were concerned that the environmental standard would not be where it should be for when the Olympic Games take place in 2010. There was also concern that the sustainability commitment was not being driven from the top, "How could people use less, be more involved? Give us the hard facts of what our impact is on the environment, they should make it in our face. We want to see more rules and policies from "SLT" [Senior Leadership Team], and then involvement from every department. I can think of how my department can do more, but we need to be able to offer input".

Supervisors and managers were most likely to be concerned with their environmental and social impacts. They stressed waste, water usage, environmental and wildlife protection, improved recycling as important. Supervisors said that it is now difficult to live in their community and more employees are moving away and leaving the company. In order to be a strong company they felt there needs to be a consistent core staff, which are primarily the supervisors. When asked what actions and values they thought made a company sustainable, the supervisors and managers said they want to (and like to) work for a company that is involved in the community, that will sponsor its initiatives and be involved in the community through making a difference. They were pleased that there are specific positions in the company for the environment. The supervisors

group said that they appreciate the “little things the company does like two dollar dinners for people in staff housing when the season is just starting, it goes a long way.”

Managers were mostly concerned with understanding their environmental impact on the valley, as well as ensuring sustainable living standard for the region and for employees. They were concerned with how they might integrate sustainability into their operations. On one hand, they see it is important to understand how it works in their operations, but on the other hand, how can they add more to their “time-strapped list”.

Sustainability as a part of employees’ work. Apart from recycling, participants did not see how sustainability worked in their day-to-day jobs and they did not see how their work was affected by sustainability. However, they did show interest in understanding how to incorporate sustainability into their work. For example, one of the permanent staff said, “I make it (part of my job) with recycling, I work it into my day, it's a part of my lifestyle, but I don't have a job description. I would like to do more, but it wouldn't be part of my job, I'd be happy to do it extra. We have people who want to do more, volunteer b/c they are passionate about it. Want to know how we decide about expansions, what are we doing to minimize these impacts? I want to know how planning was done, what was taken into consideration”. All of the groups felt that they should understand and learn how sustainability operates within their divisions. Year-round staff agreed that other than recycling, sustainability is not something that they come across in their day-to-day work and that they do not have much interaction with sustainability procedures.

When asked if sustainability was part of their day-to-day job, the managers said no, that it was still a choice and not a priority. For example, one of the managers said, “No, it's not a priority, it's sort of like a choice still and it's not mandated and that's the problem because people still have the choice, no one is looking over their shoulder”. Some managers agreed that sustainability decisions do come up, such as purchasing plastic or glass containers, however, it is not a priority.

3.2.3 Intrawest challenges to implementing green building

Green building has been defined by the United States Green Building Council for building design that:

1. Increases the efficiency with which buildings and their sites use and harvest energy, water, and materials, and;
2. Reduce building impacts on human health and the environment through better siting, design, construction, operation, maintenance, and removal—the complete building life cycle.

Understanding the “Green Premium.” According to the interviews, the cost premiums associated with ecologically designed buildings are prohibitive from a developers’ perspective. Developers who wish to build in an ecologically designed manner must incur a “green premium”. This is an increased “up front” cost that the developer must finance if they want to build in this capacity. Because of the infancy of the “green” building movement there are a number of uncertainties surrounding this building type development. The most formative hurdle associated with green building are the assumed premiums and developers must ensure they recover their costs.

According to interviews, this is the primary issue that must be addressed if green building is to become widely adopted by industry developers. Placemaking executives recognize the high risk associated with adopting a sustainable approach to their development initiatives and said, “our customers are not asking for anything different than what we are supplying. They are not purchasing on a value equation, they are all about the purchase price, and the price is driven by the market.” Hence, there is no incentive for the developers. Interviewees agreed there must be a demand to decrease their exposure to risk associated with building green developments.

One developer noted that “practices will change when it is profitable to do so, but not before.” He also used the metaphor of “the chicken or egg scenario,” describing the demand and delivery of ecological design into the marketplace. The public must demand green buildings before the development community will build.

The Chief Executive at Raymond Properties believes that, “the west coast of the United States would not be ready to adopt green design in the residential community in about five years, while the East Coast would not be ready for five to ten years.”

Avoiding unnecessary risk. Intrawest developers view the increased cost as a risk to market share in the current business climate. The increased risk is due to the increased cost due to the green premium. They see a 2% to 3% cost premium to build ecologically designed and constructed buildings to be prohibitive. The executives identified two areas as problematic for the adoption of green building by Placemaking in the near term. The first is the increased “design and cost barriers,” these usually occur at the front end during the design period. They explained by saying, “There is a 10 year payback and if we turn around and sell the units we are losing money. The business sense is not there, and our business model makes it impossible to recover the upfront costs.” They also stated “the construction industry is not able to deliver on time and price, the contractors will change when the market changes.” Interviewees said that collectively these hurdles are difficult to overcome in the near term without the market demanding something entirely different.

Assessing technology. There was a fear that new technologies are not reliable. For example, one Intrawest executive said, “There are a number of technologies available that can reduce emissions, energy consumption etc., we have installed proven HVAC systems in our warm weather destinations but without a tried and tested product, we will not implement unproven technologies. We will not be the guinea pigs.” The Intrawest executives went on to say, Placemaking would not stake a leadership position in new building practices that are not definitive.” They will wait for other developers work out the flaws and then slowly shift their operations and development practices. They understand certain areas will accept green design faster than others, and such designs are location specific in the early stages.

3.3 Strategic steps the company could take towards sustainability

As outlined in the introduction, the next process represents the “D-Step” in a strategic approach, to understand the actions a company should take towards the vision. The steps towards sustainability that the employees, executives, and industry professionals could take were ascertained from the discussions with these groups. The steps are an analysis from the discussions in the focus groups and interviews to understand the companies’ operations. The executives and employees inform the

strategic steps that the company must take. To this end, there are a number of strategic steps that should occur for Whistler Blackcomb and Intrawest to move towards sustainability. The majority of the actual strategic steps are located in the discussion in the analysis of the obstacles and perceptions of the interviewees. These conversations informed the strategy for the company.

3.3.1 Whistler Blackcomb executives' perceived steps the company should take towards sustainability

The company executives were asked what support they would need, specifically in their own divisions and areas of responsibility, to further embed sustainable development.

A clear commitment from the top level of the organization. Several executives stated that a clear commitment was needed by the organization to further embed sustainable development. This included clarifying the parent company's commitment. For example, one senior executive said, "the parent company needs to take more of a position on sustainability, they need to take a stronger position because otherwise there can be a conflict with what commitment is". Executives stated that part of a clear commitment from the higher level of the organization includes determining where the commitment is as a priority. For example, one participant said, "we need to identify where it is on the priority, identify the expertise and give the support needed because we lack the expertise to implement it".

Include sustainable development in strategy planning. Executives believed that including sustainable development as part of their business strategy would help them further implement it. This included understanding the direction and vision of where the organization wants to go. For example, one executive said, "where do we want to be in 5 years? If it was tied into our structure and set accountability formats like objectives it would be really easy for us to do that. Maybe it's a bit more direction from the top or even if the direction was to say ok, here's the new understanding of sustainability, go into your divisions and see where the opportunities are, I could set those objectives in my reports of goals and objectives".

Create a sustainability policy. According to several participants, creating a sustainability policy would help further implement sustainable development. A policy could help formalize, articulate and communicate the organization's commitment. For example, one executive said, "the first step is to come forward with a policy and explain policy to fund managers".

Communicating sustainability from the higher levels of the organization. Participants believed it is important to communicate their commitment with stakeholders in order to more effectively integrate sustainable development. For example, one executive said, "The Company is behind this, we need to convince the rest of the staff that we're behind them, that we're ready to make a financial commitment, the top sets the tone". One executive stressed the importance of effective and clear communication, "We need to be very careful of how we communicate it, make sure we make it in line with our language and not try to invent something new. Like make it part of our environment and community values".

Financial support. Executives thought their needs to be a level of financial backing to further implement sustainability. For example, one participant said, "(we need) support to pay for higher environmentally friendly products/services". However, one participant did not necessarily think financial support is the only answer, but that actions are important as well. For example, the participant said, "I'm not sure that more money would make it better, but challenging ourselves with what we had could make it better. Like if Vancouver (parent company head office) gave us more money and said, make us green, I'm not sure that would be the right way. We have a lot of great intellectual capacity, a lot of driven individuals that have a conscience about it".

3.3.2 Whistler Blackcomb employee perceived steps the company should take towards sustainability

The focus groups identified aspects that would help them engage in sustainability to a greater degree and help the company move towards sustainability.

Clear support from the top levels of the organisation. Participants said they rely on the environmental team for information on sustainability but that there is a lack of support from the senior level to the environmental

team. They explained that the environmental team is continuously chasing other employees, however, employees are unable to participate due to their full schedules. When asked how this could be changed, participants explained that it needs to have meaning in the core values and that the commitment and communication needs to come from the top. The perception is that perhaps this is not happening because everything comes down to the budget and that perhaps it is not a priority for the top management, “This is what I mean when I say core values, it needs to come from the top...everything comes down to pennies and that's something that is really tough to be up against.” In addition to top-level support, managers suggested that the initiatives should be driven from the higher levels of the company. For example, managers said they would like to see “initiatives mandated from the top, but also involve employees at all levels and make (employees) accountable for it”. Another manager stated, “It's a culture that needs to be top level introduction all the way through to all of us when we're making our decisions of what we'll do (next year etc)”.

Engage employees. All of the focus groups said they would like to be more involved than less involved in sustainability issues. For example, one focus group said, “We have people who want to do more, volunteer because they are passionate about it. Want to know how we decide about expansions, what are we doing to minimize these impacts? I want to know how planning was done, what was taken into consideration.” Several themes emerged on how to help engage employees to a greater degree in the company.

Employees want to be more involved and make sustainability initiatives part of their daily work. Employees suggested that making initiatives part of their goals and objectives would hold them accountable to ensuring their responsibilities were carried through. For example, one employee said, “Maybe it should be part of objectives, budget, goals, it comes from IntraWest and is then passed down but I'm not going to add extra objectives for myself unless it comes from them”. One participant said making sustainable development part of goals and objectives would be key to the success, “If you asked everyone if they would be interested in this they would say yes, but if you ask if they would do it outside of their work time, probably not. It needs to be part of our lives”. It should be involved in our job description, like how Food and Beverage transformed their department this year with the Food Safety Program”. Participants

suggested implementing sustainability like other business strategies. For example, the Food and Safety Manager compared implementing sustainability to the process of implementing a recent new mandate, “I was Executive Chef, now I'm Food Safety Manager. Food safety was always on my plate, in the back of my mind but it was one thing on top of the other 15 things I needed to do. And we had a wake up call, we were forced to make a decision to do it and we formed the food safety department, and now that's my focus. I first had to create the mandate for it, let people know what they needed to do. Now we've seen a shift but there had to be mandating, education and reinforcing and supporting. We still have issues but overall it was a shift”. Understanding that this initiative was developed from the top, they suggested that this is something that sustainability could be modeled after. All of the focus groups recommended that a sustainability committee be formed with volunteers from each department, much like the work safety program.

