

A GROWTH STRATEGY FOR A NICHE-MARKET SOFTWARE FIRM

by

Brian Grossman
Bachelor of Arts, University of British Columbia, 1994

PROJECT SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF BUSINESS ADMINISTRATION

In the
Faculty
of
Business Administration

Management of Technology Program

© Brian Grossman 2007

SIMON FRASER UNIVERSITY



2007

All rights reserved. This work may not be reproduced in whole or in part,
by photocopy or other means, without permission of the author.

APPROVAL

Name: Brian Grossman
Degree: Masters of Business Administration
Title of Project: A Growth Strategy for a Niche-market Software Firm

Supervisory Committee:

Dr. Mark Wexler
Professor
Faculty of Business Administration

Dr. Sudheer Gupta
Assistant Professor
Faculty of Business Administration

Date Approved:

August 28, 2007



SIMON FRASER UNIVERSITY
LIBRARY

Declaration of Partial Copyright Licence

The author, whose copyright is declared on the title page of this work, has granted to Simon Fraser University the right to lend this thesis, project or extended essay to users of the Simon Fraser University Library, and to make partial or single copies only for such users or in response to a request from the library of any other university, or other educational institution, on its own behalf or for one of its users.

The author has further granted permission to Simon Fraser University to keep or make a digital copy for use in its circulating collection (currently available to the public at the "Institutional Repository" link of the SFU Library website <www.lib.sfu.ca> at: <<http://ir.lib.sfu.ca/handle/1892/112>>) and, without changing the content, to translate the thesis/project or extended essays, if technically possible, to any medium or format for the purpose of preservation of the digital work.

The author has further agreed that permission for multiple copying of this work for scholarly purposes may be granted by either the author or the Dean of Graduate Studies.

It is understood that copying or publication of this work for financial gain shall not be allowed without the author's written permission.

Permission for public performance, or limited permission for private scholarly use, of any multimedia materials forming part of this work, may have been granted by the author. This information may be found on the separately catalogued multimedia material and in the signed Partial Copyright Licence.

While licensing SFU to permit the above uses, the author retains copyright in the thesis, project or extended essays, including the right to change the work for subsequent purposes, including editing and publishing the work in whole or in part, and licensing other parties, as the author may desire.

The original Partial Copyright Licence attesting to these terms, and signed by this author, may be found in the original bound copy of this work, retained in the Simon Fraser University Archive.

Simon Fraser University Library
Burnaby, BC, Canada



SIMON FRASER UNIVERSITY
THINKING OF THE WORLD

STATEMENT OF ETHICS APPROVAL

The author, whose name appears on the title page of this work, has obtained, for the research described in this work, either:

(a) Human research ethics approval from the Simon Fraser University Office of Research Ethics,

or

(b) Advance approval of the animal care protocol from the University Animal Care Committee of Simon Fraser University;

or has conducted the research

(c) as a co-investigator, in a research project approved in advance,

or

(d) as a member of a course approved in advance for minimal risk human research, by the Office of Research Ethics.

A copy of the approval letter has been filed at the Theses Office of the University Library at the time of submission of this thesis or project.

The original application for approval and letter of approval are filed with the relevant offices. Inquiries may be directed to those authorities.

Bennett Library
Simon Fraser University
Burnaby, BC, Canada

ABSTRACT

A relatively new software and professional services company is looking to expand its business in a niche market. The software product, used for articulating and managing a sustainability vision, is targeted to local governments in the US.

The field of sustainability is new and uncertain. In 2007, the company's competitive advantage rests in the use of its knowledge of sustainability to deliver rapid implementation of its software product. Professional consulting services are integral to the product but also limit the company's ability to scale its operations to achieve growth.

Recommendations are proposed to help this young company achieve growth in the US market. Particular focus is placed on the role of alliances in enabling the company to gain a foothold in the emerging market for sustainability reporting.

ACKNOWLEDGEMENTS

I would like to thank Dr. Mark Wexler for his guidance throughout this project. I am grateful for the thoughtful feedback and encouragement he shared with me along the way. Thank you as well to Dr. Sudheer Gupta for his helpful comments and suggestions in the final stages of my project.

I also extend my thanks to the management team at Visible Strategies. In particular, I wish to acknowledge Dr. Boyd Cohen. It was Boyd's entrepreneurial spirit and passion for sustainability led me down this path.

Special thanks to my wife, Andrea, and to my family for their unwavering support over the past year.

TABLE OF CONTENTS

Approval	ii
Abstract	iii
Acknowledgements	iv
Table of Contents	v
List of Figures	vii
1 Introduction	1
1.1 Project Objectives.....	2
1.2 Company Overview.....	3
1.2.1 Visible Strategies	4
1.2.2 Product	4
1.2.3 Professional Services and Software Implementation	5
1.2.4 Technology.....	6
1.2.5 Target Markets	7
1.2.6 Company History	8
1.2.7 Revenue Model	9
1.2.8 Human Resources.....	10
1.2.9 Brand Recognition and Marketing.....	12
1.3 Strategic Issues.....	13
2 The Sustainability Reporting Industry	16
2.1 Historical Context.....	16
2.1.1 Triple Bottom Line Reporting.....	17
2.2 Emergence of Sustainability Reporting.....	18
2.3 Sustainability Reporting in Corporations	18
2.4 Sustainability Reporting in Governments	19
2.4.1 Types of Reporting.....	20
2.4.2 Market Demand.....	21
2.5 Who is Selling Sustainability Reporting?.....	21
2.5.1 Industry Segmentation	22
2.5.2 Barriers to Entry.....	24
2.6 Trends in Sustainability Reporting.....	25
2.6.1 Role of the Social Enterprise.....	26
2.7 Trends in Technology.....	26
2.7.1 Software as a Service (SaaS).....	27
2.8 Implications for Niche Players	29
3 Opportunities for Niche players	30
3.1 Competing as a Niche Player	30
3.1.1 Selling to Government Agencies.....	34
3.2 Co-operative Strategies	35
3.3 Niche Player Alliances	36

3.4	Critical Success Factors in Alliance Formation	37
3.4.1	Firm-specific differences	37
3.4.2	Active management of alliances	38
3.4.3	Mutual trust between alliance partners.....	38
3.4.4	Clarity of objectives	39
3.4.5	Learning and knowledge management.....	39
3.4.6	Identify and focus on key strategic objectives	40
3.4.7	Know the specific knowledge of partners	40
3.4.8	Alliance partners have a stake in each others' success	40
4	Sustainability Reporting Industry characteristics.....	42
4.1	Sustainability Reporting: A PESTEL Analysis.....	42
4.1.1	Political Future.....	44
4.1.2	Economic Future	46
4.1.3	Socio-cultural Future.....	47
4.1.4	Technological Future	49
4.1.5	Environmental Future.....	50
4.1.6	Legal Future	52
5	Current Company Position	56
5.1	SWOT Analysis.....	56
5.2	Strengths.....	57
5.3	Weaknesses	59
5.4	Opportunities.....	61
5.5	Threats.....	63
5.6	Summary of Analysis	65
6	Recommendations and Conclusion	67
6.1	Recommendations	69
6.2	Conclusion.....	77
	Reference List	78

LIST OF FIGURES

Figure 1.1 Creating a Sustainability Vision Using See-it.....	5
Figure 1.2 Visible Strategies Products	10
Figure 1.3 Organisational Structure	11
Figure 2.1 Sustainability Software and Consulting: An Industry Segmentation Matrix.....	24
Figure 4.1 Key Dimensions of the PESTEL Model	44
Figure 4.2 Visible Strategies' Long Term Prospects Within the PESTEL Framework.....	54
Figure 5.1 Summary of SWOT Analysis	56

1 INTRODUCTION

The development of a new generation of internet-based technologies, collectively known as Web 2.0, has created opportunities for small software firms. Many of these firms are using the new technologies to develop specialized products that cater to niche markets.

One such firm, Visible Strategies, is applying its knowledge of and passion for sustainability to provide software and consulting services for local governments and other organisations.

Sustainability is a relatively new concept, and no single definition has emerged that applies to all situations. For corporations, sustainability may mean ensuring the future supply of critical resources. For government, sustainability often means minimizing the long term environmental, economic and social impact of human activities. A frequently cited definition of sustainability is development that 'meets the needs of the present without compromising the ability of future generations to meet their own needs' (Brundtland, 1987).

Governments and community organisations that embrace the concept of sustainability often lack the knowledge and resources to develop their own sustainability vision and strategy. They may not have reporting mechanisms needed to communicate their vision, or to encourage stakeholder involvement in the process. In addition, these organizations are often reluctant to create initiatives within their bureaucratic structure. Companies such as Visible Strategies provide the tools and knowledge that these organizations

require to address sustainability. They also provide the flexibility to deliver these services quickly, efficiently and in a cost effective manner.

1.1 Project Objectives

The purpose of this project is to outline strategic options for Visible Strategies to achieve growth in the United States (U.S.) market. At the company's request, a focus will be placed on the discussion of alliances to help the company meet its growth objectives.

The sustainability reporting industry is in its early stages of growth. As such, it is not easy to predict the market's evolution and long term prospects. In **chapter 1**, the current position of Visible Strategies will be examined. The company's products, history and vision will be contextualized within the broader concept of sustainability.

Chapter 2 focuses on the history, evolution and application of the concept of sustainability. This is followed by an overview of the adoption of sustainability reporting by corporations and government. As well an examination of how the market has evolved for software and consulting services that support sustainability initiatives is presented.

Companies targeting niche markets must understand what it is that gives them a competitive advantage. They must then allocate scarce resources wisely to ensure that their competitive advantage can be maintained over time. The discussion in **chapter 3** concentrates on how niche competitors, like Visible Strategies, not only fit into the entrepreneurial system but as well how they compete.

The discussion of niche players and alliances is followed in **chapter 4** by a PESTEL analysis of the political, economic, social, technological, environmental and legal factors

affecting companies that sell the concept of sustainability. The purpose of this macro-level view is to understand the current environment and predict the evolution of sustainability reporting over time. It is also intended to give an overview of Visible Strategies' current position and predict the company's likelihood for success.

An analysis of Visible Strategies current position will be presented in **Chapter 5**. This will take the form of a formal SWOT analysis to discuss the internal strengths, weaknesses and external opportunities and threats. The current position of Visible Strategies sets the stage for the recommendations to Visible Strategies.

Chapter 6 highlights specific recommendations that the company should consider in its growth strategy. The objective of this analysis is to evaluate options and recommend a realistic and sustainable medium-term (3-5 years) strategy for growth in the US market, with a particular focus on how to structure alliances. Like many small companies, Visible Strategies is facing financial and other resource constraints that require the setting of goals and priorities. The recommendations hone in on initiatives that are intended to bring focus to the company's strategy.

1.2 Company Overview

The purpose of this section is to provide an overview of Visible Strategies. An examination of the company's products and technology is followed by a discussion of the company's primary markets, history, human resources and revenue model.

1.2.1 Visible Strategies

Visible Strategies is a small Vancouver-based professional consulting and software development company. The company was established in 2002 as Real-Living Solutions and re-named Visible Strategies in June 2007.

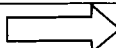
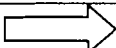
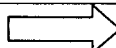
1.2.2 Product

Visible Strategies has developed an interactive internet-based, hosted software tool called “see-it”. See-it is used in the formation, management and communication of an organisation’s sustainability vision and strategy. The software provides a framework for measuring progress in attaining specific goals outlined in the organization’s sustainability vision. Sustainability targets are worked out. Users of see it are able to access relevant information tied to each performance target.

See-it allows clients to articulate a holistic sustainability vision that is customized for their community or organisation. A holistic sustainability vision incorporates long term social, economic and environmental goals. Strategies to achieve each goal are then identified. These are translated into specific actions that must be taken to meet goals. Within each action, specific targets for performance are identified. For example, a community measuring its progress on creating a ‘green’ economy might use the number of green certified businesses as an indicator of performance.

Figure 1.1 illustrates the structure of the see-it model for creating a sustainability vision. This includes examples of goals, strategies and actions.

Figure 1.1 Creating a Sustainability Vision Using See-it

	VISION 	GOALS 	STRATEGIES 	ACTIONS
EXAMPLES AND DEFINITIONS	Environmental Leadership	Greenhouse Gas emission reductions	Holistic Greenhouse Gas Reduction Strategy	Greenhouse Gas Reduction Program. Target: 75% by 2050
	Accessible Urban Hub	Inclusive access and mobility	Handicapped friendly community	Implement accessibility guidelines
	Innovative community	Innovative community partnership	Incubator Initiatives	Establish incubator companies to city center

Source: Adapted from Beaverton, Oregon see-it implementation on visiblestrategies.com

See-it provides an interactive tool that facilitates the involvement of a user organization’s internal and external stakeholders. Software users are able to ‘drill down’ through each action to find specific targets and supporting documentation. Through a see-it implementation, local governments, for instance, can encourage community interest and involvement in the process of developing a sustainability strategy.

