AN ACTION PLAN FOR SUSTAINABLE MANAGEMENT AT HIGHER EDUCATION INSTITUTIONS

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Abstract

This paper discusses the concept of 'sustainability' as it relates to organizations such as higher education institutions. The term is difficult to define, give meaning to, and eventually implement, and there are also many barriers preventing organizations from becoming truly sustainable. Most organizations that have implemented sustainability initiatives have seen minimal results and have not been able to create substantial buy-in from their employees and stakeholders, and this essay describes some of the reasons why. Several definitions for sustainability are given, as is an explanation of the term as it relates to business ethics and to organizations struggling to find meaning for the term.

Higher education institutions experience barriers to sustainability in addition to those that most organizations face. To address the challenge, several models for sustainable universities are presented in this paper. All have in common the development of an internal campus community as well as a strong connection to the external communities they serve. The essay presents possible solutions, including better management training, more effective sustainability assessments, and collaboration with First Nations people, to move post-secondary institutions towards sustainability.

Executive Summary

There is no definition of sustainability that encompasses all individuals, societies, companies, or industries, yet many of these groups attempt to create meaning for the term in order to form a foundation upon which to build sustainable lives and systems. The concept of sustainability can be broken down into three categories: ecological, economic and social. Each component is best understood in relation to the others, as the need for a holistic view of sustainability becomes more difficult to ignore.

Higher education institutions are uniquely positioned to influence the ecological, economic and social systems upon which the human population depends. Educated people are in many ways responsible for the existence and potential collapse of these systems, but are equally capable of evolving these systems to become more sustainable. The assumption that the traditional university system can continue to facilitate the needs of a rapidly changing and deteriorating planet is no longer valid, so some colleges and universities are now beginning an arduous but necessary shift from the unsustainable status quo to a university system that helps people build solutions to the world's problems.

Although sustainability is now incorporated in some form into most organizational systems, and consumers are demanding more accountability from corporations and governments, most sustainability efforts are only marginally successful. Barriers of cost, mistrust, mindset, and isolation are often enough to prevent

organizations from becoming truly sustainable. For colleges and universities, even more barriers are prevalent, including a lack of interdisciplinary leadership and resistance to government mandates that address sustainability issues. For higher education institutions to overcome these obstacles to become sustainable organizations, a focus on both the internal university community and the external societies in which the universities operate is essential. The recommendations presented in this paper are intended to facilitate the transition from the continual support of a conventional economic growth scenario to a systemic acceptance of sustainable values, with the goal of influencing communities and external organizations to do the same.

Dedication

To Johann, for organizing the rest of my life so that I could write.

To my mom, for being unconditionally supportive.

To my stepfather, for teaching me to think outside the box and question everything.

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Table of Contents

List of Figures

List of Tables

1: Introduction

Sustainability is becoming more than a business trend; organizational leaders are beginning to realize that becoming economically, ecologically, and socially sustainable is vital not only to individual companies but to the systems in which they operate. Still, many organizations struggle with creating a definition for and an understanding of sustainability that has meaning and can be successfully implemented. Many organizations, for lack of a better definition, use the original definition of sustainability created by the WCED, which only implies that resources should be consumed only insofar as access to those same resources is available to future generations.

For colleges and universities, which are such integral and influential parts of the world's economic system, finding a meaning for sustainability is crucial. Colleges and universities are the conduits through which so many people flow and become part of troubled economies, societies, and ecosystems; therefore, they are in part responsible for creating the conditions that allow for overconsumption of scarce resources and have led to the planet being unable to sustain a rapidly increasing human population. In addition, despite their centuries-long existence, colleges and universities are not sustainable institutions themselves, and are at risk of becoming redundant if ecological, economic and social sustainability are not achieved. In contrast, they also represent a system in which solutions to the world's problems can be developed. They have the power to create a new set of conditions that are conducive to sustainability and can reverse some of the damage. Still, there are many barriers to the goal of being sustainable institutions. The

essay aims to address these barriers and present possible solutions to help post-secondary institutions become sustainable organizations.