Communicate the sustainability commitment. Employees suggested that the company should communicate what sustainability means to the organization, “We as an organization need to be able to define what (sustainability) is”. Participants expressed that the company should communicate their commitment, what they are doing and why, “You can't just talk about it once in a while, it's got to be in every conversation when you go into making decisions. We're replacing lights, we're doing this, but it needs to be clear what we're doing as a company, for example, why did they start to change all the light bulbs?” Employees also wanted to see the company be more transparent by communicating their environmental approach. For example, one employee said, “I think planning is lacking because I'm not aware of it. I want to know what kind of guidelines we are using when expanding, we are being environmentally sensitive but compared to what”. Participants said that they want to hear more about the good things the mountain is doing and agreed that because they are the community's primary employer, they should communicate more with the community. The managers were particularly interested in the company communicating and promoting their initiatives to their stakeholders. For example, one participant said, “Guests are coming here expecting us to be environmentally responsible, how we communicate back, i.e. having an education centre for bears etc, for us to advertise what we do right now so people know this is part of our culture, I don't think we do a good job of this. I think it would be good to get (the environmental team) this support for these initiatives”. Employees

suggested that training sessions, presentations, displays and an environmental intranet would be good ways to communicate to the staff.

Sustainability training. Employees wanted to see more training from the environmental team and part of the commitment should come from the top to start a cultural shift, “For me the first part is to produce the training of The Natural Step, what is the culture you're trying to create, what do we want to create, what is the leadership in this company you what to see as far as the education to their staff and the result of that is the cultural shift”. All of the focus groups said they wanted to see more environmental training from the environmental team. Some participants said the key to them was more education and guidance on how to incorporate sustainability into their work. Managers stressed that right now the training is inconsistent and that information should be easily accessible, or employees should know where to find information on sustainability regarding the mountain.

Be consistent. The focus groups suggested one improvement from the environmental team would be to continue to ensure the overall initiatives are consistent. For example, ensure recycling is consistent, training is provided and proper infrastructure is available, i.e., ensuring that the right bins for recycling are available).

3.3.3 Real estate executives' perceived steps the industry should take towards sustainability

“It is easy to change the direction of a canoe without anything in it, it is much more difficult to slow and change the direction of a large ship.”

-Intrawest Executive

Executive understanding of The Natural Step framework. The Natural Step has been adopted by several Intrawest owned mountain operations, including Whistler Blackcomb and Keystone. Some parent company (Intrawest) executives have taken part in workshops explaining the Natural Step principles and framework. Intrawest executives in charge of real estate development noted that some of mountain operations have “adopted” the framework, but termed The Natural Step Framework “unclear” and “fuzzy”.

Changing practices. The executives noted the challenges to overcoming the obstacles that stand in the way of aligning business operations and sustainability. All of the executives agreed that such a transition would pose significant challenges, but understand the opportunities as well. Placemaking executives stated “market demand and acceptance” would ensure a faster transition to ecological design. The outward pressure on the developers by the market will require a rapid transition to ecologically designed residences. Such demand would begin in localized pockets and slowly spread into national markets.

Executive view on implementing green design. The real estate executive team made a very clear point that the market drives the design and development of the resorts. To deviate from these practices is very risky due to the uncertainties of introducing a new product to a market where green designs are largely unknown. Their view is that the market is not ready for the introduction of green products. The cross section of developers agreed with this statement.

The LEED approach and understanding frameworks. The Intrawest executives recognized the importance of the Leadership in Energy and Environmental Design (LEED), for their future projects. LEED is a “consensus-based national standard for developing high performance, sustainable buildings [18]. Intrawest executives commented that the LEED system would, “drive our strategy in the future, but we have yet to commit to any specific design.” The other developers also noted that LEED and other similar programs are pushing the basic level of building design to greater efficiencies. The LEED system is evolving to meet the changing needs of the building industry by establishing a basic level of ecological design and materials selection.

Intrawest executives described the LEED initiative as the “future design of the business”. All the executives agreed that this system would play an important role ensuring efficiently designed buildings in North America and abroad. They believe such standards will be eventually become normal. Some are preparing now, while others are waiting for laws and mandates to dictate their direction. The LEED rating system has become the preferred standard throughout the building and construction industry. This rating system is specific to the design and construction of new and re-developed buildings. The system helps establish best practices. Many

major ski resort operators have adopted LEED standards for new construction.

Breaking down barriers. Internally the executives noted specific areas that should be improved to ensure a transition to green building. They noted “research and knowledge” as a driving force to transition to sustainable designs. They understand research must be improved and knowledge gained to successfully implement ecological designs into their developments. To this end, one Intrawest executive said, “we are not there yet, but we are working on it.”

Currently Placemaking is involved in a partnership development of a ski “village” with Aspen Ski Company. Aspen Ski Co. is considered the most progressive company in the ski industry in terms of their sustainability initiatives. They have focused on these issues since the early 1990’s and have implemented a number of sustainability initiatives. The Intrawest executives commented, “we have begun the research process with our Village at Snowmass. We are learning a lot working with the Aspen Ski Co. and that will be very beneficial to us in the long run. Aspen has designed and incorporated a number of green strategies, so they are a good partner to have at this stage in our learning curve.” The executives recognize the beneficial situation in which they find themselves so they can safely ask questions and begin the “research” and “knowledge acquisition” that is necessary to take the next step towards sustainability.

Implementing technology. Technology is as much as a challenge to overcome as it is a vehicle to move beyond the current situation. The executives recognize the benefits of specific, established technologies. Placemaking has already adopted sustainable technologies, such as efficient HVAC systems for their warm weather destinations and Environmental Management Systems to monitor and operate lighting and temperatures in their buildings. They see these technologies as very beneficial because, “they reduce energy needs which translates into lower costs.” These have energy saving benefits for operations and will be considered if there are cost savings associated with them. One Intrawest executive summarized the use of technologies for Intrawest operations; he believes there are beneficial technologies on the market that will help them move towards sustainability. The technologies that the real estate division adopts will be “proven technologies that save energy, increase efficiencies, and saves money.”

3.3.4 Ski resort strategic steps

To further understand actions companies could take towards the vision (the “D Step”), best practices in the ski industry were looked at. The “best practices” list is a culmination of resort companies implementing solutions that comply with the Sustainable Slopes initiative [17]. This is a voluntary initiative that many resorts are adopting. They recognize the importance of environmental health and attract customers to the mountain. There is also increased brand recognition and marketing opportunities for joining the sustainable slopes charter.

Many of the initiatives outlined in Appendix C, are not part of any sort of a cohesive sustainability strategy. Rather, they are a list of actions that, independent of a comprehensive sustainability strategy are minimizing solutions, however if coupled with a sustainability policy would be actionable steps toward a sustainable company.

4 Discussion

This study identifies the characteristics of a sustainable resort, how the resort company is performing, the barriers to change in the organization and the steps the company could take towards sustainable development. Although the participants in the study identified several steps they believe would help the organization move forward, these recommendations could be utilized as strategy if integrated with a strategic approach such as the Five Level Model and a systems view perspective. Understanding the barriers to change and strategic steps the company could take to dismantle the obstacles could help the organization create a more efficient, focused and replicable model.

Along with a clear vision and strategy, sustainable development within an organization, requires learning and significant change. Peter Senge defines leadership as the “capacity of a human community to initiate and sustain significant change” [9]. For real change to occur, leaders must not only create positive energy through motivation to attain the short-term wins, but perhaps more importantly, they must identify, understand and disseminate the barriers to change. The executive interviews and focus groups provided an insight to many assumptions, concerns, attitudes and perceptions held by key people in the organisation. This type of insight, understanding the baseline of where the company is today and the existing constraints to change, is the first step to lead sustained change in an organization [15]. The possible areas where Whistler Blackcomb could address the major barriers to strategically advance sustainability at the company include dismantling obstacles to change and creating a common purpose, creating the awareness of the common purpose and incorporating sustainability in strategic planning. Combining the strategic approach outlined in the introduction and the results from our interviews and focus groups, we have identified the challenges and opportunities for a strategic approach to sustainable development.

4.1 Dismantling obstacles to change and creating a common purpose

4.1.1 Dismantling obstacles to change

The barriers to sustainable development perceived by the interviewees and focus group participants represent a significant challenge the company faces to further implement sustainable development. Although there were several barriers identified by both executives and staff, the results indicated that some obstacles must first be addressed at the higher levels of the organization. The interviews with the executives showed that one of the major barriers to implementing sustainable development was that the parent company has not yet communicated its own commitment and thus expectation of how its own resorts should operate. The reasons why the parent company has not yet clearly communicated their sustainability commitment throughout the organization may be because they are also grappling with common issues other large organizations struggle with when considering sustainable development. There was a “fear of the unknown”, lack of clarity of cost vs. benefit and a lack of understanding and awareness of a clear definition of sustainability. The following actions could help dismantle barriers and build a common purpose among the executive team:

Conduct interviews with Intrawest executives. Conduct interviews and analysis with Intrawest executives to gauge awareness and attitudes of sustainability in the company, understand the type of language that resonates with the management team and generate ideas for dismantling obstacles for change.

Participatory dialogue. Lead a participatory dialogue session around the basic principles for success and for key executives from Intrawest to answer the questions that can help build meaning in their company such as:

- What does sustainability mean at Intrawest/Whistler Blackcomb?
- How does it relate to the purpose of our organization?
- Where do they want to be as an organization?
- Where is it as a priority?
- What are the boundaries (what will we not do)?
- Who is the organization as a company?
- Why are they in business?
- What do they want to see the company become?
- How does sustainability fit into this picture?

- How can sustainability add value to what they do?

This could help bring clarity to the team, which is important before a company-wide sustainability engagement plan proceeds. Peers from other companies and leading experts in sustainability and business planning could participate in key places of the dialogue with Intrawest and Whistler Blackcomb's executive teams. An objection forum could also be a part of the dialogue. This activity would allow for participants to voice their concerns on sustainable development at the company. This is important because if key staff and board members in a company do not see the value, opportunity and importance of sustainability, the program will likely not succeed [19]. The objections could then be addressed and worked through with the group as a whole. With the executive team moving towards a common understanding of sustainability, or the principles of success, each senior executive could think through what sustainability means to their functional area. This would be important in engaging all divisions at all levels through a future employee engagement strategy.

4.1.2 Creating a common purpose

The barriers identified in the study may also represent an opportunity for the company as many of the challenges could be addressed from building a common purpose and vision. Creating a common purpose and vision for a company is important because according to Durragh and Campbell, one of the most common reasons why corporate initiatives fail is because individuals do not perceive the issues or the initiative as a priority, they feel there are other priorities or more important activities and therefore do not fully commit to the implementation [20]. This lack of "buy-in" was demonstrated in both executives and employees, as they did not believe sustainable development is a priority. If the initiative is not clearly communicated as a priority and important to the company, it will not be a priority to the individuals within the organization. As there was a clear lack of understanding of the company's sustainability vision, one executive recommended creating a clear vision among the executive team, specifically with the Natural Step concepts as a base, and using these concepts to build a vision twenty years from now.