A key selling feature of the see-it software is its adaptability to local conditions. For example, one community translated its vision for social sustainability to mean creating an accessible urban hub. From this broad vision, key goals were identified, including community interaction, inclusive access and mobility, and improved public transit. The user can locate specific actions tied to each goal. Background or in-depth information is then made available on the see-it site to provide the user with further information on each topic.

1.2.3 Professional Services and Software Implementation

Visible Strategies offers professional consulting services to compliment the sale of hosted software solutions. These professional consulting services are considered critical

to the software sale. The purpose of professional consulting services is to assist in the setup and ongoing support of the client's sustainability strategy and to establish ongoing reporting and performance measurement mechanisms.

During implementation, Visible Strategies will typically guide the client through a 'sustainability visioning' sessions. These sessions help the client to articulate a broad vision and set of goals. The vision and goals are then used in the see-it software implementation. The see-it tool is then implemented by Visible Strategies' content managers to reflect the outcome of the visioning sessions. After initial implementation, clients have the option of maintaining their own content or engaging Visible Strategies' content managers to help maintain and update the site.

Visible Strategies' software is often used to complement the work of other consulting firms. This is accomplished in two ways. First, see-it is used to incorporate key points in consulting reports that will form part of the organisation's sustainability strategy. Second, see-it allows users to find specific information related to a broader goal. The software thus enables improved accessibility to existing documents and resources for both internal and external users.

1.2.4 Technology

The first version of see-it was created by a third party software developer. In late 2006, Visible Strategies brought the development of see-it in-house in order to gain full control over product development.

See-it is based on an emerging method of software delivery called software as a service (SaaS). The SaaS model enables companies to host multiple clients on one centralized platform, without having to maintain local software installations. There are significant advantages to this model for Visible Strategies, which will be discussed in further detail in this analysis.

The company is considering outsourcing part of its software development efforts to reduce costs. However, in the short term, in-house development is preferred. By developing in-house the company will have more flexibility to adapt to change. The software is also not sufficiently documented at present to allow for clearly defined contracts with external software developers.

1.2.5 Target Markets

Visible Strategies' software has been adopted by several government and corporate clients. The company has recently chosen to focus on markets where it believes it has a key competitive advantage. These markets are local governments, public agencies such as universities, or other organizations that oversee sustainability policy.

Visible Strategies views this target market favourably for four reasons. First, competition is less fierce than it is in selling sustainability based software to corporations. Second, the company believes it has a first-mover advantage in these markets. Third, the value-added tools such as the consulting option will be more likely adopted when the target market must deal with constituents or stakeholders interested in sustainability. Fourth, limited resources in the firm have led to a more focused approach to penetrating the market for sustainability reporting tools.

As well, Visible Strategies is pursuing corporate and other non-government clients who are interested in its software product. The primary focus of this analysis will be on the adoption of the see-it software by local governments.

1.2.6 Company History

Visible Strategies was founded by Colin Grant. He currently holds the position of Chief Executive Officer (CEO). The idea for Visible Strategies' main product, see-it, was conceived by Colin Grant. The software tool was intended to encourage organizations to develop a more forward-thinking vision. Grant believed that many corporations were producing elaborate and expensive sustainability reports but not using them to effect change within their organisations. He conjectured that without a long term holistic sustainability vision, organisations lacked specific goals and direction.

Dr. Boyd Cohen invested in the company in November 2006 and assumed the role of President. In May 2007, Victor Holysh also invested in the company and assumed the role of Chief Operating Officer (COO). Visible Strategies is currently jointly owned by Colin Grand, Boyd Cohen and Victor Holysh.

The owners of Visible Strategies consider their experience and expertise in strategic planning and performance management to be key assets in establishing credibility for their product and its accompanying consulting services in the marketplace. These are used as key selling points when approaching potential customers.

Colin Grant has over ten years of experience as a facilitator and coach. He worked for several years in a large global consultancy, where he focused on strategy development with governments and corporations around the world. He subsequently founded and

grew a successful alternative energy company in Scotland. He currently sits on several advisory boards in Vancouver, including the Mayor's Sustainability Council and the Vancouver Climate Leaders' Group.

Dr Boyd Cohen holds a Ph.D. in strategy, entrepreneurship and sustainability from the University of Colorado. Dr. Cohen is currently an assistant professor in the Faculty of Business at Simon Fraser University (SFU). At SFU, he established a new technology entrepreneurship program. Dr. Cohen has also taught sustainable entrepreneurship at the University of Victoria, the Instituto de Empresa in Madrid, Spain and at INCAE in Central America. Dr. Cohen's research focuses on entrepreneurship in the area of environmental sustainability.

1.2.7 Revenue Model

With regards to revenue, currently 60 per cent of Visible Strategies' revenues are generated from sales and licensing of software. The remaining 40 per cent is earned from consulting and professional services supporting the software implementation.

The current licensing model sells the initial version of software at \$20,000 to \$50,000, depending on the level of consulting required. The client also signs a hosting contract for at least one year at a cost of \$20,000.

Contracts are typically one year in duration. Visible Strategies is considering how it can generate more residual revenue from the initial software sale. One proposal being considered is to lower the up-front licensing fee and create incentives for the client to lock in to a longer term contract. This revised licensing model has not yet been

implemented. Longer term contracts are viewed favourably because they allow for a more stable and predictable revenue stream.

Figure 1.2 provides an overview of the software and services currently provided by Visible Strategies.

Figure 1.2 Visible Strategies Products

Product	Description	Target Market
See-It Complete	Hosted software + full consulting services. Includes mapping out a sustainability vision and goals.	Municipalities and local governments that do not have a sustainability strategy
See-It Light	Hosted software + consulting as needed	Municipalities and local governments that have developed a sustainability strategy but want complementary management tools
Professional Consulting Services	Services to support software implementation Stand-alone consulting services for sustainability strategy visioning	Governments, corporate clients

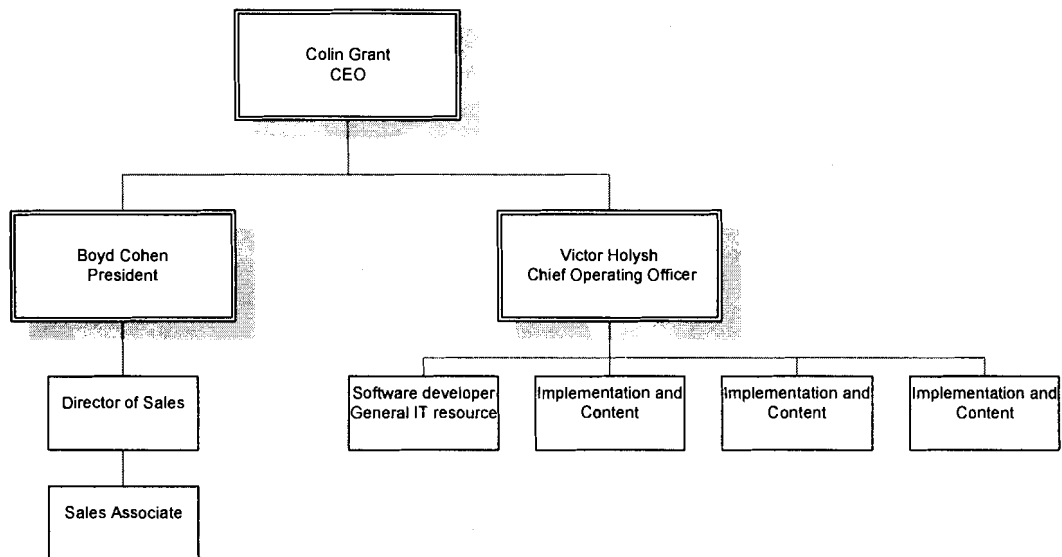
1.2.8 Human Resources

Visible Strategies currently employs a staff of 10, including one developer, two implementation and content managers and two sales staff. Colin Grant and Victor Holysh have dedicated 100% of their time to running and growing the company. Boyd Cohen has a part-time teaching engagement, but is otherwise devoting his time to the company. The company occupies an office in the Gastown district in downtown Vancouver, British Columbia, Canada. All employees work out of this central office.

The structure of the company is based on a simple divisional form, with operations and sales forming the main divisions. Within the structure, there is high level of interaction both between employees and management and among employees. This is enabled by the company's small size, but has also allowed the company to remain flexible and responsive both to its clients and to new ideas emerging in the fields of sustainability and its embeddedness in new software programs.

Figure 1.3 depicts the organisational structure of Visible Strategies. The reporting relationships in day-to-day operations are more blurred than the chart indicates. This is due to the small size of the company, the highly collaborative nature of the work and the active hands-on status of the three partners.

Figure 1.3 Organisational Structure



Source: Interviews with company principals

Visible Strategies has built its products with a small information technology (IT) staff.

This unit includes one full-time resource. The company has identified two key areas

where investment in human resources is essential for future software development. First, the company will need to attract a chief technology officer to develop and manage an IT strategy. Second, the company believes that it needs a full-time software developer to write code for new versions of software.

1.2.9 Brand Recognition and Marketing

The brand awareness of Visible Strategies is low. The recent re-naming of the company has meant that the company has had to re-launch its marketing efforts. Despite this challenge, the company believes that the new name more accurately reflects the product branding and image it wants to promote in the future.

Visible Strategies' marketing plan emphasizes the use of 'guerrilla marketing' techniques. The concept of guerrilla marketing focuses on the belief that small businesses can use low-cost, high visibility methods of marketing such as press releases, word-of-mouth campaigns and personal contact with potential clients (Morris et al., 2002).

Visible Strategies actively seeks opportunities to gain press coverage through news releases related to high profile software deployments. Recently, the company received local media coverage as a result of its engagement with the Live Earth concerts in July, 2007. These concerts were intended to raise awareness of climate change and therefore relate directly to the would-be markets sought by Visible Strategies. It also furthers the firm's claim to expertise in an emerging knowledge-based market.

Visible Strategies also encourages its contacts within local government to speak to their peers in other government agencies about the success of see-it implementations. The

company relies on peer-to-peer testimonials and word-of-mouth to unearth prospective clients.

An important component of Visible Strategies' marketing efforts is to identify and target sales to 'thought leaders' or 'gatekeepers' in the area of sustainability. In the early stages of the company, free versions of the software were provided to several municipal governments in order to gain exposure among high profile mayors. The company believes that by associating itself with respected individuals in the field of sustainability, it will gain credibility in the field and mobilizing this reputational capital will generate new sales leads. One such example is the association is Visible Strategies' consulting relationship with the mayor of Albuquerque, New Mexico, who is a respected leader in the area of climate change initiatives.

1.3 Strategic Issues

This section outlines the main strategic issues facing Visible Strategies. The analysis emphasizes strategies for the company to achieve growth in the US market. At the company's request, particular attention is paid to the role of alliances and other cooperative strategies to achieve growth objectives.

Visible Strategies has gained several municipal government contracts in the United States, including Marin County, California and Beaverton, Oregon. The company's current strategy is to penetrate the US market as quickly as possible to take advantage of what it believes to be a significant first-mover advantage in offering integrated sustainability reporting tools to public sector agencies and government.

Visible Strategies is also gaining credibility in this market through the experience and academic credentials of its principals. As credibility and exposure as experts in sustainability-related software raises among municipal leaders, Visible Strategies intends to have loyal clients bring the firm to the attention of others governance agencies.

The company's principals frequently present as guest speakers at conferences related to sustainability. In addition, each deployment in local communities has generally resulted in direct inquiries from other potential customers. The strategy is one of satisfying a loyal and committed clientele and using these groups to reach other potential users. This is particularly viable as government agencies not only frequently interact with one another but often prefer to work with shared standards and software programs.

Consulting services play an integral part in the sale of software. The company is grappling with how to engage in rapid expansion so that the software tool can become widely adopted and accepted as a visioning tool for sustainability reporting. At the same time, the company needs to maintain an appropriate level of professional services to support installations and update its product and service lines.

To facilitate growth Visible Strategies will have to engage in alliances. The company must decide how to structure its alliances and partnerships in order to create a relationship that provides incentives for partners to have an interest in each others' success. This means providing an adequate level of consulting without losing the value offered by its accumulated experience and knowledge, while maintaining control over intellectual property.

If the market grows rapidly, new entrants can threaten the company's position. If Visible Strategies relies uniquely on its software product to offer a sustainable competitive advantage, it will be difficult to fend off such competition. Similarly, if public expectations shift, new governments are elected or economic conditions change, the market for sustainability-related software could disappear, shift or take on a new technological platform.

Visible Strategies will need to find an appropriate level of investment in software development. To facilitate contract renewal the company will need to show clients that their software is being used and brings about the desired outcomes. To this end, the company must remain agile and responsive to both the changeable needs of the client and the dynamic new issues arising in the fields of software development and sustainability.

The business environment in which Visible Strategies operates is relatively uncertain.