This paper discusses issues with finding a definition for sustainability, describes obstacles to sustainability in higher education, provides examples of more progressive institutions, and examines various models for sustainable management of post-secondary institutions. It identifies how colleges and universities face unique challenges both in conjunction with and in comparison to other kinds of organizations, but also how much potential exists for educational institutions to lead the sustainability movement and transform global attitudes towards sustainable business management. The development of a unique sustainability model or framework for organizations that effectively brings together all aspects of the sustainability movement is a great yet surmountable challenge, but one that universities are particularly poised to address.

2: Sustainability: History & Definitions

Although the term ‘sustainability’ is a relatively new part of our vocabulary, various individuals and organizations have long been concerned about the way humans impact the earth, how people and societies function and interact, and how businesses can be more ethical and socially just. The predecessors of the sustainability movement laid some of the groundwork for issues that have become essential for both individuals and companies today. Many First Nations societies have embraced environmental and social responsibility as part of their culture for generations, and their knowledge is now a topic of interest for many companies that want to become sustainable organizations. Pollution legislation such as the Clean Air Act of 1958 has existed for decades, since the environmental degradation caused by the Industrial Revolution has long been recognized (Berry & Rondinelli, 1998). Even so, not until the 1970s did environmental concerns start to become important to the general population. People who cared about the future of the earth were labelled as “hippies” and their causes dismissed. However, as dialogue among governments concerning ecological preservation increased through events such as the Geneva Convention, public concern also grew. Newfound consumer awareness about the negative environmental and social effects of the Industrial Revolution eventually led to the term Corporate Social Responsibility (CSR), the idea that companies needed to be more accountable and transparent about the ecological and social impacts of their business activities. From there, concerns about the treatment of humans emerged as businesses started to be exposed for mistreatment of workers in overseas manufacturing

facilities. These and other examples demonstrate that certain aspects of sustainability were well-known issues long before the holistic concept gained popularity.

Corporate Social Responsibility is now an expectation of nearly every business, and sustainability efforts form a major part of that accountability. Firms now release annual reports detailing their CSR activities in an attempt to please increasingly demanding stakeholders. Despite these efforts, the actual meaning of sustainability is still unclear to both individuals and companies, even though experts have been trying for nearly thirty years to give structure and definition to the term and apply it to the unsustainable world we still inhabit.

2.1 Some History of the Term

In the 1980s, the United Nations officially recognized that the earth could not sustain a rapidly growing, resource-consuming population forever, and commissioned a new group, the World Commission on Environment and Development (WCED), to determine what sustainability meant so that national governments could be encouraged to try and achieve it. The WCED coined an early definition of sustainability, and although it was accurate on many levels it failed to stimulate much interest in governments, corporations, or the general public because it was boring and uninspired, recognizing only the concept that development should "meet the needs of the present without compromising the ability of future generations to meet their own needs" (James Hoggan & Associates Inc., 2006). This definition left no indication of how to apply such a broad concept to business, and without a framework to give it meaning, the idea of sustainability did not catch on fast with corporations and remained a utopian ideal

embraced by only a few individuals and comparatively small organized groups such as Greenpeace.

As the 1980s progressed, the need for a context for sustainability began to reform the definition of the term. Sustainability referred almost exclusively to environmental management, especially fisheries and forestry sustainability, as Greenpeace and other environmental organizations focused their campaigns on unethical practices in these industries. Thus, sustainability referred to how humans interacted with "the global environment" (Brown, Hanson, Liverman, & Merideth Jr., 1987). Ecological sustainability was the focus of much research, as an understanding began to emerge that non-renewable resources would eventually disappear, and even renewable resources were being consumed too quickly to be replenished.