Research shows that the most outstanding, long-term results were achieved by companies that have a clear, sense of purpose and a shared

set of values [21]. Companies that were consistently clear about their purpose and values and lived by them accordingly, outperformed the US stock market by as much as 15 times over 50 years. The desired outcome of a visioning process would be an inspiring core purpose or vision and mission statement endorsed by all levels of the company (board, management and staff) that expresses who the company is (vision) and what it is trying to achieve (mission). The core purpose is guided by the sustainability principles identified by the company. The key is to understand how sustainability fits into the overall vision of the company. For example, the Whistler Blackcomb Mission Statement is “To create memories for our guests and staff as the best mountain experience again and again”. Their vision statement is “We are committed to being the world’s premier mountain resort. Our people are passionately dedicated to deliver each and every guest a memorable mountain experience. We will continuously re-energize our product and provide great value to maximize the full potential of our unparalleled natural resource.” The vision and mission statement represent the core purpose of Whistler Blackcomb’s vision as they communicate the enduring benefits of the organization. They don’t necessarily state what the organization actually sells to their customers, but state the enduring benefit of their product, to create memories for their guests. It describes what the company aims to do and what they offer to society. Sustainable development can play a greater role in the organization’s vision when the company’s sustainability principles guide the overall vision (as described in the introduction).

The executive team and the staff did not have a common purpose and awareness of sustainability. The following actions could help create a common understanding of sustainable development at the company.

In The Natural Step for Business, Natrass and Altomare demonstrate how IKEA approached a company-wide training plan. When IKEA brought in the environment as part of their business strategy, a video was created to deliver a message from Anders Moberg (President and CEO, IKEA) about how the company was integrating the environment into its business strategies and operations. The video re-enforced why these issues were important to IKEA and that this was important and consistent with IKEA’s culture. The initial company-wide training program was three fold: 1. It occurred in all the company’s main functional areas 2. It was a top-down training strategy where management received training first where managers were responsible to train their respective areas 3. They

applied the “Grandfather Principle”, meaning that Anders Moberg, company President and every executive’s boss, conducted the executive training session. This process was then duplicated at all levels to demonstrate the highest level of commitment and that the issues were highly important to IKEA and were taken seriously [22].

4.2 Challenges to sustainability

4.2.1 Teaching the common purpose

There are several reasons why creating awareness is important. Corporate initiatives are more likely to fail if individuals do not connect to or do not recognize the issues that the initiative is trying to address and thus do not fully support it [20]. They often reject new developments as unnecessary or difficult and perceive them as additional work (as explained by several employees). An initiative may also fail when individuals lack ownership and responsibility for the issues, perhaps through a lack of understanding, and, as such, do not fully implement all aspects of the initiative.

Both executives and employees at Whistler Blackcomb identified sustainability as being a very important issue, and one that will only increase in importance in the near future. Merely hearing about a company’s commitment to sustainability but not actually being able to see how this works in one’s daily operations may lead to frustration and it could even potentially be seen as disingenuous. Moreover, the need to be aware not only of environmental issues and how this relates to executives’ and employees’ roles but to have knowledge of the company policy as a whole towards the environment is important [22]. It is recommended that a company’s commitment, strategy, and individual initiatives and activities regarding the environment be communicated internally to ensure that employees, and those most likely to be more central in sustainability are aware of those initiatives and activities. Otherwise, employees could perceive the environment to be a low priority for their role and might not support or fully implement any new environmental initiatives. In addition, it is recommended that executives be involved right from the start in the process for strategic sustainability planning [23].

Environmental awareness in the ski industry has traditionally been about recycling. However, with society's increasing interest in the environmental crisis, stakeholder pressure and the very fact that a ski resort depends on the state of its environment for its business, destination ski resorts are becoming more aware of environmental concerns. In addition, employees at ski resorts are more likely to care about and have awareness of environmental issues [8]. On the other hand, participants were less able to discuss basic sustainability concepts (for example, the Brundtland definition). Employees at all levels had a difficult time understanding the concept of sustainability and its link with the company. Communicating what the company means by sustainability from a visioning session (above) could help clarify this confusion. The Whistler Blackcomb environmental team has created communications and training on sustainability and the Natural Step Framework. Linking this language to suit that of the company could help clarify the company's definition.

There is opportunity for the company to reach employees and increase engagement and participation as employees at all levels of the organization indicated that they wanted to learn more, not less, from the company with respect to sustainable development. They felt that individually they could only name a few actions and examples of sustainability at the mountain, but collectively they shared and learned more from each other on the company's current initiatives. The majority of the employees felt that they were not well informed of the company's commitment to sustainability. However, the majority wanted to hear more about what was going on and how they can apply sustainability at work and on a more personal level. They mentioned the best way to communicate with them was through presentations, email, posters, but most importantly, by more than one means of communication so that the message is available for all to receive it.

4.2.2 Aligning the sustainability vision across divisions

The approach the executive management team decides to take surrounding sustainability will have broad implications for the future of the resort operations division (Leisure & Travel Group) and the real estate division (Placemaking). Currently, the managing executives at Intrawest are not aligned in their vision to move towards sustainability, the Leisure & Travel Group is exploring a sustainability policy, while Placemaking is not. The differing views of sustainability by the managing executives at

Intrawest are reflected in the management philosophies at the ten different ski resorts Intrawest owns and manages. Whistler Blackcomb and Keystone have specifically addressed sustainability, by “adopting” The Natural Step framework, while the other resort operations implement “minimising” initiatives and best practice solutions.

There are two overarching problems that could inhibit Intrawest and its resort operations progress towards sustainability. First, executives do not have a shared vision and understanding of sustainability, what it is, and how to strategically align operations to reach the end goal. Second, the transfer of information and knowledge from Intrawest to its resort operations and vice-versa, are not aligned to encourage learning from past mistakes. To address these challenges, according to the strategy outlined in the introduction of this study, there are three major opportunities that Intrawest could take advantage of, these include: (1) Deciding that a sustainability mandate is necessary, (2) Implementing sustainability across all resort operations, and (3) Ensuring Intrawest and all its subsidiary companies transfer and share knowledge.

The Whistler Blackcomb resort embodies the same challenges the parent company, Intrawest is facing. As a case study for implementing sustainability, Whistler Blackcomb could potentially align business operations with strategic sustainability. If successful, Intrawest would have a successful model on which to implement sustainability throughout all resort operations under management.

4.3 Sustainability - a strategic business goal and opportunity

4.3.1 Transitioning Whistler Blackcomb and Intrawest toward sustainability

If the transition towards sustainability requires significant organizational change towards the principles of success, then it cannot be done without an overarching strategy. The interviews and focus groups indicated that sustainability is still considered a personal commitment at Whistler Blackcomb. Although the environment and community is part of their core values, there was no indication that sustainable development is viewed as a business strategy. The implementation of a successful strategic plan begins with a commitment, a shared vision of success,

communicating the policy and obtaining employee commitment and involvement [23]. The 5 Level Model, a framework for leading organizations in complex systems towards sustainability, can be used to outline such a process, where key people involved in the transition can move in between the framework levels and distill the details towards the broader goal or vision, which should ultimately lead the strategy. For example, the company could take a strategic approach to sustainability in a structured manner such as:

The System Level 1, where the understanding of the organization's role in society is explored. Here, it is understood that the current global trends lead to a non-sustainable society and there are implications to the organization for contributing to these trends. This is where a company may make its commitment to turning their business practices towards a sustainable path.

The Success Level 2, where organizational success is described within the context of a sustainable society in the biosphere. Here, the environmental vision is integrated with the company's vision and core values so that it is not a separate program. The sustainability principles will act as constraints where they are achieved when the company reaches success. A clear vision, as described in the introduction, will inspire and indicate the direction in which the company will evolve. A company sustainability policy may then be set in place to not only hold the organization accountable, but to show they are serious about their commitment.

The Strategy Level 3, where backcasting from principles of success occur. Here, the company can be strategic about their decisions, and where the sustainability planning is not a separate entity, but part of the company's overall strategic plans.

The Actions Level 4, where actions are necessary to be in line with the overall strategy to move towards success. This is where the specific actions take place.

The Tools Level 5, where selected tools are chosen to specifically support the actions in a strategic manner towards success. Dialogue tools may help in the awareness section to help executives reach consensus on their commitment, or capacity tools may be used to train staff and employees.

Without having a sense of the different levels, the operation risks straying away from the overall company vision (above). This is already evident with their environmental team as they frequently operate in the Actions Level rather than taking a “birds eye view” to see if the company is heading towards the vision. For example, the team has an impressive list of initiatives spearheaded by the environmental coordinator. Key individuals have been identified and invited to meetings, however, the attendance has been low because employees are already time-strapped and sustainability is not seen as a priority. The lack of employee involvement is unlikely to change due to a series of reasons: the company commitment is unclear, it is not communicated from the top, it is not in employees job descriptions/performance objectives/overall strategic planning, actions and group meetings are therefore not a priority but more of a personal commitment. In addition, the lack of the program communication and a solid training program in sustainability theory and what it means to the company could result in uninformed employees, and therefore they would not contribute as much as they could in the co-creation experience (brainstorming solutions).

Focus group participants indicated that there is an opportunity for the company to implement sustainability in a manner that is similar to other business strategies such as the Food Safety Program. They believed that when the company has decided on a strategy, it is very good at implementing it. They believed that this should be initiated from the higher levels of the organisation; employees can then participate in the planning and implementation of staff goals and objectives.

4.3.2 Green building background and potential benefits for Intrawest

Green buildings are designed to conserve natural resources, save energy, create safe indoor air quality, and decrease the overall footprint of the building. Green buildings are becoming a desired style due to increasing prices of electricity, water scarcity in certain areas, and the measured improvement in workers’ productivity in such buildings, all of which add value. The impacts of developing local areas are significant. Inherently, buildings embody and use significant amounts of energy, water, and waste during construction and throughout its useful life. Conventionally designed developments have high resource intensity to operate the buildings and the accompanying systems. Comparable developments

using green designs often source sustainable materials and are designed to reduce the amount of resources required to operate the buildings, thereby reducing the overall footprint on the local area.

Constructing this infrastructure using ecological design would seem to create an inherent sustainable step; but is it strategic? The answer to this question relies on the underlying principles on which the company is operating. For green building initiatives to be strategic, a sustainability policy based on a principled definition of sustainability must be in place and used as a foundation to ground initiatives. To this point, the quantity of green technologies or use of “new” management tools does not determine if a business is strategic or not. Only when ecological design is combined with a principled definition of sustainability can these initiatives be strategic towards sustainability (see sample policy in Appendix D). As of now, the Placemaking division is not working from such a vision or model.

Executive management, full time, and seasonal employees are the heart and soul of Intrawest, Whistler Blackcomb, and all mountain operations; but without the natural resources that attract the guests and the infrastructure to provide them with necessary service, turning a profit would be impossible. Resort development and the sales of real estate generated a record 57% in profits in 2004 [14]. Real estate development and sales plays a vital role in creating a profitable company and shareholder value.