There are a number of smaller niche players looking to capitalize on increasing awareness and adoption of sustainability. Global consulting firms, with their broader reach and depth of product offerings, are also capable of infringing on Visible Strategies niche markets.

Visible Strategies has built a competitive product that targets a niche market. The next chapter will address the broader historical context of sustainability as a means of shedding light on the nature of this emerging market. This is the first step in understanding how the market for sustainability-related software is likely to evolve over the next several years.

2 THE SUSTAINABILITY REPORTING INDUSTRY

The purpose of this chapter is to examine the history and evolution of the concept of sustainability. This is followed by a discussion of the adoption of sustainability reporting within corporations and government. Then a discussion of emerging trends in sustainability reporting is followed by a survey of some of the niche and global players in this emerging industry. This chapter provides a context in which to make sense of sustainability software and those interested in both providing and purchasing it.

In the context of this analysis, the term ‘sustainability reporting’ is used to define the broad range of solutions available. These range from products that assist in the development of a sustainability vision and strategy, to tools that are more focused on information management.

2.1 Historical Context

The concept of sustainability, or sustainable development, has its roots in the establishment by the United Nations of the World Commission on Environment and Development in 1983, later renamed the Brundtland Commission. The Commission issued a landmark report in 1987 called **Our Common Future**, which is widely viewed as having lent political credibility to the concept of sustainability and raised awareness of its role in public policy and contemporary human affairs (Roseland, 2005).

The Brundtland Commission defined sustainability as ‘development that meets the needs of the present without compromising the ability of future generations to meet their own needs’ (Brundtland, 1987). This definition is still widely referenced in the literature on sustainability.

From this early definition of sustainability, organisations emerged to try to measure and report on it. In 1989, the Coalition of Environmentally Responsible Economies (CERES), a coalition of environmental groups, created the Valdez Principles as a framework for evaluating the impact of corporate activities on the environment (Roseland, 2005). These standards were created, in part, as a response to the public outcry resulting from the Exxon Valdez oil spill in Alaska in March of 1989. The creation of the Valdez Principles (later renamed the CERES Guidelines) is significant because it marked the beginning of formal reporting by organizations on non-financial metrics.

2.1.1 Triple Bottom Line Reporting

Reporting by corporations on environmental issues evolved into the notion of triple bottom line (TBL) reporting. Triple bottom line reporting refers to the practice of public and large private sector organizations reporting on social and environmental impacts, in addition to financial measures. The principles of triple bottom line reporting are now considered a basic tenet of corporate social responsibility (Vanclay, 2004).

A detailed discussion of TBL and corporate social responsibility is beyond the scope of this analysis. However, it is important to note that the acceptance of TBL reporting established the notion that non-financial performance can be defined and measured. The

acceptance of the principles of triple bottom line reporting has also led to the creation of reporting standards for measuring sustainability in a systematic and standardized way.

2.2 Emergence of Sustainability Reporting

The Centre for Public Agency Sustainability Reporting (CPASS), a non-profit organization based in Melbourne, Australia that promotes sustainability reporting in local government based on the Global Reporting Initiative, provides a useful definition of sustainability reporting:

Sustainability reporting involves measuring, accounting and disclosing an organisation's economic, environmental and social performance to improve organisational performance and advance sustainable development. Sustainability reporting is an essential management tool for enhancing accountability, transparency and engagement, and addressing sustainability within any organisation (Centre for Public Agency Reporting, 2005)

Once the idea of reporting on performance of non-financial metrics gained wider acceptance, organisations emerged to standardize the methodology. The Global Reporting Initiative (GRI) began in 1997 to provide a formal framework for sustainability reporting. The GRI provides specific compliance guidelines and protocols used in the implementation of sustainability reporting. A primary goal of the GRI is to address some of the challenges of reporting including: defining boundaries, ensuring stakeholder involvement and ensuring that the reporting mechanisms were incorporated in a systematic and consistent way (Global Reporting Initiative, n.d.).

2.3 Sustainability Reporting in Corporations

With the introduction in 2006 of the 3rd revision (G3) Guidelines, the GRI has become the most accepted and widely used set of guidelines for sustainability reporting among

corporations worldwide. KPMG, a global consultancy, reports that 68 per cent of the top 250 companies in the Fortune 500 are currently issuing sustainability reports, and that most have adopted the GRI framework (KPMG, 2005).

The adoption of sustainability reporting by corporations created a market for specialized information management software and consulting. Some companies in this market focus on compliance to the GRI framework, while others focus on sustainability strategy development and implementation. These services are collectively known as sustainability reporting management (SPM). Companies offering SPM solutions include Proventia and ESP. Both of these companies offer SPM solutions to corporate clients. Figure 2.1 shows the relative position of these companies to Visible Strategies.

2.4 Sustainability Reporting in Governments

The adoption of sustainability reporting by government agencies is a relatively recent development. Several factors help to explain this. The GRI was initially developed within the context of corporate social responsibility. This has resulted in slower adoption by governments. Governments also have a long history of reporting on environmental issues using techniques adopted long before the emergence of an interest in sustainability. This suggests less of an urgency to adopt formal sustainability reporting than in the private sector. The adoption of sustainability reporting in government had to push aside those who had been trained in and had vested interests in retaining the older environmental reporting methodologies.

The level of adoption of sustainability reporting in government today is significant and increasing rapidly. A 2005 survey conducted by CPASS found that 67 per cent of public

agencies surveyed had formal sustainability reporting mechanisms in place (Dickinson et al., 2005).

Reporting on sustainability in government tends to be *ad hoc* and inconsistent. There is typically a lack of measurable performance targets, as well as limited verification of performance (Dickinson et al., 2005). In addition, the rate of adoption of GRI standards in governments is uncertain. CPASS reports that 50 per cent of public agencies surveyed that report on sustainability are referencing the GRI guidelines in their reporting practices (Dickinson, 2005). An informal survey of government web sites, as well as anecdotal evidence from Visible Strategies' management, suggests that few governments in the US have formally adopted the rigorous GRI framework.

2.4.1 Types of Reporting

Public agencies typically report on three types of information related to sustainability. Organization-based reporting examines activities within the organization, such as reducing internal waste or energy consumption. Community-based information is related to what is happening in the wider community. This entails attention to statistics on the public transit usage and urban density. Policy-based reporting evaluates the progress in the community resulting from the policy of the agency (Centre for Public Agency Reporting, 2006). For example, a local government may report on increased public transit usage resulting from policy initiatives to expand service, or the increase in density of the downtown core as a result of incentives provided for developers to build higher density housing.

2.4.2 Market Demand

Overall demand for sustainability reporting is difficult to determine due to the newness of the field and lack of clearly defined boundaries for the emerging industry. In its survey of corporate social responsibility reporting, KPMG (2005) notes that, since 1999, reporting requirements have shifted from reporting exclusively on environmental issues to a more holistic view of sustainability. The environmental consulting industry therefore serves as a good starting point for estimating demand in the field of sustainability.

A recent study on worldwide market potential for environmental consulting services attempts to quantify potential market size in terms of *latent demand*. The study's author defines latent demand as potential revenues when a market is accessible to competitors. The study estimates that the total worldwide latent demand in 2006 for environmental consulting services was \$31.63 billion. The North American market is estimated to comprise 25 per cent of this total, or \$8.12 billion. By 2011, the worldwide market is forecast to grow by over 25 per cent, reaching \$40 billion (Parker, 2005).

2.5 Who is Selling Sustainability Reporting?

The inconsistent implementation of sustainability reporting in governments has created opportunities for companies such as Visible Strategies. These companies can differentiate themselves by developing software and consulting services targeted to specific needs of governments. The absence of standardization allows companies to sell on the promise of customized, unique and innovative solutions.

Organisations, networks and online resources have also emerged to promote sustainability reporting among governments. The Local Governments for Sustainability

(ICLEI) is a network of 630 cities and other government agencies that was established in 1990 as the outcome of the first World Congress of Local Governments for a Sustainable Future. The ICLEI provides consulting services, best practices, and access to research on sustainability (ICLEI, n.d.). SustainLane Government is a network of over 300 cities in Canada and the United States. The purpose of the network is to create an online database of resources and best practices that can be shared among governments (SustainLane, n.d.).

Through sharing of knowledge and best practices, organisations such as ICLEI and SustainLane are likely to play a role in determining the standards and methodologies used by governments in sustainability reporting. Companies selling software and services in the field of sustainability will need to be attuned to how these organisations are influencing the development of sustainability reporting. These trends are likely to determine which products become widely adopted among governments.

2.5.1 Industry Segmentation

Companies selling sustainability reporting are broadly segmented into global management consultancies, and local niche players. Within each segment, some companies offer only consulting, while others offer software solutions. Some, such as Visible Strategies, are selling both.

In the U.S. market the largest management consulting firms include KPMG, Deloitte and Touche, Ernst and Young, Accenture, and Price Waterhouse Coopers. The market value of the management consulting market in the U.S. in 2007 is forecast to reach \$121 billion, and has been growing at an average rate of 8.2% per year since 2000

(Datamonitor, 2005). Global professional consulting firms offer services ranging from operations management to corporate strategy, with the latter making up 13.2 per cent of revenues. The proportion of revenues generated by consulting related to sustainability is not known.

The global management consultancies have a breadth of expertise and knowledge in the areas of finance, operations, human resources and corporate strategy. Global management consulting firms are able to leverage their experience and expertise in traditional management consulting to create products related to sustainability. These firms also have a well-developed client base to which they can sell new products and services. Currently, product offerings by the large consultancies range from reporting based on compliance with the GRI, to environmental risk management services.

There are also a number of smaller niche software and professional services firms that are developing products to manage and articulate sustainability strategy. Smaller niche players tend to operate in a more local context, due to their small size and limited resources. Visible Strategies, for example, has most of its clients in the Pacific Northwest region of North America.

Niche firms tend to have products targeted to very specific dimensions of sustainability, such as strategy development or knowledge management. Technology is enabling these niche firms to extend their reach beyond local markets. This broadens the overall market for highly specialized or targeted products. The implications of technology on the competitiveness of niche firms will be discussed further in section 2.7 of this analysis.

This analysis identifies four broad product segments that define sustainability products and services. Figure 2.1 provides an overview of companies that sell software and / or consulting services in sustainability reporting. The figure is presented in the form of an industry segmentation matrix to show the relative position of the noted players in the industry.

Figure 2.1 Sustainability Software and Consulting: An Industry Segmentation Matrix

		Target Customer Segment	
		Corporate	Government
Product Categories	Strategy and Visioning Software + Consulting		Visible Strategies (Niche) MetroQuest (niche)
	Consulting + Compliance Tools	SustainAbility (Niche) KPMG, Deloitte (global)	KPMG, Deloitte (global)
	Compliance + Information Mgmt Software	Proventia ESP	Credit 360 (niche) TownSquare (niche)
	Online Information Aggregation + Resources		SustainLane Government (niche) Sustainable cities

Source: Model adapted from Besanko et al., 2007.

2.5.2 Barriers to Entry

Barriers to entry in sustainability reporting are low for small, locally-based niche players. There is no single certification agency that qualifies someone as a sustainability expert. Rather, each company must prove its competence in the field based on past experience, reputation and word of mouth.

The newness of the industry, combined with the availability of software as a service model, also contributes to low barriers to entry. Innovative software designs can potentially be imitated by new firms entering the market.

2.6 Trends in Sustainability Reporting

A key driver in the wider adoption of sustainability reporting has been the engagement of local and municipal governments. The popular slogan ‘think globally, act locally’, which emerged out of the United Nations Conference on Environment and Development in 1992, now frequently linked to the concept of sustainability (Willis, 2007). This has prompted an increased focus on locally-based initiatives to tackle complex global problems.

Public perceptions of inaction on environmental issues by US government have also contributed to the development of locally-based initiatives. As well heightened concern over climate change has recently added to the creation of locally-based initiatives. For example, leading mayors in the US created the Mayors Climate Protection Agreement in 2005. The Climate Protection Agreement mandates cities to reduce greenhouse gas emissions by 7% below 1990 levels. The agreement has been signed by 500 cities in the US (US Mayors, n.d.).

Research also suggests that local governments have a greater willingness to engage in longer term sustainability planning. There is increasing recognition that the issues communities face, such as climate change, are complex and thus require a holistic, long term vision (Willis, 2006). Such initiatives are not restricted to large cities. Small

communities such as Whistler, British Columbia. Blue Mountains City, Australia, and Burlington, Vermont all have embarked on ambitious long term sustainability strategies.

2.6.1 Role of the Social Enterprise

The willingness of government to support social enterprises is a factor in the adoption of sustainability reporting. Social enterprises are defined as enterprises that have a specific social goal (Preuss, 2007). These range from not-for-profit organisations to entrepreneurial ventures such as Visible Strategies. Companies selling sustainability can use their focus on social goals related to sustainability as a key selling feature of their products.