Today, most definitions of sustainability include ecological as well as social and economic components. Social sustainability refers not only to the ability for individuals to meet their basic biological and social needs but to do so in a way that preserves the ecological conditions necessary to continue to meet those needs (Brown et al, 1987). To the definition of social sustainability, recognition of the need for human sustainability, the potential for the earth to support our current and growing world population, is often added (Brown et al, 1987). Human sustainability includes the issue of rising global human population and how to structure a global economic system that can sustain a population that everyone knows is already too high and is still increasing rapidly. The issue of "carrying capacity" is at the forefront of human sustainability, as scientists try to determine just how many people the earth, or a region of the earth, can support indefinitely (Brown et al, 1987) However, social sustainability is more easily understood

on a smaller scale, as distinct groups of individuals, in the form of companies, cultural groups or other societal structures, strive to find ways to become sustainable despite existing on a planet that is not.

Economic sustainability is particularly difficult to define because there is no model for economic sustainability that a majority of economists can agree is plausible and realistic. Proponents of economic sustainability hypothesize that in contrast to traditional economic views, the global economy cannot grow forever, and some sort of control mechanism must be implemented to ensure that the economic system continues to function without any great upheaval or collapse. Some analysts envision a Zero Economic Growth (ZEG) model, where the economy stays in its current state and stops expanding, but others believe this would eventually lead to economic collapse, a frightening idea and a conclusion that defies the entire concept of sustainability (Brown, Hanson, Liverman, & Merideth Jr., 1987). As a result, many experts dismiss the concept of economic sustainability. This disagreement is probably a significant factor that prevents many businesses from trying to become sustainable organizations; with so much conflict over whether steady growth or zero growth is the solution, the status quo prevails.

In the current economic recession many business managers are learning that their companies cannot survive without significant financial cutbacks, so companies are becoming leaner and more efficient to avoid closing or collapsing. This growing concern for economic sustainability should fuel ecological sustainability innovations as well, since emissions-reducing practices in corporations have both financial and environmental benefits. Within organizations experiencing employee retention problems or employee

wellness issues, the idea of human and social sustainability is becoming increasingly important, but often the costs associated with the maintenance of human capital can be daunting. In addition, corporations that rely on the economies of developing countries to support their businesses either through the supply chain or as end users of their products now realize they have a responsibility to ensure that these people have their basic needs met, else they will not have humans to either make or consume their products.

According to some critics, our economic system is "inextricably intertwined with and dependent on the ecological system" (Jennings & Zandbergen, 1995), so organizations must consider the environmental impacts of their activities in order to sustain their operations. Thus, realizing the goal of economic sustainability depends on addressing issues of ecological and social sustainability as well, and since environmental and social problems are so immense, they have the potential to subvert the global systems and resources that so many businesses rely on to maintain profits. As a result business owners must consider reinventing their operations to become sustainable on all levels. These three aspects of sustainability combined create meaning for organizations that are learning not just how to incorporate the word into business reporting, but how the existence of their business depends on successful adoption of sustainable business practices.

2.2 First Nations Definition

First Nations people are arguably the only identifiable group in North America for whom sustainability is a way of life, and has been for countless generations. Embedded in the culture of many First Nations people is the idea that resources should be consumed with consideration for people seven generations to come (Kuhn & Duerden, 1996). Their

care for and connection with nature sets an example for those who believe sustainability is not possible for whole societies. In Canada in particular, businesses are recognizing the First Nations' holistic understanding of sustainability and working with native bands to learn how to sustainably manage their business (Evans & Goodjohn, 2008). The accessibility of this 'traditional knowledge' gives depth to the definition of sustainability and presents a significant opportunity, especially in North America, for companies to begin achieving important sustainability goals in their organizations.

2.3 Industry-specific definitions

How industries define sustainability really depends on what it means to the companies within those industries and how they choose to embrace sustainability concepts in their day-to-day operations. Beyond the widely cited WCED definition, sustainability must also have an associated meaning that allows organizations and societies to create a picture of what they want their futures to look like. In North American society, it may be difficult to imagine sustainability as a holistic ideal when the value of individualism is so prevalent in our culture. Consumerism in the minds of many is a 'must have,' not a 'want,' and thus the idea of preserving some of our resources for the use of future generations is a concept some citizens of developed countries reject, assuming either that the earth will never be depleted of the resources needed to keep humans alive for years to come, or that researchers will derive a solution to the problem. However, different industries and companies have tried to define the term and describe its meaning as it relates specifically to their business, and perhaps this narrower definition has allowed for some success in achieving sustainability-related goals.