While analyzing the awareness of sustainability issues amongst employees and executives at Whistler Blackcomb and Intrawest, it became clear that the Leisure and Travel Group (Operations Division) and the Placemaking Group (Real Estate Division) are working off two different operational models.

While Whistler Blackcomb is an “early adopter” of The Natural Step framework and is working to become strategic in their operations, Intrawest’s Placemaking Division is lagging in their adoption of any type of sustainability strategy.

During discussions with the Intrawest executive managers, the importance of sustainable design, awareness towards such design, and the overall shift towards sustainable building style was discussed. They felt very

strongly that these would be important features in future projects, but is not a priority at this time because of the lack of consumer demand. They went on to say they will not stake a leadership position in an emerging building style and risk decreased revenues by changing their current model. They will let other developers assume the risk, then implement ecological designs when the market demands these products. It is easy to justify such a stance towards a departure from the status quo, however the potential savings from building and selling green buildings could significant financial, environmental, and social benefits for Intrawest.

Value Added. “Buildings in the United States consume more than 30% of the total energy use and 60% of all electricity consumed” [13]. Integrating green technologies into new construction has large financial incentives for developers and owners alike. Incorporating resource saving initiatives into long term vision of the Placemaking division could help prepare the organization for the challenges of operating a service oriented business in the future, while creating shareholder value.

Constructing and operating destination resorts have large impacts on the environment and local communities. Balancing development activities to ensure the integrity of the surrounding environment is paramount to preserving the features that draw many guests to such destinations in the first place. The ski industry is aware of the negative effects that encroachment and unchecked growth have on natural areas and consequently have taken many positive steps to recognize and reward sustainability adopters. Creating a destination resort that balances ecological integrity with the necessary infrastructure development that attracts and retains customers with the least environmental impact is smart business.

To accommodate the expansive infrastructure development needs of Placemaking and maintenance of the village centered resorts in Intrawest’s portfolio, a significant amount of natural resources (e.g. energy, water, materials) are needed. Green buildings address the challenges and offset the increasing costs of electric power, electric grid constraints due to poor condition of utility infrastructure, water shortages, waste disposal problems, government regulations over criteria pollutants, increased costs of global warming, and increasing expenses of maintaining and operating buildings [12]. Developing a strategy to mitigate and ultimately restore the local area could be a priority for future

development. Without healthy natural areas the strategic advantage of destination resorts is compromised, ultimately effecting shareholder value.

Green building, on the surface, is assumed to be an obvious move towards sustainability. But, analyzing the inherent un-sustainability of buildings and infrastructure in general the very question of the viability of resort destinations in a sustainable society must be asked. Will the local economy and resources enable such large-scale operations in their present state? Executive managers could address such questions now to enable time enough to create and implement a plan to address the changing climate to ensure a viable business for the future.

LEED has helped to bring ecological design initiatives into the mainstream. LEED is the recognized leader in certification of Sustainable design in North America [18]. There is a premium costs associated with ecologically designed buildings. This premium is known as the “green premium” among industry professionals. These costs are due to an increase in design time in the early stages of the process, as well as hard costs associated with the construction. The assumed estimates of the “green premium” within the development community run as high as 10% to 15% [12]. However, the most recent research estimates the actual costs for building green commercial buildings to be 2%-3% [12]. Lack of information is making the mainstream integration of ecologically designed buildings very difficult. Specific areas of concern include incomplete integration within and between projects, lack of life cycle analysis costs, and insufficient technical information [12].

The Capital E report identified an average commercial construction project incorporating green technologies in California to cost between \$150/ft² to \$250/ft², with an average green premium running at 3% (equal to \$3-5/ft²) [12]. The following quote is for a commercial building. The significance of this quote is to highlight the cost savings over a 20year period. It is very relevant to the study for the fact that the long-term cost savings will more than pay for the extra “up front” costs that a green residence requires. The metrics are further broken down in the figure below, but consider this.

“A minimal upfront investment of about two percent of construction costs typically yields life cycle savings of over ten times the initial investment.

For example, an initial investment of up to \$100,000 to incorporate green building features into a \$5 million project would result in a savings of at least \$1 million over the life of the building, assumed conservatively to be 20 years”[12].

Greg Kats identified specific costs and benefits in 20year Net Present Value (NPV) terms for green building. The following figure highlights the benefits by metric to highlights the results.

Summary of Findings (per ft2)	
Category	20 year NPV
Energy Value	\$5.79
Emissions Value	\$1.18
Water Value	\$0.51
Waste Value (construction only) – 1 year	\$0.03
Commissioning O&M Value	\$8.47
Productivity and Health Value (Certified and Silver)	\$36.89
Productivity and Health Value (Gold and Platinum)	\$55.33
Less Green Cost Premium	\$4.00
Total 20-year NPV (Certified and Silver)	\$48.87
Total 20-year NPV (Gold and Platinum)	\$67.31

Source: Capital E Analysis

Figure 4.1 Financial Benefits of Green Building

Adopting frameworks. Two of Intrawest’s resort operations, Whistler Blackcomb and Keystone, have adopted The Natural Step sustainability framework. Because an organization adopts The Natural Step framework, or any other framework for that matter, does not guarantee that the organization is “strategic” in their approach or even understand what sustainability means to their organization. Organizations are using the term “adopt” to simply mean they have looked at a framework, in this case, The Natural Step. Currently, there are no set criteria or quality control to ensure organizations that use the term “adopt” are actually

using the framework to drive business processes. This is a situation that should change in the future, but currently does not have a legal precedent to ensure protection and quality control.

Management systems enabling processes have defined the “strategic” approach to business management during the last 15 years. Executives want employees to make informed decisions and do what is best for their operations to ensure the competitiveness of the company. Understanding how to use a specific system to drive business operations and management is imperative for any company adopting a new management system. Strategic sustainability is no different.

Implementing sustainability to strategically align and advance company operations with sustainability requires engagement and “buy in” at all levels, specifically by executives. As noted in the results, Whistler Blackcomb has taken the first steps towards sustainability. The decision to align company vision and policy with sustainability will ultimately ensure the competitiveness in the ski industry as well as align operations to protect the local ecosystem and prepare for future pressure of constrained natural and human systems.

The Natural Step Framework is based on a principled definition of sustainability rooted in science. Applying this framework to Placemaking would create an overarching set of rules, that, when combined with any number of tools, LEED included, will move the company strategically towards sustainability. Approaching sustainability with a framework turns a minimizing and “less bad” scenario into a strategic approach to move the company towards a sustainable future. Moreover, a strategic sustainability agenda can help a company earn its license to operate in communities where they wish to develop, while earning competitive advantage.

Intrawest executives described LEED as, “the future standard industry-wide.” LEED has established itself as the industry standard although there are others initiatives on the market. LEED is an evolving standard that has had a number of mixed reviews due to the complexity of the process, nuanced credits, and cost of certification. Such problems can be expected from a new system, but the fact cannot be ignored that a new standard in building design and construction has begun. Many in the industry understand the benefits of LEED and believe this is the answer, but as a

stand-alone initiative it is still a minimizing or “less-bad” solution. Embedding such a tool in an overarching framework for strategic sustainability would create an approach to achieve truly sustainable designs.

The Intrawest executives termed The Natural Step Framework “unclear” and “fuzzy”. Such interpretation is understandable to any framework dealing with problem solving complex issues. However, the long-term benefits could mean the difference between a future business that is simply trying to survive, to one that is thriving in a warmer, resource-constrained world. Balancing short-term value with long-term viability is difficult for any executive to balance. However, one who does not examine such issues is leading any company towards the precipice of declining returns and decreasing value. A sustainability policy founded in a principled definition of sustainability could align company operations to strategically move the company towards sustainability [9].

Challenges and financial benefits to adopt green design. There is an inherent problem to apply green design into the residential market. As one executive stated it is a classic “chicken or egg scenario”. How can people demand what they do not know is available, and why would developers build green when uncertainty surrounds this market? The awareness issue is the largest problem facing the residential market and is a barrier facing Intrawest’s transition to build such designs. Intrawest will follow the market signals, but why will the market change when people are not aware that there are other options? How will people know these options are available if there is not a push for education?

The concerns of the management team are understandable. However, they can start on a limited scale and build a small percentage of “sample” residences that are green without opening the company to serious financial risk. Volvo is a great example of a company adapting to meet the changing needs of the market. Executive management saw the need for fuel-efficient vehicles and acknowledged the future constraints of the fuel industry. They developed a single line of fuel-efficient trucks that have become widely available in Europe. The executives understood the risks and balanced them by taking small steps towards fuel efficiency by introducing a single line of efficient vehicles. If these trucks did not sell, they could easily have absorbed the loss and moved the business in another direction. However, this was not the case, the trucks performed

exceedingly well. Currently, new lines of fuel-efficient vehicles are being introduced into the market and the designs are taking advantage of new technologies to achieve greater efficiencies. Understanding future constraints of resources, Volvo was able to gain a competitive advantage for a small risk. Such business sense should pay dividends in the long term if Volvo continues to assume a leadership position by understanding future constraints. Businesses including GE, Goldman Sachs, Alcoa, and Interface Carpets understand the financial benefits of planning for a world constrained by diminished natural resources and higher temperatures. These companies have staked leadership positions and are being rewarded with increased market share, profit, and shareholder value. Companies could learn a great deal from following such a model.

Cost savings from sustainable design is from reduced energy, water use, and waste; decreased operations and maintenance costs; and increased productivity and health of the occupants [12]. The community of Tuscon, Arizona surveyed 300 heads of households, they found that more than 80% of the people would be willing to pay a premium of \$5,000 to \$10,000 for energy efficient homes if cost were to be recovered through lower utility bills [13]. Intrawest has the opportunity in the coming years to explore the benefits of ecological design and take a page from Volvo's playbook. They have "approximately 19,800 units of future development under their control for future development" [14]. It can be safely assumed there are opportunities to explore ecological design in a small percentage of their residential units.

Much of the public is unaware of the potential cost savings, healthy atmosphere, and overall higher standards of living that are associated with ecologically designed residences. Many developers, Intrawest included, described how "the market is not demanding any green features and residences". Developers assume homebuyers will not pay the upfront cost for "a value based equation". However, this assumption does not take into account various socio-economic class structures nor does it reflect the purchase power and consciousness of the buyers of Intrawest's target customers.

Intrawest developments target the high-end consumers for their residences. The target customer for the residences at Intrawest villages is a discerning clientele with the purchasing power to afford high-end luxury residences. Intrawest relies on its reputation and local alpine

environment to sell their properties. Recently, the Aspen times reported that the Intrawest development at Snowmass released a list of preferred buyers who would be invited to purchase units in the development, “the names of somewhere between 500 to 800 people had been gathered and only a few would actually be invited to purchase a unit” [24]. Competition for the Intrawest properties is fierce, there is an average 73% presale of the proposed residential units before construction is completed [24].