The value of promoting social good is particularly important in selling sustainability software to governments. In traditional market-driven software businesses, end users of the software determine the value of a product at a given price. By contrast, the acceptance of sustainability-related software solutions are influenced by the extent to which buyers believe it will further the social goal of sustainability. This is especially true given that the products are experience goods. The products must be used first in order to determine their true value.

2.7 Trends in Technology

Underlying the growth in sustainability reporting software are new internet-based technologies collectively known as Web 2.0. This section discusses emerging trends in software development that are enabling companies, especially niche players, to broaden their reach.

2.7.1 Software as a Service (SaaS)

Software as a service, or SaaS, is an evolving model for software application where software applications are hosted and operated by the vendor and is used by customers over the internet. The highest profile example is Google Apps, which provides hosted services for spreadsheets and word processing (Datamonitor, 2007). Customers pay a fee for using the software, but do not have a copy installed locally. This allows software vendors to control the implementation from the central location, and charge an ongoing hosting fee. Industry research indicates that spending on SaaS implementations will reach \$10.7 billion by 2009 (Borck, 2005).

There are a number of factors that are fuelling the adoption of the SaaS model. There is reluctance on the part of companies and government to invest in standalone software that requires on-site support. Another key factor in the adoption of SaaS is that the technological advances of Web 2.0 permit new interactive capabilities and improved performance. These have led to an overall value that is seen as comparable to standalone software installations.

There are some key advantages for the software development firm using the SaaS model. First, the vendor has full control over the deployment, thus eliminating or mitigating any issues related to system integration. Second, the handling of issues does not require on-site visits or consulting. This may also be a disadvantage for software firms that have traditionally depended on revenues from on-site professional services. Third, since the software is run from a central host, the software provider is able to manage the performance, security, scalability of the system for many clients from the same location (Dubey and Wagle, 2007).

The SaaS model also holds some advantages for smaller niche software vendors. Functionality can be demonstrated over the internet, reducing the potential advertising and travel expenses associated with the promotion of new products. Visible strategies has found that many of its customers learn of their product by using versions implemented elsewhere. Since the company's market is in public agencies, it is easy to use the SaaS model to demonstrate implementations in other communities without concern for the impact on competitive advantage of their clients.

Companies pursuing a SaaS model generally have lower R&D costs, since the applications they develop can be shared across multiple companies and run on one platform. They also reap the benefits of the lower cost of delivery, as there is no pre-packaging of software. However, studies have found that companies pursuing a SaaS model may incur higher overall delivery costs resulting from hosting and managing applications (Dubey and Wagle, 2007). There is also increased risk associated with software updates, as the same platform may be used to support many companies.

Despite these challenges SaaS is opening up new opportunities for market niches to take hold. McKinsey Quarterly (2007) predicts that 10 per cent of enterprise applications will migrate to SaaS by 2009, and that new markets will emerge that are particularly suited to this method of delivery. For companies offering sustainability reporting, the value proposition lies in exploiting the key advantages of the SaaS model by offering seamless delivery of service requiring no up front investment in IT.

The emergence of the SaaS model for software delivery as well as increased awareness and adoption of sustainability reporting initiatives has resulted in the emergence of a

niche-software business in communication and management tools related to sustainability.

2.8 Implications for Niche Players

The preceding analysis discussed the broad environment in which Visible Strategies is operating. For Visible Strategies to effectively compete in this environment, it must also understand and exploit its position as a niche player in this evolving market.

3 OPPORTUNITIES FOR NICHE PLAYERS

The purpose of this chapter is to discuss the relationship between niche and larger players in business. Suggestions are drawn on how niche players, like Visible Strategies, can achieve sustained competitive advantage. The final section focuses on how and to a lesser extent why alliances can be used by niche players to achieve their growth objectives.

3.1 Competing as a Niche Player

In this analysis niche players are defined as firms that engage in a focus, or niche, strategy. A niche strategy takes three different forms: product, geographic, or customer specialization (Besanko, 2007). By selling a narrow set of products and service to local governments, Visible Strategies is pursuing a niche strategy based on customer and product specialization.

In attempting to understand the factors that allow niche players to build and sustain a competitive advantage, it is useful to examine some of the literature on the topic.

Opportunity in business arises when firms develop a specialty market strategy. These firms build their strategy around specialized knowledge of a particular market (Drucker, 2002). An example of this in the software industry is Intuit Software. Intuit identified an untapped market in small business software and exploited it by understanding what users in this market wanted. Intuit did not invent its software from the ground up. Rather, it

used existing infrastructure (personal computers, software platforms) to create its own specialty product.

As it applies to sustainability reporting, the specialty market strategy involves applying an existing methodology (reporting using best practices and standards) with an established technology (reporting over the internet), and applying both to a specialized niche market (local governments) before anyone else does.

Drucker emphasizes that systematic analysis of emerging trends and markets as a key success factor in pursuing a specialty market strategy. The technology is only an enabler of the product diffusion; it is specialized knowledge of the market or niche that leads to the creation of products that are valued by customers.

Iansiti and Levien (2004) examine technology-based business as a diverse and evolving ecosystem; the existence of large, established (or keystone) firms co-exist with more numerous smaller niche-players to form interdependency, much as exists in biology. The business ecosystem depends on the interdependency of its component parts; if one aspect is removed, it can upset the entire balance.

In biology, this would mean extinction of a predator species leading to overpopulation of another species. In business, this would mean a dominant or keystone player such as Microsoft closing its development platform to 3rd party developers, thus removing any incentive to innovate.

Iansiti and Levien's framework is useful in identifying some key characteristics of niche competitors in the software industry. The software 'ecosystem' is comprised of large

keystone players such as Microsoft and Oracle, and thousands of smaller niche-players that leverage the key components of the keystone players. Instead of developing software tools from scratch, niche players use existing platforms developed by keystone players. Among public companies niche players outnumber keystones by a factor of 10 to 1, indicating their relative importance in the overall system (Iansiti & Levien, 2004).

The essential element of any niche strategy is specialization by leveraging relationships with companies who have complementary assets (Iansiti & Levien, 2004). Niche strategies focus on acquiring the capabilities required to exploit this specialization. At the same time, they depend on other businesses to provide more readily available components of their product.

Companies in the sustainability reporting industry are not creating new software platforms or inventing a new method of delivery. Rather, they are leveraging existing technology to deliver more specialized product, which can in turn be easily integrated into the system of the key customers. In such a distributed model, firms can scale more easily than by developing a stand-alone, in house product that does not use complimentary resources.

A key factor identified in the niche-strategy is how 'tightly coupled' a niche-player is to its keystone partners. Iansiti and Levien (2004) advocate a loose coupling to encourage mobility and flexibility, and reduce the risk of 'hold up' by the larger firm. This implies that firms need alliances and partnerships to accelerate adoption of their products. They should also avoid being vulnerable to opportunistic actions by allying themselves too closely with one major player.

Nowak and Grantham (2000) argue that small niche software firms benefit from an emerging component-based software economy. This benefit occurs when software is built for specialized applications using other, existing applications. This allows companies to focus exclusively on their core competencies. The end result, suggest Nowak and Grantham (2000), will be improved quality and flexibility at lower cost and complexity.

For niche software firms, there are advantages of a more open, component based system for software development. However, these advantages exist for everyone. As such they cannot easily form the basis of competitive advantage for any one firm. The research points strongly to the need for companies to gain competitive advantage through thorough knowledge of their markets and more precisely the clients for whom they are adapting the product or service so that they can create a sustainable business model.

There are several concepts in business strategy that are also relevant to niche firms. Michael E. Porter (1996) describes sustainable competitive advantage as ‘deliberately choosing a different set of activities to deliver a unique mix of value’. Trade-offs must exist in order for the firm to create this unique value and fend off imitation. These trade-offs compel companies to make difficult choices about how they will compete, and counsels avoiding multiple strategies that may create inconsistencies. If there are not trade-offs, all companies are on a level playing field and profits will erode with competition. This is an important point for the niche software firm. Its intention to grow quickly can cause it to move away from the set of activities that defined its early competitive advantage.

The notion of knowledge creation enabled by core capabilities is also helpful in understanding how niche firms compete. A company's core capability can be defined as a unique advantage that has been built up over time and is difficult to imitate (Leonard, 1998). The core capability is made up of skills and knowledge (scientific, firm-specific or industry-specific), physical technical systems and managerial systems. Managerial systems consist of education, reward, incentives and training.

A last dimension is a company's values and norms, which include the company culture and value placed on knowledge acquisition. Leonard (1998) argues that firms must understand how to manage their knowledge-creation activities. They must also have a good understanding of what the company does that constitutes a core capability. Niche players must be particularly mindful of this as they grow. It is critical to maintain a focus on what is winning them new clients, and what will be difficult for others to replicate.

3.1.1 Selling to Government Agencies

Any company that targets the public sector as its principal market must take into account the unique nature of product and service procurement in this arena. Governments define value for money differently than in the private sector. Companies selling to governments must understand and respond to these differences.

A fundamental characteristic of government is that it creates institutions and sets objectives to implement public decisions (Lynch, 2005). In the private sector, the primary objective is to create profits and shareholder value. Public institutions have a different mandate; goals are defined in terms of public interest, or the wishes of the constituency that the institution serves. Long term strategy can be difficult to implement

in government, as perceptions of what is in the public interest can change when new governments are elected or as values within society evolve.

3.2 Co-operative Strategies

As noted earlier in this analysis, engaging in alliances is one strategy that niche players can undertake to achieve growth. The focus of this section is a discussion of alliances, including critical success factors in alliance formation. In order to frame the analysis, this section begins with a discussion of several generic co-operative strategies. The analysis then focuses on niche player alliances, including critical success factors in alliance formation.

Engaging in alliances is one of a vast number of options available to Visible Strategies. The company's growth objectives currently exceed its ability to finance organic growth. Thus, management has identified alliances as a means to focus the company's resources on developing the customer base for see-it. Alliances are also viewed as potentially reducing clients' dependence on Visible Strategies' internal consulting services.

A firm considering how it will grow can invest its profits into expansion, grow through alliances or acquisitions. Small niche firms typically do not have sufficient profits to invest heavily in growth and acquisitions. Visible Strategies is looking to expand through strategic alliances that will allow for a more scalable growth model. The company also wants to focus on building its hosted software business.

Co-operative strategies exist when organizations agree to work with each other to add value for both organizations (Lynch, 2006). Co-operative strategies take several distinct forms: *strategic alliance*, in which organizations agree to combine or share resources, *joint ventures*, in which two organizations set up a jointly owned subsidiary to facilitate co-operation, and *franchises*, where a master firm, or franchisor, sells its business model and branding to another firm, the franchisee (Lynch, 2006).

3.3 Niche Player Alliances

Alliances are formed when individual firms lack the critical resources, such as capital and skills, to achieve a sustainable competitive advantage (Whipple & Frankel, 2000).

Geoffrey Moore (2005) suggests strategic alliances have grown in importance with the increasing importance of 'open systems', in which buyers and sellers of services are increasingly interconnected. Moore contends that smaller, more flexible entrepreneurial ventures are favoured in this emerging environment. This is because individual firms can pursue their niche strategy without having to develop a complete solution from scratch. Small firms typically do not have the leverage to create a joint venture opportunities, therefore the less structured and more flexible strategic alliance is favoured.

In addition to working for mutual benefit, firms engage in alliances for strategic reasons. These include sharing risk, gaining access to new markets, and pre-empting competition in target markets (Sivadas et al., 2000). Strategic alliances leverage the commitment and expertise of each partner, and can have the effect of raising barriers to entry for potential competitors by creating synergy between complementary resources (Lynch, 2006).

Alliances also serve the purpose of getting a product to market faster, maintaining market

leadership, or perhaps facilitate the setting of an industry standard or technology (Koza et al, 2000).

Companies may also form an alliance to gain local market knowledge, or to gain particular resources that they themselves cannot provide (Whipple & Frankel., 2000). Visible Strategies currently uses alliances in this way by finding regionally-based consultancies to help implement see-t in geographically dispersed markets.

3.4 Critical Success Factors in Alliance Formation

This section outlines some of the critical success factors of forming alliances.

3.4.1 Firm-specific differences

Underlying value creation in alliances is the existence of firm-specific differences. This is sometimes referred to as ‘unobserved heterogeneity’ between firms (Anand et al., 2000). This means that firms have specific competencies that may be hard to define or imitate. However, when combined with the competencies of other firms, more value is created than would have otherwise existed with the two firms operating separately (Koza et al., 2000). This implies that smaller firms must be diligent in deciding with whom to form an alliance. Firms must focus on the partner-specific assets that will compliment their own offerings.

The research suggests that small companies should be careful to avoid what Porter (2000) refers to as ‘the growth trap’. In the context of niche players, the growth trap means that the firm is focusing more on the alliance partner’s presence to a new market rather than on unique capabilities that compliment its own business.

3.4.2 Active management of alliances

The ability and willingness to actively manage alliances is a key success factor in creating value for both parties to an alliance. For larger companies, evidence suggests a 25 per cent greater success rate when a specific function is set up to oversee alliances (Dyer et al., 2001).