The selectivity of the clientele speaks volumes regarding the exclusiveness and demand for these units. It is not difficult to envision a small percentage of the units Intrawest builds be based on green design. They could very well be overlooking a new market niche that could further differentiate themselves from their competitors and ensure a strong market position for the foreseeable future.

If Placemaking is not interested in taking such an approach, they could, at the very least, green any new or remodeled buildings used for day-to-day business operations. Addressing such “in house” efficiencies would net their operations energy, natural resource, and capital savings while serving as a leader in the local communities and ski industry in general. Such an approach could win them free advertising, accolades, awards, and the reputation as doing “right” by the environment and doing “well” economically.

Applying sustainability at Intrawest. Energy savings, water savings, increased worker productivity, healthy indoor environment, and a decreased environmental footprint are valuable and ultimately cost effective reasons to make such a shift. Greg Kats in his study, found a 20-year net present value (NPV) of productivity and health benefits at \$8.47 per square foot. These savings, combined with the energy savings of \$5.70 per square foot creates a scenario where “in house” infrastructure development should critically examine and seriously consider such buildings for their own operations [12]. The market might not be ready for ecologically designed residences, but the executives managing their own operations have an obligation to their shareholders to take a close look at ecological designs because the abovementioned NPV numbers alone more than cover the upfront costs.

Intrawest executives understand aligning with sustainability initiatives

and creating ecologically designed developments is the future of the business. They recognize the main drivers to sustainability as “research and knowledge”. Gaining this knowledge will be an important driver to help transition away from unsustainable business practices. They see the benefits of working with partners such as Aspen Ski Company to gain proficiency in regards to green design and sustainability. However, Intrawest has to want to change, simply partnering with progressive companies can help spur creativity and capitalize on the technical aspects, but there has to be “buy in” at the executive level and a true desire to shift operations if they want to be successful with sustainability. Without a philosophically different approach by the Intrawest executives consistent partnering with “progressive” and “knowledgeable” will do nothing to close the gap between interest and implementation.

Placemaking is a growth business operated to generate sales. It operates on a model that works and generates a profit. Intrawest was originally conceived as a property manager and developer and these business initiatives remain at the core business of the company today. The executives who manage Placemaking understand the business, growth, and how to ensure shareholder value. Their assumption is that any departure from business as usual will decrease profits and not benefit the bottom line. There are obvious benefits in the current reality to continue business as usual. Placemaking had one of their highest profits in 2004, generating 57% of the revenue for Intrawest. Why fix what is not broken? Industry leadership, market share, and shareholder value are current reasons not to make changes to their current success. But what about the future of the industries the development community relies upon for supplies? What about diminishing natural resources and higher prices for these resources? What about shareholder value and market leadership in the future? Important considerations while contemplating the adoption of sustainable business practices.

Overlapping areas of interest. There were three points of interest that overlapped the executives commented upon, including, (1) use of integrated design, (2) importance of technology, and (3) role of the contractors.

Executives agreed on the importance of the integrated design. Integrated design is the process in which members of the design and building team meet to discuss the project at the beginning and throughout the

construction process. The benefits of such an initiative identifies problems before they can become major issues, maximizes efficiency, and saves money [13]. Developers, architects, contractors, electricians, plumbers, landscape designers, etc are all engaged in the process, uniting independent groups as part of a larger team. Such cooperation maximizes communication and awareness so that each team understands its role in the process. The group is aware of all large decisions and is able to provide insights as to the impacts of these decisions on the specific teams. Such communication is vital during the early design stage and throughout the construction of the building.

Technology was another important factor agreed to contribute to sustainably designed developments. Intrawest executives stated that their technology had to be “tried and true” before they would consider incorporating certain systems into their designs. For example, they incorporated highly efficient HVAC air conditioning systems in their warm weather operations for decreased costs and increased efficiency. However, they would not consider any technology that was not 100% reliable and proven. The developers from Dockside green took another approach. They saw cutting edge technology as the means to achieve a great number of efficiencies for their development in Victoria, BC; using cogeneration plants to process waste to create methane which in turn powers a percentage of the buildings.

Finally, The Intrawest executives saw contractors as a barrier to the process and not ready to adapt to the challenges to create green buildings. They believe that the contractors are not ready to assume the challenges associated with ecologically designed buildings. A noteworthy conversation with the Dockside green executive said the opposite. They said, “developers must rely on the competence and relationship with the contractors. In the integrated design concept they are involved the entire process and are major assets to the project”. He continued, “building is building, ecologically designed or not, the structure must go up. They are probably more prepared then the developers. I believe LEED has really helped out on the construction front. Many are taking great pains to market themselves as green leaders; they want to be the first like we do. Overall, I do not believe contractors are as big a hurdle as market assumes they are.” This point is obviously a matter of perspective and one can assume that the executives at Intrawest work with a different set of builders than the executives of the Dockside Green development, lending

their perspective on experience. It can be hypothesized that the reality is somewhere in the middle.

4.4 Strategic steps towards sustainability

4.4.1 Characteristics of a sustainable resort

Best practices fall under two categories, (1) strategic actions towards sustainability and (2) “minimizing” or “less bad” solutions. The difference is extremely important. Destinations resorts with a sustainability policy and vision create truly actionable initiatives leading towards a future sustainable business.

Best practices are action level initiatives to help move a company in line with sustainability principles. Alone, these actions are not the solution to the problems facing the business; rather, they are a “step in the right direction”.

A company that embeds a sustainability policy and vision statement into their business strategy will use “best practice” solutions as strategic steps towards sustainability. The policy and vision will act as an umbrella under which the “best practices” and many other business decisions can be placed in context. These initiatives will be part of the company’s larger strategy to align operations towards sustainability ensuring each program and process is making progress towards the ultimate goal of a sustainable company.

A company that implements action based solutions without any type of vision statement or policy built into the core of their business will act like a sailboat at sea with no set destination, making adjustments to the changing conditions of the wind and sea, but never arriving at a set destination. However, a company that anchors all the initiatives with a policy and vision with a criterion on which to base decisions is being strategic. Following along with the above metaphor, even as winds and seas shift the boat will continue to take bearings towards a set destination and will ultimately arrive at the desired port.

Implementing sustainability at Whistler Blackcomb is a definitive and strategic decision that will ensure the business is operating from a vision of success, creating market leadership and competitive advantage along

the way. Companies that understand the changing business climate and who incorporate sustainability as a business goal invariably has an executive management team that is taking a proactive approach to create long term value for the company and shareholders. Identifying and implementing a strategic course of action regarding sustainability initiatives will be rewarded by identifying problems before they can impact the business while creating competitive advantage.

5 Conclusion

Our research assessed how an organization has used a scientifically principled definition of sustainability and integrated it into its business practices. Strengths weaknesses, challenges and opportunities were interpreted based on a framework for planning for success -- a five level model for planning in a complex system.

A major finding in the study suggests that the Whistler Blackcomb sustainability program's reverse shift in momentum and the parent company's hesitation to integrate green building design stems from the company's overall reluctance and or unwillingness to use a science-based definition of sustainability and integrate it into its business practices from the top levels of the company. Sustainability is not in the company's core business values, vision, goals and objectives and strategy, therefore its priority is not visible to those who would implement action on a daily basis. We therefore provide the following recommendations:

Stress the imperative of reaching sustainability by using the business case. Companies often choose to focus on sustainable development after a crisis has occurred. Sometimes, the damage is too late to repair the major set back. To avoid such an event, continuously understanding not only the financial benefits but the competitive advantages such as earning the license to operate, realizing new market opportunities, brand recognition and risk management is essential to persuading upper levels of management to consider a more strategic approach to sustainable development.

The vision in the management system determines the end goal of the organization, it is the starting point for both short and long-term planning and it should indicate the direction in which the organization is evolving. Creating the vision is all about answering the question, "what does success look like". A key characteristic of a successful organization is that there is a shared vision of how a company will look in the future once it has succeeded, as well as a shared strategy of how to get there. A vision with new clear goals will align the top level of management while demonstrating the company's commitment and priorities.

To ensure a sustainability program progresses, there should be consistent communication of strategy, visions, purpose and benefits. Sustainability is a process driven by a common vision that excites people and relies on their full participation. Effective communication engages people to interact with their organizations at a meaningful emotional level, and can lead individuals to understand how this effects their daily lives at work and at home.

Although beyond the scope of this project, the reluctance of the top level of an organization to understand a rigorous definition of sustainability and how it can integrate this definition into its operations should be investigated further. From our research, the following questions for future study arise:

- How many organizations use a scientific rigorous definition of sustainability?
- Of those organizations that use a rigorous definition, how many have integrated it from the top levels of the company?
- What are the main barriers preventing an organization from using a scientific definition and more strategic plan for sustainable development?
- Can a systems perspective and a deeper understanding of the current sustainability trends encourage organizations to plan more strategically for sustainability?
- What are the overall costs for a mainstream development company to design and build a green resort?
- How can such a project be a carbon neutral development?
- What will cause a shift in consumer demand towards green design?
- How can this demand be expedited?

Implementing sustainability in a strategic manner requires full organizational participation, where commitment from the highest level is of foremost importance. As companies move away from merely complying with regulations to progressing towards a new approach to business through updated goals, strategies and purposes, these organizations, markets and consumers will demand more from lagging operators. Such a shift in business will require a more strategic approach, with improved processes, measurement standards, and disclosure on performance. We believe that an organization's sustainability

performance is stronger when the company shares a common vision and strategy with a science based definition of sustainability, supported and initiated by the upper levels of the organization.