Smaller companies are unlikely to have the resources to create a separate division to manage alliances. However, it is useful for these firms to have an understanding of the critical functions of such a role. These functions are sharing of learning and knowledge, coordination of activities, and mechanisms for ongoing assessment and intervention. Without guidelines to manage alliances, the approach firms take tends to be ad hoc and inconsistent, and ultimately leads to a failure of the alliance (Whipple & Frankel, 2000).

3.4.3 Mutual trust between alliance partners

A common theme in the literature on alliances is that mutual trust is absolutely essential. Alliances are sometimes viewed as incomplete contracts involving the transfer of knowledge between firms (Anand et al., 2000). The key notion here is that alliances are by their very nature open to interpretation and change by one or all parties to the alliance. However, along with complexity and ambiguous contract terms comes increased flexibility and opportunity. Smaller firms must find alliance partners that value the same flexibility, thus allowing the partnership to evolve over time into one which both firms are working for their mutual benefit.

3.4.4 Clarity of objectives

Although the terms of the contract in alliances are most often ambiguous, the overriding objectives of the alliance must be clearly articulated. It is insufficient to say that the focus is growth, as this can blur the company's strategy. It can lead to alliance formation that does not meet the other key success factors outlined in this analysis.

3.4.5 Learning and knowledge management

A strategy that leverages alliances to maximize growth opportunities emphasizes informal relationships where shared learning is a primary focus (Lynch, 2006). The underlying ambiguity of alliances points to the fact that much of the knowledge within an organization that creates value is tacit knowledge rather than codified knowledge (Anand et al., 2000). Tacit knowledge is the set of activities, not easily defined or copied by other firms that give the firm with tacit knowledge a competitive advantage. This ties in with the earlier discussion of core competencies.

In an alliance, the structure of the shared territory or knowledge space must be in place to ensure that tacit knowledge flows between or among alliance members (Dyer et al, 2001). This can be accomplished through training programs or internal, often informal, networks of managers within the alliance.

Visible Strategies is well-positioned to share tacit knowledge with partners. The small size of the company, collaborative work culture and extensive set of others working in different but related aspects of sustainability reporting is conducive to the sharing of knowledge.

3.4.6 Identify and focus on key strategic objectives

Small firms must always be mindful of their strategic objectives, and structure their alliances to leverage other firms' tacit and codified knowledge to exploit these objectives. This ties in with Michael E. Porter's (1996) view of strategy as 'choosing what *not* to do', of making hard choices to exploit trade-offs in the business environment. In structuring alliances, this means always ensuring that the chosen alliance partner provides missing pieces of the puzzle that completes the firm's strategy. If local market knowledge is important, it would not make sense to partner with national firms that do not themselves target this niche market.

3.4.7 Know the specific knowledge of partners

Firms must know what competencies or complementary assets the partner firm possesses. There are two reasons for this. First, in order to establish firm-specific differences, the firm needs to have good understanding of what the partner firm can offer. Second, it will allow the firm to evaluate different types of partners. Some may appear attractive at first because of their market reach, but may not be the best choice if they possess resources that the firm already has, or does not need.

3.4.8 Alliance partners have a stake in each others' success

There is also evidence that value will be increased in the alliance if both firms have a stake in each other's success (Moore, 2002). This success factor suggests that smaller firms must be careful in forming alliances with larger partners. As noted earlier in this analysis, a relationship with a larger firm might lead to more efficiency and greater

exposure, but also leaves the larger firm with a great deal of power over the smaller firm (Iansiti and Levien, 2004).

In the software development context, if the smaller firm is not able to define and protect its intellectual property, it may leave itself exposed to imitation of its key assets by the larger partner. This suggests that complementary, more flexible alliances are favoured for smaller firms. There is also some evidence that successful alliances that add value also enable the firm to attract new and complementary alliance partners in the future (Dyer et al., 2001).

4 SUSTAINABILITY REPORTING INDUSTRY CHARACTERISTICS

The purpose of this chapter is to analyse the macro-level environment in which Visible Strategies is currently operating. Using the PESTEL framework, the future prospects of the company within this environment will be examined. This will be followed by a description of Visible Strategies current positioning, including its internal resources and how these can give it a sustainable competitive advantage.

The sustainability reporting industry is new and emerging. There is limited historical information on the uptake of sustainability reporting, so any estimation market potential or industry forces is speculative. Therefore, particular emphasis will be placed on factors that are *external* to the industry such as political, environmental and socio-economic trends.

4.1 Sustainability Reporting: A PESTEL Analysis

The PESTEL model is a framework for analysing the environment in which an industry operates. The purpose of the PESTEL analysis is to account for the political, economic, socio-cultural, technological, environmental, and legal factors that are influencing the industry (Lynch, 2005). The analysis is then used to predict future trends and formulate strategies to adjust to these trends.

An understanding of social, political and legal trends is particularly useful in understanding an emerging industry such as sustainability reporting. This analysis will

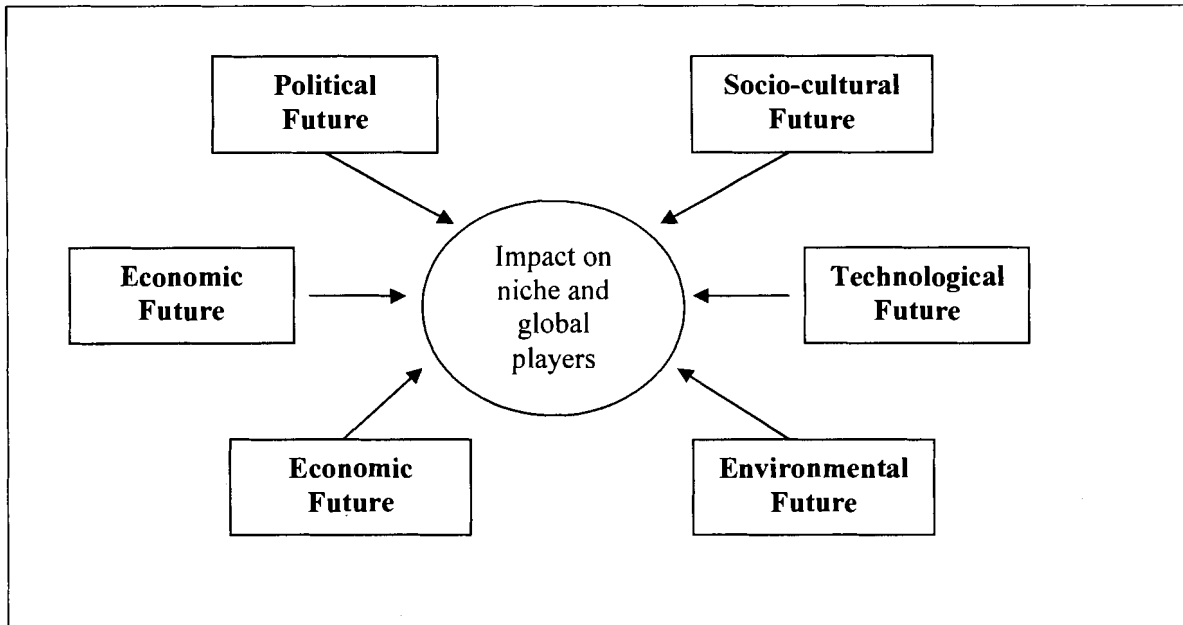
focus on how these external factors will influence the evolution of the industry for both niche and global players. This will be followed by a linking of the influences of the PESTEL model to Visible Strategies' longer term prospects.

The use of the PESTEL model for Visible Strategies considers the long term future of the company, irrespective of company ownership. The intention is to highlight some of the broad trends that might otherwise be overlooked in a young entrepreneurial venture trying to secure new business in the shorter term.

This analysis begins with an overview of each dimension influencing the industry, followed by an analysis of its implications for niche players such as Visible Strategies, and larger global management consultancies. Particular focus will be placed on local governments, as these represent the primary market for Visible Strategies' see-it product.

The PESTEL model uses six key dimensions to analyse the industry. Each dimension is then discussed in the context of how it will impact niche and global players. The dimensions are outlined in figure 4.1 below.

Figure 4.1 Key Dimensions of the PESTEL Model



Source: Adapted from Lynch, 2005 and Improvement Network

4.1.1 Political Future

The political environment will, to a large extent, determine the future demand for sustainability reporting software and consulting services. Government priorities change with economic and electoral cycles. Decisions are made on how best to allocate public resources for the benefit of constituents. Governments are constrained by budgets, and often look to public opinion for direction on where priorities should lie. These factors will continue to create an unpredictable environment for companies vying to capitalize on the growth in sustainability reporting.

There is also an absence of standards and best practices in the adoption of sustainability reporting by government. Without standards, purchasing decisions become more complex as buyers must evaluate different solutions that cannot be directly compared. In addition, the benchmarking of progress between different governments and organizations

is not well developed. This results in difficulties for governments in comparing their respective progress in a systematic way.

The absence of industry standards, combined with political uncertainty, currently favours smaller niche players that offer customized solutions. Larger professional consulting firms are unlikely to pursue markets where they must create a highly customized solution. Large consultancies want to transfer knowledge throughout their firms, a task made more difficult without standardized practices. Niche players are more likely to gain a foothold in regional markets by catering to specific needs of governments. As products comparisons are difficult, niche players may have an advantage in that they can emphasize their specialized expertise.

Another key factor in the political future is governments' willingness to engage outside resources for developing new initiatives. Local government and corporations may be willing to engage in sustainability reporting. However, they are often reluctant to set up additional bureaucracy to support the initiative. By committing to an in-house sustainability reporting software solution, the time required may be longer and the outcome more uncertain than if the government engages a third party. In addition, local governments are typically structured within a unionized environment. If sustainability reporting falls out of favour, it may prove to be difficult to dismantle in such a constrained environment.

Given that the long-term viability of sustainability reporting is uncertain, government is reluctant to invest heavily to build capabilities in-house. By engaging a 3rd party, governments can mitigate the risks of their investments. For example, if a government

wishes to discontinue the services of Visible Strategies they can simply allow the hosting contract to expire without incurring any further costs.

It is likely that governments will continue to engage external companies for rapid, cost effective and flexible implementations. Companies selling into this market should be aware of trends in government outsourcing, as there is no guarantee that the current trends will continue indefinitely. For example, governments may opt to develop more initiatives in-house if questions are raised about the quality of work or level of accountability in outsourcing.

4.1.2 Economic Future

The economies of the industrialized world are currently experiencing strong growth, relatively low interest rates and low inflation. In times of relative prosperity governments are more likely to invest in new initiatives to promote sustainability. Current economic conditions favour continued growth in the sustainability reporting industry.

If economic conditions deteriorate, spending priorities in government are also likely to change. In the event of an economic downturn, products and services related to sustainability reporting may be considered by some governments as a discretionary purchase. Large consultancies are more diversified and therefore be better able to withstand such shifts in government spending. By contrast, a recession could severely impact niche players that offer specialized solutions.

If favourable economic conditions persist, there is a strong possibility that the adoption of sustainability reporting will accelerate. This scenario would favour smaller niche players.

These firms can sell to government based on the promise of innovative solutions to local conditions.

In a broader context, research suggests that public concern for the environment is higher in wealthier nations than in poorer ones (Dunlap et al., 1995). This suggests a strong positive correlation between affluence and support for environmentalism, and by extension sustainability. The extent to which sustainability reporting is adopted by local governments may be influenced by how it is perceived by governments globally. If only rich communities adopt sustainability reporting, and poorer communities believe that they cannot afford it, the divide between rich and poor could deepen. For companies selling sustainability, this may limit broader acceptance and diffusion of their products. It could also create the impression of sustainability reporting as a luxury afforded by wealthy regions, rather than as a foundation of good governance.

The trend towards globalization is important in considering the future of sustainability reporting. Over time, this environment may favour larger consulting firms over smaller niche players. Large consulting firms increasingly have a global reach. Their competence in delivering service across geographically dispersed regions may allow them to establish a strong presence in sustainability reporting. If standards emerge in the industry, global consulting firms may be able to offer services more efficiently. They will also be able to use their vast marketing resources to promote their solutions.

4.1.3 Socio-cultural Future

It is difficult to predict if the recent interest in sustainability will persist in the long term. Public interest and priorities evolve and change over time. Despite this uncertainty,

public expectations related to transparency have shifted in recent years. The internet has enabled governments to make information available to the public more easily and cost-effectively than ever before. As a result, there is a greater expectation to be able to find relevant information about government goals and performance. This trend is favourable to companies that help governments to develop a sustainability vision and strategy.

Demographic changes will also play a role in determining the viability of sustainability reporting. The population in North America is aging. There are not enough skilled workers to replace those that are retiring. Governments will find it increasingly difficult to attract and retain talent for internal operations. The lack of internal resources may accelerate the trend to outsource the development of new government initiatives.