References

- [1] Hawken, P., Lovins, A., and L.H. Lovins. 1999. *Natural Capitalism: Creating the next industrial revolution*. Boston: Little, Brown.
- [2] Robèrt K-H, Daly H, Hawken P, and Holmberg J, 1997. A Compass for Sustainable Development. *International Journal of Sustainable Development and World Ecology*; 4: 79-92.
- [3] Ny, H, Broman G, MacDonald J P, Yamamoto R, and Robèrt K-H, 2005. Sustainability Constraints as System Boundaries – an Approach to Make Life Cycle Management Strategic, submitted to *Journal of Industrial Ecology*; (submitted for publication).
- [4] Holmberg J, Karlsson S, 1992. On Designing Socio-Ecological Indicators, In Svedin, U. and Hagerhall Aniansson, B. (eds), *Society and Environment: A Swedish Research Perspective*.
- [5] Holmberg J, Robert K-H, 2000. Backcasting – a framework for strategic planning. *International Journal of Sustainable Development and World Ecology*; 7(4):291 – 308.
- [6] Assadourian, et al, 2005. [State of the World](#)
- [7] Speck, E, Waldron, D, 2003. Draft Guidebook: Implementing the Comprehensive Sustainability Plan using The Natural Step Framework. *Resort Municipality of Whistler*.
- [8] Schendler, A, 2003. Applying the Principles of Industrial Ecology to the Guest Service Sector. *Journal of Industrial Ecology*; MIT Press 7: 127-137
- [9] Robèrt K-H, Basile, G, Broman, G, Byggeth, S, Cook, D, Haraldsson, H, 2004. Strategic Leadership Towards Sustainability. Karlskrona, Sweden, *Blekinge Institute of Technology*
- [10] Matsushita Sustainability Report, 2001 Accessed website on December 1, 2004 at

- [11] Klinkers L, and Nelissen, 1995. Environmental Campaigning: How to Promote Employee Participation in Environmental Policies. *Greener Management International*; 10: 96 – 109.
- [12] Greg Kats, 2003 “The Costs and Financial Benefits of Green Building: A report to California’s Green Building Task Force,” October 2003.
- [13] Browning, W, Cureton, M, Lovins, H, McManigal, L, Uncapher, J, 1998. *Green Development, Integrating Ecology and Real Estate*. New York: John Wiley & Sons, Inc
- [14] Intrawest Financial Report, 2004. Management Discussion and Analysis.
- [15] Sadgrove, 1994. *The Green Guide to Profitable Management*. Aldershot, UK; Gower
- [16] Morgan DL, 1998. *The Focus group Guidebook: Focus group Kit*. Vol 1.(London: Sage).
- [17] National Ski Area Association, Sustainable Slopes Charter and Environmental Database. Accessed website February 20, 2005. Available online at http://www.nsaa.org/nsaa/environment/the_greenroom/
- [18] United States Green Building Council, LEED description. Database Accessed February 20, 2005. Accessed website on February 19, 2005. Available online at: (<http://www.usgbc.org/DisplayPage.aspx?CMSPageID=222&>).
- [19] Abbey, et al, 2003. Global Profit, Global Justice, New Society Publishers, Canada
- [20] Durragh and Campbell, 2001 “*Why Corporate Initiatives Get Stuck*”, *Long Range Planning* 34. 1:33-52.
- [21] Collins JC, Poras J I, 1994. Built to Last. Successful Habits of Visionary Companies. Harper Collins.

- [22] Nattrass. B., and M. Altomore. 1998. The Natural Step for Business: Wealth Ecology and the Evolutionary Corporation. Canada: New Society Publishers.
- [22] Hunton-Clarke L, Wehrmeyer W, Clift R, McKeown P, King H, 2002. Employee Participation in Environmental Initiatives: Facilitating More Environmentally Conscious Decision-making in Innovation. *Greener Management International*; 40: 45-57.
- [23] Alexander, LD, 1985. Successfully Implementing Strategic Decisions. *Long Range Planning*; 18.3: 91-97.
- [24] Benson, S, 2005. Secret list of preferred buyers in Base Village to be culled today *The Aspen Times, April 14*
- [25] Aspen Ski Company Sustainability Report, 2004. Accessed on February 22, 2005. Available online at <http://www.aspensnowmass.com/environment/programs/default.cfm>
- [26] Aspen Ski Company Website. Accessed March 1, 2005. Available online at: <http://www.aspensnowmass.com/environment/?isSummer=1>
- [27] Robèrt K-H, Schmidt-Bleek,B, Aloisi de Larderel, J, Basile, G, Jansen, J.L, 2002. Strategic Sustainable Development-selection, design and synergies of applied tools. *Journal of Cleaner Production*; 197-204

Appendix

Appendix A: Executive Interview Questions

Whistler Blackcomb Interviews and Focus Groups

1. What does sustainability mean to you? What does it mean in the context of Whistler Blackcomb?
2. How important do you think it is for today's mountain resort destinations to engage in environmental sustainability? Why?
3. What is important to you when it comes to embedding sustainability at Whistler Blackcomb?
4. Do you feel you have a clear understanding of what environmental sustainability means at Whistler Blackcomb? Do you have a good sense of where the company is headed on this front?
5. Where would you like to see the company go in terms of sustainability? In your opinion, do you feel that sustainability should be a priority at Whistler Blackcomb? Why or why not?
6. What are some of your concerns when considering embedding a company wide sustainability plan?
7. What do you think are the top three primary drivers/motivation for Whistler Blackcomb to further implement sustainability into its business operations?
8. What do you feel are the top three barriers to embedding sustainability at Whistler Blackcomb?
9. How do you see sustainability playing a role in your division's operations? i.e. explain a bit based on their area of responsibility.
10. How could you incorporate sustainability to a greater degree in your operations?
11. Allana mentioned that the executive team participated in a sustainability-training course, with material based on the Natural Step. Did you participate in this? Did you participate in any others? If so which ones, how was the experience?
12. If you could be as specific as possible, when you think about your responsibilities what type of support would you need to embed sustainability in your divisions operations?

Employee focus group questions:

1. Can everyone write down the top 5 things you think of when you hear the word “sustainability”? Will share with rest of group.
2. What actions and values do you think make a company sustainable? Why?
3. Can anyone think of some examples of sustainability at Whistler Blackcomb?
4. Would you say you feel well informed of what sustainability means at the company? Why?
5. On a scale of 1 – 5 (1 being poor and 5 being excellent), how would you rate how Whistler Blackcomb is doing in sustainability?
6. How important do you think it is for Whistler Blackcomb to be environmentally and socially responsible?
7. Is it important to you that W/B is an environmentally and socially responsible organisation? Why?
8. Is sustainability part of your day-to-day job or do you see it as an “extra” add-on to your work –load? Why?
9. If it was part of your job, what part of sustainability do you think would most interest you? For example, a community involvement program or an environmental program.
10. How does W/B commitment to sustainability affect your ability to do your job?
11. Do you think W/B’s guests perceive them to be environmentally and socially responsible?
12. What would you like to see more of in terms of sustainability (i.e. programs, initiatives) at W/B? Why?
13. Do you think you should be doing more or less in your daily work in terms of sustainability?
14. Would you want to be more involved in improving Whistler Blackcomb’s sustainability initiatives? If so, how would it be easier for you to be more involved?

Appendix B: Real Estate Industry Interview Questions

Vice President Development, Intrawest

1. For an average development, how long does it take to fill the residential units/ properties once the development has been completed?
2. Can you give a ballpark number in terms of profit you hope to make on an average development?
3. How is the financing of the Developments structured? All by Intrawest, 3rd Party?
4. If you were to gauge your awareness as it relates to green building and sustainability in general, where would you rate it?
5. What do you believe the applicability of sustainability is to Intrawest and the Placemaking Division in its current practices?
6. What are some of the barriers that are keeping you from “going green”?
7. Do you see these barriers coming down in the near future?
8. Is sustainability important to the future of the Placemaking business?
9. If so, in what capacity?
10. Where do you think you can start or where have you begun implementing green solutions
11. What will be the drivers that make the Placemaking Division move towards green development?
12. Does any of your market research lead you to believe customer’s needs are changing?
13. Do you think your customers would pay a higher premium for a green residence?
14. Is a 2%-3% green premium cost prohibitive to you from your financial viewpoint to build green?
15. Do you think your customers could justify the increased cost if they knew they were better off in the long run?
16. Volvo, has begun integrating “green” designs into a few of their truck lines. They are offering a line of trucks that are “green” or fuel efficient, without bankrupting the company. Taking the baby steps necessary to start down a path of sustainability. Is this a current trend or could it be a future path for the Placemaking division?
17. Aspen is dedicated to Sustainability, Are they applying pressure in the Snowmass development to integrate “green” technologies?

18. Have they offered to pay the green premium to create a “greener” development, so Intrawest is not responsible for the increased costs, but built in a sustainable way regardless.
19. Can you talk a little about the technology that will be used in Aspen?

Vice President of Design, Intrawest

1. Is Sustainability a priority for the Placemaking Division?
2. How are your plans coming along for the ASC Village at Snowmass?
3. As far as the Olympics go, will you be developing any of Intrawest property to accommodate the Games?
4. Whistler has adopted TNS, Leisure and Travel Group is looking into it, have you any experience or desire to pursue/try TNS framework in the Placemaking Division?
5. I am curious as to your research into the price points and business case analysis you have done to date surrounding green building, and is it in your future?
6. There are a number of enabling technologies that help with energy efficiency and operations, have you looked into any of these and/or have you implemented any?

President & CEO, VanCity Enterprises

1. You are in an interesting position being on the finance side of things... Can you give a brief description in the role you play in the Dockside Green Development?
2. What are some of the main drivers for you as they relate to green building? E.g. social cause, financial gain, environmental benefits?
3. From a business perspective, can you describe some of the financial benefits from financing green developments?
4. How long do you think it will take to fill the residential units/commercial properties once the development has been completed?
5. Can you give a ballpark number in terms of profit you hope to make the Dockside Green Development?
6. Can you describe some of the hurdles you have faced/are facing with the Dockside Project?
7. Do you see the RE industry (Lenders/Owners/Brokers/Developers) changing drastically due to the way the business is evolving?
8. Has it taken some convincing of your colleagues or from others to finance these projects because it is a “new” way of building?

9. In your opinion, how long do you think it will take for green building to become mainstream and what are the barriers that are keeping it from doing so?
10. Do you see these barriers coming down in the near future?
- *I am trying to come to terms with the market being the driver of the change. I question this line of thought for two reasons:
11. I consistently hear that “until the market drives the need for green buildings, developers will continue of the unsustainable path”, what are your thoughts on this comment?
12. What are your thoughts on Residential Developers not building green, because of the green premium, “unproven technologies” and “long term payback”?
13. How do you get around the green premium scenario, when residential developers will not build green because they will turn around and sell the property, and never see the return?
14. Have you encountered/thought about/used any financial models that developers can use to build green, sell the property and recover their investments?
15. What types of financing are you using to build the Dockside Green Project?
16. How high are your green premiums?
17. Can you describe where those premiums occur, (e.g. front end design, technology, contractors)?
18. From a financing point of view can you describe some of the numbers you are working concerning costs, price, ROI, green premiums, expected presales, contractor fees, etc. as they relate to the Dockside Green Development or in general?
19. One of the Intrawest interviewees pointed out that “the construction industry was one of the biggest barriers to building green, can you comment on this statement and the reality concerning the contractors who will be building the Dockside Project?
20. Are they highly specialized?
21. Where do you think the market is today, relative to green buildings in both the residential and commercial sectors?
22. Where do you think the majority of the developers fall relative to knowledge/understanding/desire to implement ecological designs in Residential & Commercial developments?
23. What are you most frustrated with?
24. What are you most excited about?
25. What was the biggest win?

President & CEO, Raymond Property Company

1. Where would you rate your awareness in terms of green building and ecological design on a scale of 1-10?
2. Have you used any “green” design or technologies in past or current developments?
3. Are you looking into design features or “green” technologies for future projects?
4. Do you think ecological design will be important for future developments?
5. Have you noticed ecological design being implemented in other projects, besides the majors (Genzyme, Manulife Building) around Boston?
6. Have you done any research looking at the benefits of incorporating green technologies?
7. If yes, what do you see as some of the benefits/problems of incorporating ecological designs?
8. Would a 2-3% “green” premium be cost prohibitive to a “green” development?
9. Same question as #10, but what if this was the future strategy of the business and the profit loss was necessary understand the process?
10. Same question as #10, but what if all costs were recovered, because tenant/buyer would pay a premium due of the inherent long term saving?
11. Do you see the RE industry (Lenders/Owners/Brokers/Developers) changing their practices anytime soon?
12. What do you see as the main driver for this change?
13. In your opinion, how long do you think it will take for green building to become mainstream?
14. I consistently hear that “until the market drives the need for green buildings, developers will continue of the unsustainable path”, what are your thoughts on this comment (That is interesting to me, because how can the market drive the change if there few/any alternatives)?
15. What are your thoughts/suggestions concerning the green premium scenario, where residential developers do not use ecological design because they will not see the future cost savings?
16. So you think current buyers would pay a premium to live in an ecologically designed residence?

17. Does it come down to consumer awareness?
18. What if they would choose an ecological design over the other, but do not because they are not given the option?
19. Where do you think the market is today, relative to green buildings in both the residential and commercial sectors?

Institutional Developer: ING Real Estate Executive Manager

1. Where would you rate ING/Clarion's awareness and initiative to implement sustainable design in new properties?
2. What is the policy at ING/Clarion for using green design?
3. How relevant is it to the Boston Market?
4. Are you using "green" design or "green" technologies in past or current developments or properties you manage?
5. Are you looking into ecological design features or "green" technologies for future projects?
6. Do you think ecological design will be important for future developments?
7. What about for the future of ING/Clarion?
8. What do you see as some of the problems of incorporating ecological designs for a company like ING/Clarion?
9. Do you see the RE industry (Lenders/Owners/Brokers/Developers) changing their practices anytime soon?
10. What do you see as the main drivers for this change?
11. In your opinion, how long do you think it will take for green building to become mainstream?
12. The ING Headquarters is a gleaming example of "integrated design" success, is this type of planning implemented in your developments?
13. Would you consider ecological design to be market specific?
14. Where do you think the overall market is today, relative to green buildings in both the residential and commercial sectors?

Appendix C: Ski Resort Best Practices

Monitoring helps the resort track company wide initiatives that are leading towards established sustainability goals. There are a number of ways to do this and some of the most effective are:

Environmental Management System: Internal policy that drives operations to meet established environmental goals and helps to educate employees.

Annual Sustainability Report: Outlines sustainability initiatives in operations, where business is operating the system, and progress business is making in sustainability goals [25].

ISO 14001: Third Party Certification of Environmental Management Program. System evaluates environmental impacts of business operations and drives environmental practices from company policy not by a person or department. Creates a standard that is recognized worldwide.

On Mountain Operations are the required needs by the resort to ensure guests a pleasurable mountain experience. There are many initiatives resorts are implementing to be more environmentally friendly in regards to their on mountain activities, including:

Snowcats: Switch to bio-diesel to power Snowcats (slope grooming machine). Bio-diesel reduces toxic emissions, is free of sulfur, and cuts emissions of particulate matter [25].

Snowmobiles: Switch to 4 stroke snowmobiles, they get twice the gas mileage and emit 80 percent fewer pollutants than the 2 strokes [25].

Close the Oil Loop: 1.3 billion gallons of waste oil generated annually in US. Reused oil is not subject to price volatility [25].

Ecological Chairlift Development: Construction of lifts completed without bulldozers or mechanized ground equipment. Crews hauled all supplies on foot using separate paths to avoid creating trails and stopping construction during critical mating and nesting periods protect wildlife. Heavy items such as poles and concrete delivered by helicopter. During

April and early May, when snow still covered the area, backhoes were taken across the snow to dig the 6-foot holes for the tower footings [25]

Dirt Half Pipe: Cuts water use by an average of 4 million gallons per year. This creates a \$15,000 savings in electricity cost, meaning less pollution [25]

Maps: Placed on all ski bars to reduce necessity for paper maps. Saving paper and costs [25].

Energy procurement and generating initiatives are being adopted industry wide. These best practices attempt to diversify the energy supply to reduce dependency on fossil fuels.

Buy Green Power from Local Utility: Develop voluntary carbon reduction strategy to slow the growth of CO₂ emissions created by generating electricity. Some resorts are creating specific dates for reduction targets. Resorts pay a premium for “green” power, but some are willing to pay the extra amount to offset carbon emissions [25].

Micro-Hydro Power: Aspen Ski Co. has implemented a renewable energy system attached to its snowmaking system. Pressurized water runs through an array of pipes around the mountain for their snowmaking operations. They have attached the turbine to the system to generate electricity when the snowmaking system is in operation. They are harnessing a source of electricity that is not utilized in many resort operations. The system creates 250,000kwh annually enough to power 40 homes and prevents the emission of half a million pounds of carbon dioxide [25].

Indoor Lighting Retrofit: Install energy efficient lights-bulbs throughout all building in the resort. Aspen did so and reduced their Carbon Dioxide emissions by 2,106,842lbs/yr and in the process saved \$80,044 in electricity charges [25].

Planning, Design, & Construction incorporates “Green” building and ecological design into infrastructure development and building remodels in the resort community. The ski industry recognizes these designs as a way to minimize impacts on pristine alpine environments. Many of the “green” buildings are certified through the Leadership in Energy and

Environmental Design (LEED) rating system [12]. This is becoming standard in the ski industry and many in the resort communities are turning to this system for certification purposes (http://www.nsa.org/nsaa/environment/sustainable_slopes/).

LEED Certified Buildings Encourage: Disturbed land for site selection, water efficiency, energy efficiency, the use of ecologically friendly materials and products, safe indoor air quality, and specifications relating to the design process and technological advancements in the building [18].

Snowmass Base Village: Built on a former parking lot, the new base village at Snowmass includes four LEED Certified Buildings are scheduled to be built in the coming year. These buildings have a 30% energy reduction above code and incorporate a number of advanced technologies including: condensing boilers, advanced electronic controls, commissioning for the whole village, and waste heat recapture [26].

Integrated Heat Pumps Snowmass Golf Club: Installed a water-source heat pump, an environmentally friendly heating and cooling system circulates water from a nearby pond to heat and cool the building. The pond water remains a constant 58 degrees F. year round. In winter tap the relative heat of the water to warm interior spaces and cool the building in summer. These systems are up to five times more efficient than standard heating and cooling systems and beat local energy codes by more than 60% [26].

Recycle Construction/Destruction Debris: Aspen Ski Co. successfully recycled or reused a number of materials in the construction and deconstruction process when they built the Snowmass Golf Club House. Wood was mulched, building materials were recycled, rock and fill were reused, steel and wood beams were reused, and salvageable materials were removed and sold. In total only 12 percent of the crushed materials. If all 6,810 cubic yards had been taken, with no recycling, it would have cost nearly \$94,000 [26].

Building Operation and Maintenance: Aspen Ski Company sent three building operators to a Building Operator Certification Course. This teaching is designed to teach the operators how to operate the buildings more efficiently [26].

Water resources incorporate all facets of water management at the resorts. Snowmaking, resort facilities, waste management, and landscaping. Water management is a very important aspect of ski slope management due to the vast amounts of water that is needed to cover the slopes in man-made snow annually. This will continue to be an important issue in the coming years, especially in areas that are affected by climate change.

Snowmaking Compressors: New Snowmaking compressors have an estimated efficiency of 30%-40% better than older models, creating a savings of \$24,000 annually. Increased efficiencies means 1.3 million lbs of Carbon Dioxide is saved annually [17].

Wastewater Treatment Plant:

Grand Targhee resort operates a plant without chemicals and discharges water that exceeds potable water standards. The plant is designed so that additional processing and filters can be added to provide wastewater treatment for the resort through its build-out. It has an operational capacity of 180,000 gallons. The plant is fully automated and run by computers. The system is designed to deposit bacteria in filters in the first phase of the treatment process. The water then passes through a microbe basin that further breaks down the bacteria that was not caught in the first phase. The final processing step is ultraviolet light kills any organisms that may have escaped through a filter. The water, which meets drinking water quality standards, is discharged out of the plant into a creek channel below the mountain. The plant does produce a small amount of solid waste, but the system is so efficient that the solids from 1 year of continual operation can be removed with a half-ton pickup [17].

Waste management is an essential part for any ski resort operator. In the past the first priority was to remove the garbage as efficiently as possible away from the guests. Now, recycling, sorting, and composting are becoming buzzwords and standard practice throughout the industry. Many operators are realizing the financial benefits and positive public perception by implementing recycling and composting programs.

Hazardous waste reduction is a priority for Aspen Ski Co. They have set a target goal for zero hazardous waste. In 2003-2004 they generated 220

gallons of hazardous waste, mostly from paint thinner and paints. They aim to further reduce this amount in the near future [25].

The composting initiative at Keystone has created some impressive results. They introduced an on-site composting program to reduce waste by expanding diversion into the organics stream (reducing disposal costs), improve the environmental operations of the Ranch Restaurant, and assess the feasibility of high-altitude, cold weather composting in a resort atmosphere. They accomplished this objective by using "The Earth Tub". This consists of 4 main parts: The 3 cubic yard insulated composting vessel, the 2-hp motor-driven mixing auger, the forced aeration system which supplies sufficient air to maintain an aerobic environment in the vessel, and the bio-filter, an absorbent bed of porous organic material which helps break down any odorous compounds. Carbon source came from High Country Furniture in Breckenridge, which enough sawdust and wood shavings generated by their operations ensure a healthy compost. Additionally, manure from the Keystone Stables and coffee grounds from Starbucks provided excellent ingredients for the mixture. Temperatures, though slow to increase, have remained between 130-140 degrees F, despite the cold temperatures. Keystone is closing the waste "loop" because waste that would have ended up in the trash can now be used for site beautification and soil amendment [17].

Recycling initiative at Keystone has created a comprehensive recycling program that provides service to all employees and guests at all of their owned and/or managed operations. In 1999, new collection truck was purchased, and during the 2001-2002 season, diverted 1,300 tons of solid waste in the form of recycling was diverted (2.2 pounds per skier day). Keystone achieved a 24.77% diversion rate for the year (2003) [17].

Procurement programs enable the departments in charge of the food and materials to find suppliers that are in line with company philosophy. Many resort operators are beginning to recognize the importance of the supply lines and the upstream effects they have on the people and places from where goods are purchased. Procurement programs enable the purchasing departments to find alternative supplies in an environmentally and socially responsible manner.

Restaurants that are part of the Aspen Ski Company have taken a number of steps to protect endangered fish species in the world and make it a

point to but locally produced organic foods. Aspen Ski Company implemented a company-wide boycott banning Swordfish and Chilean Sea Bass from being served in their restaurants. They said they will continue the boycott until a satisfactory federal recovery plan has been implemented [17].

Working ranches in close proximity to resort operations supply protection from sprawl and development, leaving open space. These local farms supply locally produced, organic beef directly to the resorts for the guests consumption. The resort, in this case Aspen Ski Company, buy beef direct from the farmers eliminating long trucking needs. Overall, the feedback from the restaurant operators is the guests prefer the natural beef [26].