The shortage of skilled workers will also impact the companies that sell sustainability reporting solutions to governments. It will be important for companies to attract and retain skilled workers in order to grow their client base and keep pace with emerging technologies. Movement of workers between companies will likely increase as technology has enabled workers to sell their skills across geographically dispersed areas.

The emerging shortage of skilled workers will likely favour larger consulting firms over smaller niche players. Smaller players are less likely to have the financial resources to compete with large companies in attracting talent. In addition, large consulting firms are able to offer opportunities for internal advancement that are less likely in a smaller firm. Smaller firms can counter this by offering the promise of a high growth environment. In the case of Visible Strategies, several employees are working for the company out of passion for sustainability and belief in the company's product.

4.1.4 Technological Future

The growth of the software as a service (SaaS) model discussed earlier in this paper is creating opportunities for global consulting firms and small niche players. The SaaS model allows companies to lower software delivery costs through the use of a multi-tenant architecture. This architecture allows software firms to service multiple clients from one centralized platform, allowing companies to deliver services more efficiently and in a more scalable way than previously possible (Dubey and Wagle, 2007).

The SaaS model may also allow the firm to lower its marketing costs by enabling prospective clients to access fully functional software over the internet. This trend favours smaller niche players, as they are able to cost-effectively extend their reach to geographically-dispersed markets. Visible Strategies currently uses this to its advantage by making other deployments publicly available on its web site.

Emerging industries will eventually go through a period of consolidation. As sustainability reporting gains greater acceptance, governments will likely demand more standardized technology-based solutions. Standardized products will help simplify the buying decision and facilitate comparison of performance with other governments and agencies. As products gain market acceptance, the number of experts in the products use will also increase. Consequently, governments will over time gravitate to products that are better known. This will result in some level of consolidation, with many smaller niche players being acquired or exiting the market.

The impact of standardization and resulting consolidation on existing niche and global players is difficult to predict. There will no doubt be winners and losers. One strategy

for niche players to achieve wider distribution is to pursue strategic alliances with other firms. This strategy results in lower profits but also allows for wider distribution of the product and increases market awareness (Hill, 1997). As winners emerge, global consulting firms might be willing to enter the market for sustainability reporting by purchasing existing technology from successful niche players.

In a broader context, the potential worldwide market penetration of sustainability reporting software will depend on the level of access to technology in each market. A 'digital divide' exists today between those in the world who have access to technology and those who do not. In countries where internet usage is low, it may be difficult for governments make use of new technologies to facilitate public engagement in their sustainability vision.

For the sustainability reporting industry, the short term implications are minimal. In markets where internet usage is high, the industry is in early stages of growth. Visible Strategies, for example, is able to focus almost exclusively on the U.S. market because there is a potentially large untapped market. In the longer term, a broader acceptance of sustainability reporting across the digital divide would increase the creditability of the industry as a whole. In addition, as access to the internet increases, opportunities may be created in previously untouched markets.

4.1.5 Environmental Future

Public opinion polls in the U.S. indicate that concern about the environment is consistently high (Dunlap, 2007). This suggests that governments

Public awareness and concern about environmental issues is a key driver in the adoption of sustainability reporting. Triple-bottom line reporting, in which environmental, social and economic factors are considered in measuring performance, is gaining wider acceptance. This is enabling companies like Visible Strategies to leverage concern about the environment to promote a holistic vision of sustainability that incorporates the principles of tripe bottom line reporting.

Products offered by companies selling sustainability range from document management tools to visioning software. Document management tools are less vulnerable to trends in public opinion. This is because such tools are used to enhance operational efficiency. The adoption of visioning tools, such as those offered by Visible Strategies, are more likely to be adopted in times of heightened concern for the environment. This is because the newness and unfamiliarity of the product make it more prone to be considered non-essential.

Along with concern about the environment, pressure has increased on governments to report on performance. The pressure is to implement policies that account for negative externalities associated with economic activity. Negative externalities are defined as costs created for people who did not produce or consume goods (Baye, 2006). For example, the environmental impact of establishing a coal-fired electricity generation facility is considered an externality because the public bears the cost of resulting air pollution. Governments that report on sustainability would likely want to provide the public with information on the economic impact of the facility as well as the quantity of pollution generated.

Knowledge asymmetries in sustainability are another important environmental factor. Many governments want to introduce sustainability initiatives but do not have the knowledge internally to develop it themselves. Companies like Visible Strategies specialize in the field of sustainability. They are able to provide the knowledge governments need to implement a sustainability strategy.

In emerging fields, the environment favours companies that possess specialized knowledge. Government organisations may be able to acquire knowledge and competencies in sustainability over time. However, new practices and techniques take time to diffuse through bureaucracies. This environment currently favours niche players who have the required knowledge and are able to adapt quickly to the changing market.

4.1.6 Legal Future

Changes in government policy will potentially impact the outlook for companies selling sustainability. The evolution of financial reporting provides some indication of the possible role of legislation in mandating sustainability reporting in governments.

For decades, financial markets have demanded a high level of transparency and accuracy in reporting. This has been driven by governments' desire to create a level playing field in capital markets to ensure investor confidence. Consultants are hired by corporations to audit financial statements or to implement new reporting procedures, at considerable expense. These requirements have evolved to protect stakeholders in the financial system- typically shareholders of publicly-traded companies that expect and demand accuracy in reporting.

An important consideration in the adoption of sustainability reporting by government is the shift in expectations in corporate governance. Financial scandals such as the Enron collapse of 2001 led to new legislation in the US to govern financial reporting. While this is not directly impacting companies that sell sustainability to governments, it does indicate a shift in expectations in accountability.

The shift in public expectations has resulted in legislative changes surrounding corporate social responsibility and sustainability. For example, the government of France has required the largest public corporations to report on social and environmental indicators since 2001 (Fox et al., 2002).

It is too early to determine what the impact of such legislation will be on public expectations for reporting on sustainability by governments. However, it is reasonable to expect that sustainability reporting will be mandated by various levels of government at some point in the future. This will create a more favourable conditions for the sustainability reporting industry in general.

The evolution of a legal framework around sustainability reporting will likely favour global consulting firms. This is because such firms have depth of knowledge and geographic reach required to provide comprehensive solutions. However, there will be opportunities for niche players to specialize in local or regional legislative frameworks.

Figure 4.2 summarizes the conclusions of the PESTEL analysis as it relates to Visible Strategies' long term future:

Figure 4.2 Visible Strategies' Long Term Prospects Within the PESTEL Framework

Key Dimension of PESTEL Analysis	Rating of Prospects for Global Consultancies	Rating of Prospects for Niche Competitors
Political Future	Medium	Medium-High
Economic Future	High	Medium
Socio-cultural Future	Low-Med	Low
Technological Future	Medium	Medium
Environmental Future	Medium	High
Legal Future	High	Medium

The above figure is intended to rate the relative prospects of niche and global players within the field of sustainability reporting. The respective ratings, from low to high, are a best estimation based on the preceding analysis. The ratings are intended to show that over time, some aspects of the external environment will favour niche players, while others will favour global consultancies. In reality these ratings are in a constant state of flux in response to a fast-changing external environment.

Currently the market favours niche players on several fronts. Heightened awareness of environmental issues around the world will likely continue to fuel growth in the industry. In addition, niche players can continue to use their accumulated expertise to sell customized solutions to governments. The lack of standards and best practices for reporting and measuring performance across governments makes it possible for niche players to develop customized solutions. Political factors also favours niche players by allowing them to sell based on product features and innovation.

The sustainability reporting industry will inevitably reach a point of consolidation. This may be provoked by a change in the socio-cultural environment, such as a shift in public opinion from a focus on the environment to economic concerns. If the industry grows at a fast pace, it may become attractive for global consultancies to establish a greater market presence.

There are challenges in applying the PESTEL framework to sustainability reporting. Emerging trends in any young industry are inherently difficult to predict, and sustainability reporting is no different. In addition, the absence of data on private enterprises in the industry necessitates a greater emphasis factors that cannot be quantified.

It is also difficult to determine current and future levels of investment in the sustainability reporting industry. At this early stage of market growth, it is not known how many niche players are competing as entrepreneurial ventures or as pure social enterprises. Some players may be financed based on social or ideological goals. Others will secure long term financing only if they are able to prove a certain level of profitability. As a result, the impact of external factors on niche players will not be distributed evenly throughout the industry.

The next chapter will build on the analysis of the external environment by discussing the current position of Visible Strategies.

5 CURRENT COMPANY POSITION

The purpose of this chapter is to provide an overview of Visible Strategies' current position. A formal SWOT analysis will be used in order to identify and describe the key characteristics of the company's current position. The SWOT analysis incorporates strengths and weaknesses the company possesses internally, as well as the opportunities and threats the company faces in the external environment. Figure 5.1 summarizes the key findings.

5.1 SWOT Analysis

Figure 5.1 Summary of SWOT Analysis

Strengths	Weaknesses
Ability to rapidly implement client solutions Management experience in the field of sustainability Hosted software licensing model is efficient and scalable Ease of use and interactivity of software	Lack of alliances to promote the company's software Lack of capital to finance growth objectives Absence of software features and content to encourage repeat visits IT infrastructure does not support company growth objectives
Opportunities	Threats
Increasing awareness and adoption of sustainability reporting Newness of field creates niche opportunities Emergence of user-generated web site content Growth of online communities related to sustainability Increased public awareness of sustainability	Government spending priorities change over time Low barriers to entry in selling sustainability Lack of protection of intellectual property Threat of entry by large consulting firms

5.2 Strengths

Ability to rapidly implement client solutions

Visible Strategies' ability to rapidly implement a complete solution for clients is a key strength. The company can set up a customized see-it web site, including relevant content, in as little as three weeks. The speed of implementation compares favourably to alternatives. A solution developed internally by the client would take much longer to complete, particularly in bureaucratic organizations such as governments.

The flexibility of see-it allows Visible Strategies' sales team to set up customized test versions to use as a marketing tool for prospective clients. The purpose of the test version is to demonstrate the customizability and flexibility of the software, and give the buyer a complete 'look and feel' experience. Content for the custom web sites is drawn from publicly available sources. The test site can often be enhanced once the contract is secured, thus reducing the total implementation time.

Supporting consulting services are important to rapid implementation. A full implementation typically includes consulting services to help the client identify the key dimensions of their sustainability vision. These 'visioning sessions' are used by Visible Strategies' staff will assist the client's staff in outlining and articulating key dimensions of their strategy. These dimensions then form a high level view in the see-it portal.

Content and resources for the first version of the web site are provided by the client. The content will provide background information and resources for each dimension outlined in the strategy. Functionality is provided to allow on-site staff to manage their own

content in the future. At the end of the implementation process, the client has a fully-functional see-it site that can be made available to internal and external users.

Management experience in the field of sustainability

Visible Strategies has a track record of successful implementations in governments.

These past successes make future sales easier because the sales team is able to demonstrate that other governments have adopted the solution. The sales team can also demonstrate the features of existing client implementations over the internet. This reduces the cost marketing see-it product to new customers.

Visible Strategies is able to use past clients as references for prospective clients. The company's strategy of targeting municipal governments that are viewed as leaders in the area of sustainability is intended to build credibility. It is too early at this stage to measure the effectiveness of this strategy. The management team also has academic expertise and past work experience in the area of sustainability. This experience is used by the company as a differentiating factor in the sale.

Hosted software licensing model is efficient and scalable

The hosted platform using the software-as-a-service model allows Visible Strategies to manage all implementations on a centralized software and hardware platform. This offers two key advantages. First, Visible Strategies can efficiently manage technical and product support for geographically dispersed clients from its main office. The hosted model also permits full control over software upgrades so that clients can be upgraded concurrently and in a controlled manner. Second, the hosted model allows Visible Strategies to create a subscription licensing model that requires clients to pay ongoing fees in order to access their see-it web site. For Visible Strategies, this creates stable and

predictable revenue streams. For governments, this is advantageous because the cost of software implementation can be spread out over the many years of the contract.

The hosted software model also allows for scalability, as long as the core infrastructure can support it. In theory this is a strength for Visible Strategies. However, the management team is not currently in agreement on the level of scalability of the current hardware and software infrastructure.

Ease-of-use and interactivity of software

The interactive nature of Visible Strategies' software is viewed as a key strength. See-it is designed as a sustainability visioning tool rather than as an information repository. Its design allows users to clearly see the key elements the client's sustainability vision, including social, economic and environmental goals. From these broad goals, users are provided an interactive portal through which they can gain access to relevant information and view performance ratings. This contrasts with traditional document repositories, which often require users to find information based on specific topic searches.

5.3 Weaknesses

Lack of alliances to promote the company's software

A lack of alliances with consultancies that can promote and diffuse the company's product is viewed as a weakness. Visible Strategies does not have a strong incentive program to encourage other companies to sell its product. Planning consultancies that specialize in sustainability are critical to the adoption of the see-it product because they are already connected to government clients in their region.