Green procurement program at Keystone aims to “green” the entire supply chain from which they purchase goods and services. In support of this policy, they replaced 10 residential decks, a spa deck, and 2 restaurant/bar decks with zero-maintenance composite lumber made from 100% waste wood and plastic milk jugs, purchased another 22 on mountain recycling collection centers made from 100% post-consumer content material bringing our total to 31. Keystone switched the purchasing of 10,000+ cases of paper products to all 30% or higher post-consumer content (up from 20% in previous years). Restaurants switched to bleach-free napkins and installed condiment dispensers, eliminating disposable packet waste and saving over \$5,000. Wooden pallets, toner cartridges, and polystyrene packing peanuts are collected for composting, recycling, and re-use, respectively, at our central warehouse. The Keystone Lodge finished a 2-year renovation that upgraded all 153 rooms with 1.6 gallon toilets (from 3.5g), 2.5 gallon/minute bathroom faucets (from 5g/m), and 2.5 gallon/minute showerheads (from 7g/m). Resulting water savings are estimated at 117 gallons of water per room day, or 4 million gallons per year [17].

Habitat protection programs have been adopted by many resort destinations. The local ecosystems are imperative to attract the guests to the resorts, so ensuring the well-being of the local habitat is not only the right thing to do, it ensures the future viability of the business.

Natural resource management addresses the long-term management direction of the lands the ski resorts base their operations upon. Managing these important resources ensures the sustainability of the ecosystems and

vegetative diversity. This bio-diversity ensures forage for wildlife and ample opportunities for non-motorized recreation [26].

Tree for a tree program at Aspen states that any tree with a diameter of more than six inches cut down during the course of summer operations will be replaced with a native seedling [26].

Wildlife Monitoring at Snowmass Mountain, part of the Aspen Ski Company, established a program where the ski patrol would sight and record wildlife on the mountain. They recorded the information on boards with grease pencils and pictures were posted for identification of the animals. Once a month biologist would record the results and track the wildlife on the mountain. Tracking the wildlife creates a baseline and a reference mark if there are fluctuations in animal populations [25].□

Wetlands and riparian areas at Keystone Resort, worked with the U.S. Army Corps of Engineers, to create more wetlands than it has disrupted, “The Frost Fire Wetlands at Keystone has become an example for other projects in the county for reducing phosphate loads in non-point source runoff, and for integrated environmental education. In fact, this 2-acre project has removed a total of more than 85 percent of phosphates for routine flow, which is above what was expected. The project began to address the removal of phosphates, oils, greases, and metals from runoff coming off of skier parking lots and the River Run Village. The Wetland Education Program has involved the local 5th graders at Summit Cove Elementary School. These students have been responsible for creating all text and illustrations concerning the wetlands. In addition, the students have compiled educational information presented at the site. The signs point out the importance of wetlands in maintaining plant life, water quality, erosion and wildlife control, and as an accessible area for community environmental education” [17].

Education is becoming an extension of the experience when visiting the ski resorts. Many of the operators understand the guests’ connection with the environment is the strongest while they are visiting the resort. It is a valuable opportunity to reach out to the guests and help them understand the connections and importance to the natural world.

Environmental education and community outreach is an important component to the Aspen experience. They have created on-mountain

educational programs for guests at all of their resorts. Aspen Ski Company has teamed with the Aspen Center for Environmental Studies (ACES) to help them with in depth analysis to questions the guests might have. They have set up nature tours and interactive programs to engage guests of the local environment year round. [17].

Employee awareness of environmental and sustainability issues is critical, specifically if a sustainability policy is in place within the organization. The employees are interacting with the guests and carrying out all operational initiatives to keep the company generating revenue and moving towards company goals.

Internal marketing at Aspen Ski Company is cohesive company policy outlining the sustainability initiatives Aspen is focusing on. The marketing begins with the environmental coordinator and necessary information is released throughout company departments. They ensure the Environmental Policy is posted around resort for all employees to see and understand. The environmental coordinator takes great pains to ensure all employees are aware and understand the major environmental and sustainability initiatives they are working towards [26].

Intra-company environmental newsletters are used at Aspen. The information intends to heighten environmental consciousness among employees. The Green Letter highlights employees who are making a difference, provides updates on current environmental issues. It's short, to the point, and designed to be posted at coffee makers and water coolers. This letter gives busy employees thirty-second updates on the latest initiatives [26].

**Appendix D: Leisure & Travel Group Sample
Sustainability Policy**

Intrawest
Leisure and Travel Group Corporate Sustainability
Policy

DRAFT

Prepared for Intrawest Corporation
by Carmen Turner, with contributions from:
Dr. Karl-Henrik Robèrt, David Waldron, Josephine
Brennan, Ronan Chester, Archie Kasnet, Kristoffer
Lundholm and Jennifer Woofter

Preamble

“Begin with the end in mind. Shared understanding of where we are going is essential for our organization to be collectively energized and realize our full potential”

2004/05 WhistlerBlackcomb Employee Handbook

Intrawest’s resorts exist in some of the most outstanding natural settings in the world. The Leisure and Travel Group is responsible for the operation and development for all recreational facilities at the resorts. We lead the industry in delivering life-changing, soul-satisfying experiences to our guests.

We recognize that our operations exist within a society that is on an ecologically unsustainable trend with systematic declines in natural resource availability, ecosystem quality and social cohesion. Our operations have a significant impact on the environment, the communities in which we operate and the larger world. Our operations depend on our pristine lakes, alpine mountain peaks, clean creeks, sandy beaches and our dynamic and resilient, local communities. However, as part of this society, we are affected by and contribute to this unsustainability. We are aware that the trends of global unsustainability will eventually affect our bottom line. Therefore, we believe it is important to develop proactive strategies to respond to these issues. As a visionary company, we intend to be part of the solution.

The Leisure and Travel Group is currently at the beginning stages of moving towards sustainability. Like any other business goal, sustainability requires a strategic plan beginning with the end in mind. Having a clear goal and definition of sustainability is crucial for us to attain success and stakeholder confidence. As North America’s leader in destination resorts and adventure travel, we recognize that scientifically relevant principles are pre-conditions for a future sustainable society (Appendix 1). Our new destination is to move our business, step by step, towards operating within that sustainable society and we are determined to succeed.

We are not only working towards a future where we protect and preserve our beautiful playgrounds, but a future where we will enhance and regenerate those pristine landscapes for future generations. This means operating in “the smart zone”, an area where we can move our operations

toward social and environmental sustainability while simultaneously improving our business' profitability. In other words, we may not be able to do everything we would like to do right away but we are committed to taking systematic steps in alignment with this policy. This policy will help our journey towards sustainability by:

1. Describing success, features by which we can recognize our destination
2. Pointing out the direction of travel towards our destination

The Leisure and Travel Group Sustainability Policy

Purpose

1. The purpose of The Intrawest Leisure and Travel Group Sustainability Policy is four fold:
2. To align The Leisure and Travel Group's Sustainability policy with Intrawest's Mission
3. To define a clear vision of success that respects a principled definition of sustainability
4. To outline strategic principles and guidelines for The Leisure and Travel Group's operations that will lead the company to success
5. To acknowledge the importance of accountability as The Leisure and Travel Group moves towards sustainability

Intrawest's Mission

Intrawest is committed to deliver memorable, unique, ultimately body-and-soul satisfying experiences... again and again.

You will find our resorts by great mountains, crystalline beaches, championship golf courses, pristine lakes, and unforgettable attractions throughout North America and now Europe. These are places where extraordinary things happen to individuals from sun up to sun down. Places not only for adventure and discovery, but also places that inspire the soul. Places for families to grow together. Places with a level of service and a standard of hospitality that can be best measured by the frequency of visiting smiles.

Our mission aligns with our commitment to move strategically towards sustainability.

Sustainability Vision

To be the first company in our industry to not only protect and preserve our beautiful playgrounds, but to enhance, restore and regenerate the ecosystems and communities we touch and where future generations can rejuvenate their mind, body and spirit. Our sustainability vision is where the environment, society and profitability build the foundation to create places where amazing experiences happen, and where our stakeholders are inspired to begin their own journey towards sustainability.

{Can add Intrawest Core Values here}

Stakeholders

Stakeholders are perceived to be any persons affected by the Leisure and Travel Groups' operations. Community members, employees, shareholders, guests, aboriginal peoples, business operators, contractors and suppliers are examples of stakeholders who we recognize to be important. We understand the need for maintaining respect and good relations with all stakeholders in order to meet our social responsibilities and build sustainable company value. Recognizing that our resorts may have distinct impacts on aboriginal peoples and culture, we require exceptionally sensitive planning for success.

The Leisure and Travel Group affirms to all stakeholders that sustainability is a key goal for its success and will continually work towards seeing this vision of success achieved.

Strategic Principles and Guidelines

The strategic principles and guidelines will guide our efforts as we follow our mission and pursuit of sustainability (as referred to in our vision). We are committed to a vision of organisational success where the sustainability principles are realized (Appendix 1). The following strategic principles and guidelines are generic, comprehensive and can be used as a planning framework to guide all operational activities.

Because we recognize that sustainable development is an essential part of our business, Intrawest Travel and Leisure Group will develop policies, plans and practices that:

ENVIRONMENTAL SUSTAINABILITY

1. Substitute certain minerals that are scarce in nature with others that are more abundant, using all mined materials efficiently, and systematically reducing dependence on fossil fuels through renewable energy options and energy efficiency programs.
2. Substitute certain persistent and unnatural compounds with ones that are normally abundant or break down more easily in nature, and using all substances produced by society efficiently.
3. Systematically reduce our over-harvesting of natural environments, foreign introductions and other forms of modification by operating in and drawing resources only from well-managed eco-systems.

SOCIAL SUSTAINABILITY

4. Promote and support good health for all our stakeholders.
5. Encourage positive relationships, foster open dialogue and active, positive participation and support for improved quality of life within our organization and throughout the communities in which we operate.
6. Provide access to innovation, skills development and satisfying opportunities for work, personal creativity, and recreation.
7. Promote healthy, well-integrated communities (where we operate) through the support of strategies that encourage a diverse, resilient and dynamic workforce of residents.
8. Contribute to a society where everyone has access to safe and supportive living and working environments.

MANAGEMENT AND FINANCE

9. Implement management and governance systems that are fair, transparent, and accountable.
10. Use financial data to accurately represent the value of our economic, social, and environmental impact.

ACCOUNTABILITY

11. We acknowledge that we are at the beginning of our journey towards sustainability and we will operate with the vision of becoming an industry leader within 5 years. With the help of our stakeholders, we commit to this goal through accountability we will:

- Establish targets and benchmarking of best practices

- Monitor and assess the environmental and social impacts of our operations
- Conduct a regular review of this policy
- Commit to an independent review process and create a public report by 2006

Appendix 1

Our company principles for sustainability, based on scientifically relevant “socio-ecological principles for sustainability”, known in the business community as The Natural Step’s “System Conditions”, are:

In a sustainable society, we will eliminate our contribution to systematic increases in:

1. Concentrations from the earth’s crust
2. Concentrations of substances produced by society
3. Degradation by physical means

And in that society our contribution to...

4. Conditions that systematically undermine people’s capacity to meet their needs.