Visible Strategies currently has alliances with two regional planning consultancies in the U.S. The reach of these firms is limited to Oregon and California. There are no firms in other areas of the U.S. that are actively selling the see-it solution.

Visible Strategies is relying almost exclusively on direct sales to clients. The company is undertaking only limited efforts to engage new alliance partners. The company's see-it partner certification program does not offer strong incentives to attract alliance partners.

Absence of features and content to encourage repeat site visits

The renewal of contracts will depend on the ability of Visible Strategies to demonstrate repeat site visits. Today, the software depends entirely on maintenance of content by clients. If performance metrics or are not updated or resources maintained, the site can quickly become out-of-date. Over time, this could impact the ongoing use of existing see-it implementations and negatively impact Visible Strategies' ability to sign customers to longer term contracts. Features that encourage repeat users to visit see-it sites are also limited.

IT infrastructure does not support company growth objectives

The current infrastructure is supporting less than 20 clients in total. The company has only one dedicated IT resource to maintain and grow the infrastructure. However, growth objectives for the next 12 months range from a double to a tripling of the existing client count. As the number of clients increases the demands on support resources will also increase. Visible Strategies does not currently have the level of IT resources required to support up to a three-fold increase in site traffic.

Visible Strategies is currently spending 30 percent of revenues on research and development (R&D) and support related to its IT infrastructure. The relatively high proportion of revenues spent on R&D reflects the small size of the company at this time. The focus of R&D is currently on creating new features to hosted software services rather than on creating an infrastructure that can support high traffic volumes.

5.4 Opportunities

Increasing awareness and adoption of sustainability reporting

The increasing adoption and acceptance of sustainability reporting by governments presents opportunities for Visible Strategies. In addition, adoption of sustainability reporting in the private sector has led to increased public awareness of the topic of sustainability. This has led to increased demands on government to show transparency in their reporting of social, environmental and economic sustainability.

Visible Strategies also has some opportunity to exploit a niche market in sustainability visioning software. Most products are geared towards compliance to sustainability standards, or provide a repository for organizing sustainability-related documents. The ability of see-it to create a holistic sustainability vision is a differentiating factor that Visible Strategies is currently exploiting.

Visible Strategies is also in a position to exploit knowledge asymmetries that exist between its staff and clients. Potential clients may want to implement a sustainability strategy but do not possess the knowledge to do so. As Visible Strategies grows its client base, it will be able to leverage its accumulated knowledge to convince prospective clients that it has the knowledge and skill to provide what they need.

Emergence of user-generated web site content

Increasing adoption among internet users of user-generated content is creating new opportunities for companies such as Visible Strategies. Increasingly, users are expecting a more interactive experience that permits the exchange of information and ideas. This trend is appearing in the proliferation of social networking sites, and is enabled by Web 2.0 technologies.

A key goal of sustainability reporting is stakeholder involvement and transparency. Governments are increasingly making information available to the public through their web sites. Visible Strategies may be able to capitalize on this trend by incorporating more opportunities for users to share information, collaborate contribute to discussions on sustainability. As will be discussed in the recommendations of this analysis, increased user engagement can be used to create strong regional networks. Ultimately these networks can form the basis for retaining and growing traffic to the see-it sites.

Growth of online communities related to sustainability

The quantity of information available on the internet has increased dramatically along with the adoption of sustainability reporting by government. Comparing sustainability reporting between cities is currently limited by the lack of standardization of data and the sheer quantity of information.

Along with the volume of information a market is emerging for companies that consolidate and aggregate information from publicly-available sources. Resources are emerging, such as sustainlane.com, which serve as a central portal for information from climate change policy to economic development.

The emergence of information aggregation services on the internet could be an opportunities for Visible Strategies. As a hosted-software provider, Visible Strategies is storing client information in a consistent format on a central server. The company can tie in this resource to create a view that consolidates information from multiple clients. The purpose of such a site would be to generate traffic to its see-it sites, and to create added value for its existing clients should Visible Strategies decide to restrict access to its existing client base.

Increased public awareness of sustainability

Increased public awareness of sustainability is leading to pressure on governments to be more transparent. In order to demonstrate transparency, governments look to implement initiatives to increase public involvement. The internet has provided a medium to government to disseminate information more easily.

Visible Strategies has a role in this evolution as it can provide tools to governments to help them to implement their vision of sustainability. The value proposition of Visible Strategies software has increase with the increase in public interest in sustainability. This trend will continue to represent an opportunity for Visible Strategies to grow rapidly within its niche market.

5.5 Threats

Government spending priorities change over time

The demand for Visible Strategies' product is susceptible to shifts in government spending priorities. The relative newness of sustainability reporting makes it difficult to predict if current adoption trends will be negatively impacted by deteriorating economic

conditions or shifts in public opinion. Governments are encouraging public involvement by increasing their level of transparency, however it is not clear that they will be willing to make ongoing investment in infrastructure to support the level of engagement offered by products such as see-it.

In times of economic uncertainty or recession, the focus of governments tends to shift to economic development issues. Public level of concern for the environment can be considered an indicator of government priorities in relation to sustainability. While concerns about the environment are high among Americans, research also indicates that environmental issues are considered by few the most important issues facing the country (Dunlap, 2006). The result is that in times of heightened public awareness of environmental issues, governments are likely to see political benefits in pursuing a sustainability strategy.

Low barriers to entry in selling sustainability

There is no governing body or standards organization that controls who can claim to be a sustainability expert. The reputation of sellers of the concept of sustainability is based largely on their ability to convey their level of competence, supported by past experience and education.

As the market for products related to sustainability reporting grows, new players will enter the market. These new entrants could pose a threat to Visible Strategies by offering comparable software and consulting product. Visible Strategies currently has competence in software development and consulting. This combination of skills may prove to be a source of sustained competitive advantage.

Lack of protection of intellectual property

Web 2.0 technologies are evolving at a fast pace. Along with the technological innovation has come increased accessibility to tools for rapid development of flash-enabled web sites. In this environment it is difficult for companies to compete on web site design and functionality alone, as successful designs can be imitated with relatively little investment. The key to competing in this environment is generating complementary content and services that add value to the customer.

Visible Strategies is vulnerable to having its innovative and interactive design imitated by competitors. Along with increased distribution of the company's product comes increased awareness of its strengths. The threat of imitation is likely to increase if the company succeeds in penetrating its target markets in government. The recommendations later in this paper will touch on strategies the company can use to protect itself from such issues.

5.6 Summary of Analysis

Visible Strategies is operating as both a software development firm and consultancy. This combination of competencies has allowed the company to establish itself in the niche market for sustainability visioning and reporting tools by selling technology and knowledge. As the company grows it will face challenges in maintaining its lead in web site design. It will also face increased competition as a result of relatively low barriers to entry and threat of imitation.

Rapid implementation underpins Visible Strategies' value proposition. This is expected to remain an advantage in governments, which often look to external suppliers to circumvent internal bureaucracies.

Visible Strategies is also operating in a new and uncertain external environment where long term trends are difficult to establish. Increasing adoption of sustainability reporting in government will open up new opportunities for the company. The emergence of online communities and user-generated content also create potential for adding value to its product over time.

6 RECOMMENDATIONS AND CONCLUSION

The purpose of this chapter is outline recommendations for Visible Strategies to penetrate the US market for sustainability visioning and reporting software. Visible Strategies is a young entrepreneurial company operating in an emerging and uncertain environment.

The strategic options available to the company are vast. The recommendations presented in the chapter are intended to provide realistic options that are grounded in the preceding analysis. The recommendations also consider, at the company's request, how niche player alliances can help the company meet its short to medium term growth objectives.

The growth potential of Visible Strategies is linked to its position in an uncertain external environment. It is not known which companies, if any, will emerge as industry leaders. It is also unclear if niche players will sustain their lead in the field or if consulting firms with a global reach will emerge as dominant players.

The PESTEL analysis in **chapter 4** provided a long term, broad view of this external environment. The distinction between large consulting firms and small niche players is intended to assess of how the external environment will likely evolve, and how it may impact Visible Strategies. The PESTEL analysis draws on the characteristics of successful niche players in order to suggest possible evolution of the industry over time.

The contrast presented between small niche firms and large global consultancies is rooted in the discussion in **chapter 3** on how niche players compete. Visible Strategies is not currently competing with any large global consultancies. It has carved out a niche based

on product positioning that combines competencies in software and consulting. The company now faces decisions on which firms it should align with.

In **chapter 4**, the analysis turned to a SWOT analysis of Visible Strategies. This analysis examined the specific internal strengths and weakness of the company, as well as considering the externally-driven opportunities and threats. The SWOT is relevant in determining where Visible Strategies' competitive advantage lies, and how the company can exploit it.

Recommendations in this analysis are framed against the overriding objectives of the company as determined in interviews with management. The short term goal (12 months) is to achieve annual sales of \$2 million through the winning of 20 new customers, mostly within local governments in the U.S. Management revenue targets after 12 months range from \$2 million to \$5 million.

Management should engage in an assessment of the strategic value of existing technology resources within the company. Management's views are not currently aligned on this topic.

Contracts are typically one year in duration. The company is considering changing its business model to decrease the up-front cost of implementation and increase the duration of contracts. This is a good strategy in that it will ensure a more stable revenue source over time. However, the company must be considering the metrics it will use to market the sale of a longer term contract. To this end, the company must demonstrate that usage of the web-based tool is increasing over time, thereby adding value to the customer (see earlier discussion of user-provided content, lock-in etc)

6.1 Recommendations

Recommendation 1: Assign resources to pursue alliances with regional planning and sustainability consultancies.

Visible Strategies' key strength lies in its ability to rapidly implement a comprehensive sustainability strategy. The company's visioning software tool and supporting consulting services underpin its value proposition to clients. However, the company's limited financial resources, lack of familiarity with regional markets, and relatively low brand awareness make direct sales problematic. If Visible Strategies succeeds in selling to a client in a new region, it must either allocate internal resources for consulting, or contract out the implementation to a locally-based consultancy. The local consultancy must then be familiarized with Visible Strategies' see-it software product and implementation process.

The discussion in chapter 3 on niche competitors highlighted the importance of creating 'loosely-coupled' relationships between companies that have complementary resources. While relatively unstructured in contractual terms, such relationships allow for greater flexibility and reduce the likelihood of hold-up scenarios. As discussed in the key success factors for alliances, the alliance is more likely to succeed if both companies have an interest in each other's success.

Regional planning consultancies do not typically have a strong competence in software development. The software visioning tool offered by Visible Strategies can therefore complement the capabilities of the consultancy and offer a means of differentiating their services.

This contrasts with an alliance with a larger, more diversified consultancy. Larger consultancies are more likely to have an in-house IT infrastructure and perhaps even a software development team. If Visible Strategies creates alliances with such firms, it runs the risk that the larger firm will use its internal resources to create its own software. Over time, the larger partner can develop its own solution and exclude Visible Strategies completely. Larger consulting firms may also use their geographic reach and depth of resources to diffuse their proprietary technology. These firms can also use their existing client base to gain access to new markets.

Regional planning consultancies are well-positioned to facilitate a wider distribution of see-it software. This is because they have the local knowledge and contacts within government to promote the product. They are located close to the client, which is advantageous in terms of direct client engagement. In addition, a local consultancy may be favoured over a software company based in Canada. Regionally-based firms are more likely to be viewed as contributing positively to the local economy.

Regionally-based consultancies are also best suited to offer the competence necessary to preserve the quality of implementation. As noted in the preceding SWOT analysis, Visible Strategies is able to demonstrate credibility through the academic credentials and past experience of its principals. These same credentials should also be sought after in regional consulting partners.

Visible Strategies will also have to invest less in direct sales if partner consultancies are actively selling the see-it product. The company does not have the financial resources to

hire a large team to engage in direct sales. By finding partners that are willing to sell its product, Visible Strategies can expand its reach without adding additional overhead.

In order to properly identify these potential partners, Visible Strategies must first identify specific skills which allow it to offer rapid implementation. For example, the credentials may include master's level education in planning or sustainability as well as past experience in selling to government. Visible Strategies should then undertake a search of consultancies that possess these competencies. The internal sales team should then establish relationships with the target consultancies and refer any potential leads to these firms.

Recommendation 2: Develop a training program and incentive package for alliance partners.

It is recommended that Visible Strategies re-develop its partner certification program and allocate resources to promote it. The goals of the re-design should be to replicate the key strengths that allow Visible Strategies to achieve rapid implementation. The consultants should be able to consistently deliver the same package of consulting services as Visible Strategies' internal staff, in the same amount of time and at similar quality and cost.

In order to replicate its key strengths, Visible Strategies must carefully outline the specific skills and competencies that are required in the training program. These include coaching and facilitation skills required for visioning sessions with clients and specific knowledge of best-practices or trends in sustainability. The training should also include tools and techniques for linking existing client resources to the high level sustainability vision that will form the basis of the see-it deployment.

A key component of the see-it training program is to offer incentives to that are aligned with company objectives. At this stage of early growth, Visible Strategies' primary objective should be wider distribution of its software. The preceding PESTEL analysis noted a key trade off in forming strategic alliances. Achieving wider initial distribution normally results in lower potential for profit on each sale. This is offset by opportunity for wider adoption and may also allow the company to co-opt emerging competitors.

Visible Strategies currently offers partners 25 percent of initial licensing revenue on new contracts. Partners are not eligible for a share of recurring licensing revenues until sales in a calendar year reach \$1 million. The financial benefit of the initial licensing agreement is not compelling enough to elicit a strong commitment from professional consultancies. This is because such consultancies already have the ability to extract high rents for their knowledge and expertise. They must weigh the costs of allocating resources to a non-core activity against the potential monetary gain.

Another weakness of the existing structure is that there is little incentive for alliance partners to continuously engage the client and enhance the see-it implementation.

Without such ongoing engagement the see-it site risks becoming static and out of date.

At the time of contract renewal it will be difficult to show ongoing benefits. Visible Strategies does not have the resources to ensure ongoing customer engagement and must rely on its partners.

In order to address these concerns, it is recommended that Visible Strategies offer a share of recurring revenue up-front. This will provide a greater incentive to prospective partners to consider re-allocating resources to the promotion of Visible Strategies'

product. At the same time, partners will have an incentive to maintain relationships with clients over time in order to increase the likelihood of contract renewal.

Recommendation 3: Target local governments that have an emerging interest in sustainability.

Based on the preceding analysis, it is recommended that the company focus on local and regional governments that have shown an emerging interest in sustainability, but do not have the resources to implement their own sustainability strategy. This typically, but not necessarily, translates into cities of under 500,000 people.

Visible Strategies should continue to target so-called ‘progressive’ cities that have already undertaken some form of leadership in environmental stewardship or planning, but likely do not have the resources to invest in triple bottom line reporting.

Visible Strategies is capitalizing on knowledge asymmetries between sustainability experts and governments. That is, a market exists for Visible Strategies’ software because governments do not have the knowledge or experience to implement a sustainability strategy on their own. Consequently, the company has been successful in selling primarily to governments that do not have a well-developed infrastructure to support their own sustainability initiatives.

The emerging interest in sustainability by these governments may be linked to some of the socio-economic factors, such as shifting public expectations and heightened public awareness of environmental issues. Many governments are also looking to each other for

guidance on how to engage in sustainability visioning and encourage stakeholder involvement.

Governments that have a longer history of embracing the concept of sustainability are less likely to seek rapid implementation of a sustainability strategy. Many larger US cities, such as Seattle and Portland, have a long history of interest in the principals of sustainability. As such, these cities have a developed staff of planners and network of consultants that have experience in the field. These cities are less likely to value the fast implementation that Visible Strategies offers. In addition, the 'look and feel' of the see-it site may not be compatible with existing intranets or knowledge management tools.

In past software implementations, Visible Strategies has found that other governments in the region show interest in the product and make direct inquiries. This has obvious advantages in that any local consulting firms will be able to grow their business. For Visible Strategies, there is potential to scale operations without incurring additional training overhead for outside consultants. This situation is favourable for enforcing the alliance partner structure outline in the first two recommendations of this analysis.

Visible Strategies should continue to focus on selling a complete solution that includes both software and some level of consulting services. It is not recommended to emphasize an off-the-shelf version of software in the overall strategy. The primary reason is that more sales will generate more competition, and there is insufficient protection of intellectual property to avoid being replicated. There is also the risk of distracting key resources in the company from building the core products, of which consulting is a key component.

Recommendation 4: Add features to the see-it software that will encourage the development of regional networks of users.

Niche software firms succeed when they create products that are complementary to ones that already exist. The compelling value proposition of the see-it software is not the technological features, but rather the company's ability to apply its own knowledge of sustainability to create a total solution for clients. In this way, Visible Strategies should not make adding features the focus of its strategy. Features are relatively easy to copy, and there will likely be competitors with greater financial resources to pursue such a strategy.

Visible Strategies should instead look for ways to create added value by encouraging network effects in its user community. Network effects are created when the addition of new users to a network creates greater value for the existing users (Baye, 2006). Fax machines, for example, became more valuable as more companies and individuals purchased them. In the field of sustainability, sustainlane.com has succeeded in creating a network of users by allowing members to upload information to their site. As more information is uploaded, more users are attracted to the site.

For Visible Strategies, the key will be to create repeat visits to their regional sites by considering a network as a group of users within a local community. While it may seem counterproductive to create local networks, the market presents a potential niche for Visible Strategies. The company is already building its see-it sites on a common platform using the software-as-a-service model. This architecture lends itself to a high

level of customization at the local level, provided that the software tool is enhanced to enable user input.

In the longer term, Visible Strategies should consider building a store of knowledge from its software deployments. This knowledge base may form the basis for future enhancements to the software. Over time, the accumulated knowledge can be turned into data that can be made available to new customers. While there are already a number of web sites that offer best practices and publicly-available resources, however the local relevance of such sites is inconsistent.

Recommendation 5: Choose a sustainability reporting and compliance standard and integrate it into the see-it software.

In the longer term, Visible Strategies must build on see-it's capabilities as a sustainability visioning and stakeholder involvement tool. It is recommended that Visible Strategies adopt a reporting and compliance standard that it believes is gaining a foothold in government. The reporting standard should be integrated into the see-it software to allow users to link higher level sustainability vision to performance measurements that comply with the standard.

In the future it is likely that governments will want to integrate their visioning capabilities with standards of benchmarking performance. Governments will increasingly expect to be able to tie their sustainability vision to standards that other governments have

embraced. The shift in public expectations for transparency will likely move governments towards more standardization in reporting.

As the market for sustainability reporting grows, governments will likely to gravitate to fewer software vendors. Macro-level factors such as globalisation will accelerate the trend as governments will want to work with vendors that can have a greater geographic reach. The mobility of skilled workers favours companies that have a large pool of users who are familiar with the product and able to support it. Visible Strategies should position itself for this trend by offering a more complete solution to clients.

6.2 Conclusion

Visible Strategies is an entrepreneurial venture that faces uncertainty on two fronts: finding a sustainable niche in a largely undefined market space, and obtaining a sufficient level of capital to finance growth.

In the short term, Visible Strategies has an opportunity to benefit from increasing awareness of the concept of sustainability. Many governments are struggling to incorporate sustainability into their reporting frameworks. Niche players such as Visible Strategies are well positioned to provide solutions.

The longer term viability of sustainability reporting is more difficult to predict. It will depend largely on shifts in the political, social and economic landscape. The value of sustainability reporting will also be determined by how much it is actively used and valued by stakeholders over time.

REFERENCE LIST

- Baye, Michael R. (2006). *Managerial Economics and Business Strategy (Fifth Edition)*. New York: McGraw Hill Irwin.
- Besanko, D. et al. (2007). *Economics of Strategy. Fourth Edition*. Hoboken, N.J.: John Wiley & Sons, Inc.
- Borck, James (April, 2005). *A field guide to Software as a service*. Retrieved June 16, 2007, from InfoWorld web site: www.infoworld.com/archives
- Brundtland, G.H. (1987). *Our Common Future*. Retrieved July 8, 2007, from UN Documents Cooperation Circles web site: <http://www.un-documents.net/wced-ocf.htm>
- Centre for Public Agency Sustainability Reporting (2006). *Delivering Innovation and Change Sustainability Reporting and Local Government*. Retrieved June 18, 2007, from <http://www.publicagencyreporting.org/index.php?id=resources>
- Datamonitor (2005, October). *Management & Marketing Consultancy Industry Profile: United States*. Retrieved June 7, 2007, from Business Source Complete database.
- Datamonitor (2007, April). *MarketWatch: Global Round-up*. Retrieved June 16, 2007, from LexisNexis database.
- Dickinson et al. (November, 2005). *Sustainability reporting by public agencies: International uptake, forms and practice*. Retrieved June 18, 2007, from Centre for Public Agency Sustainability Reporting web site: <http://www.publicagencyreporting.org/index.php?id=resources>
- Does it add value? (2007, November 13). *Economist*, Retrieved July 2, 2007, from LexusNexus database.
- Drucker, P. (2001). *The Essential Drucker*. New York: Harper Collins.
- Dubey, A. and Wagle, D. (2007). Delivering software as a service. *McKinsey Quarterly*. Retrieved on June 30 McKinsey Quarterly web site: http://www.mckinseyquarterly.com/Delivering_software_as_a_service_abstract
- Dunlap, R. (2006, March). Show Us the Data. *Organization & Environment*, 19(1), 88-102.

- Dunlap, R. (2007, April 19). The State of Environmentalism in the U.S.: Diagnosis: Neither dead nor rejuvenated. *Gallup Poll Briefing*, Retrieved August 11, 2007, from Business Source Complete database.
- Dunlap, R., and Mertig, A. (1995, Winter). Global Concern for the Environment: Is Affluence a Prerequisite? *Journal of Social Issues*, 51(4), 121-137.
- Dyer, J., Kale, P., & Singh, H. (2001, Summer). How To Make Strategic Alliances Work.. *MIT Sloan Management Review*, 42(4), 37-43.
- Fox, T. et al. (2002). *Public Sector Roles in Strengthening Corporate Social Responsibility: A Baseline Study*. Retrieved August 13, 2007, from World Bank Web site: <http://info.worldbank.org>
- Global Reporting Initiative (n.d.). Retrieved July 8, 2007, from <http://www.globalreporting.org/AboutGRI/WhatWeDo/>
- Hill, C. (1997, May). Establishing a standard: Competitive strategy and technological standards in winner-take-all industries. *Academy of Management Executive*, 11(2), 7-25.
- Internet Coaching Library (n.d.). Internet World Stats, Retrieved June 18, 2007, from <http://www.internetworldstats.com/america.htm#us-%2007/06/18>
- Isianti, M. and Levien, R. (2004) *The Keystone Advantage: What the New Dynamics of Business Ecosystems Mean for Strategy, Innovation, and Sustainability*. Boston: Harvard Business School Press.
- Koza, M., and Lewin, A. (2000, April). Managing Partnerships and Strategic Alliances: Raising the Odds of Success. *European Management Journal*, 18(2), 146.
- KPMG (2005) KPMG International Survey of Corporate Responsibility Reporting 2005. Retrieved June 28, 2007, from KPMG web site: www.kpmg.ca/en/news/documents/KPMGCRSurvey2005.pdf
- Leonard, D. (1995). *Wellsprings of Knowledge: Building and Sustaining the Sources of Innovation*. Boston: Harvard Business School Press.
- Lynch, R. (2006). *Corporate Strategy. Fourth Edition*. Essex, England: Pearson Education..
- Moore, G. (2002). *Crossing the Cham: Marketing and Selling Disruptive Products to Mainstream Customers*. New York: HarperCollins.

- Morris, M., Schindehutte, M., & LaForge, R. (2002, Fall). Entrepreneurial Marketing: A Construct For Integrating Emerging Entrepreneurship And Marketing Perspectives. *Journal of Marketing Theory & Practice*, 10(4), 1.
- Nowak, M., & Grantham, C. (2000, February). The virtual incubator: managing human capital in the software industry. *Research Policy*, 29(2), 125.
- Ohmae, K. (1989, March). The Global Logic of Strategic Alliances. *Harvard Business Review*, 67(2), 143-154.
- Parker, P. (2005). *2006-2011 World Outlook for Environmental Consulting Services*. ICON Group International, Inc., Retrieved August 13, 2007, from Business Source Complete database.
- PESTEL Analysis (n.d.), retrieved August 3, 2007 from www.improvementnetwork.gov.uk.
- Porter, M. E. (1996). What is Strategy? *Harvard Business Review*, 74(6), 61-79.
- Preuss, L. (2007, July). Buying into our future: sustainability initiatives in local government procurement. *Business Strategy & the Environment*, 16(5), 354-365.
- Roseland, M. (2005). *Toward Sustainable Communities: Resources for Citizens and their Governments*. Gabriola Island, B.C.: New Society.
- Sivadas, E., & Dwyer, F. (2000, January). An Examination of Organizational Factors Influencing New Product Success in Internal and Alliance-Based Processes. *Journal of Marketing*, 64(1), 31-49.
- US Mayors (n.d.). Mayors Climate Protection Center. Retrieved August 13, 2007, from <http://usmayors.org/climateprotection/about.htm>.
- Vanclay, F. (2004, September). The Triple Bottom Line And Impact Assessment:: How Do Tbl, Eia, Sia, Sea And Ems Relate To Each Other?. *Journal of Environmental Assessment Policy & Management*, 6(3), 265-288..
- Whipple, J., and Frankel, R. (2000, Summer). Strategic Alliance Success Factors. *Journal of Supply Chain Management: A Global Review of Purchasing & Supply*, 36(3), 21-28.
- Willis, M. (2006, August). Sustainability: The Issue of Our Age, And a Concern for Local Government. *Public Management*, 88(7), 8-12.