The World Commission's original definition of sustainability is still used in industries and businesses as a starting point for the implementation of strategic sustainability initiatives. Organizations have learned that "the meaning of the term is strongly dependent on the context in which it is applied and on whether its use is based on a social, economic, or ecological perspective" (Brown et al, 1987). For the retail sector, recycling and waste reduction are often key components of their definition of sustainability, since they are in the business of producing millions of products for consumption and eventually, waste. Canadian grocery giant Loblaw, for instance, plans to decrease the amount of store waste that goes into landfills to just 30% of total waste, a goal that would undoubtedly please environmentally conscious consumers and likely minimize disposal costs (Birenbaum et al, 2009). Industries that offer a service, such as consulting firms, rather than a tangible product, may look to employee wellness and energy efficiency to form major parts of their definition of sustainability, since human resources and office facilities rather than product manufacturing costs make up the majority of their business expenses. Bank of Montreal maintains a commitment to advancing Aboriginal causes and is also dedicated to maximizing energy efficiency in its new builds and building retrofits (Birenbaum et al, 2009). By answering to the call for sustainability companies like Loblaw and Bank of Montreal gain positive publicity from finding a meaning for sustainability that is operationally feasible and also benefits their respective organizations.

2.4 Consumer Demand

Sustainability as an aspect of Corporate Social Responsibility has become not just a business trend, but an expectation from consumers and other stakeholders. As emissions

regulations and other environmental laws become stricter, companies must incorporate more sustainable business practices into their operations just to remain compliant with law. Beyond compliance, however, consumers are increasingly demanding strategic proactivity from organizations that are not striving to be sustainable, and 'green shoppers' are a rapidly growing population segment that unsustainable companies stand to lose (Bearse et al, 2009). Green consumers demonstrate remarkable product loyalty, and "once someone has made the switch to a green product, they are very likely to stick with it and buy it regularly" (Bearse et al, 2009). Therefore, they are a market segment of increasing interest to businesses that want to remain competitive and increase market share for their products and services.

2.5 The Sustainable Organization: An Example

The composition of a sustainable organization can take several forms, but key to its success is the understanding that its economic position relies at least somewhat on its ecological impact and that of the industry in which it operates. Active participation in industry associations, in part to encourage sustainability among competitors and perhaps stir some competition to see which companies can be more sustainable, is important because it signals to consumers that there is potential for entire industries to shift away from unsustainable business to sustainable operations. Electronics giant Best Buy, which is part of a retail sector that produces millions of tons of products that are very difficult to break down and reuse or recycle, has done what it can to address sustainability in its operations despite being the largest player in an unsustainable, wasteful industry. To remain leaders in retail electronics, Best Buy responded to the demands of its environmentally concerned consumers by instituting significant electronic waste

recycling programs, which dwarfed the efforts of competitors such as Wal-Mart (Best Buy, 2008). To encourage the electronics industry to act with more environmental and social responsibility, Best Buy imposed strict audits on the companies it used to recycle its e-waste and on the suppliers that manufactured its products, to ensure that electronics parts on both sides of the supply chain were properly handled (Best Buy, 2008). However, Best Buy still faces the daunting challenge of how to become a sustainable organization in such a wasteful industry. As with any company, a well-defined concept of sustainability as it relates to the organization must also be built and institutionalized (Jennings & Zandbergen, 1995). Then, massive organizational change has to occur, going beyond well-intentioned recycling initiatives and carbon offset purchasing; the shift has to be broad, strategic, and transform the organizational system (Jennings & Zandbergen, 1995). For large corporations like Best Buy, such a transformation is very difficult to make systemic. It is similarly challenging for post-secondary institutions.

3: The Ethical Foundations of Sustainability

Sustainability is increasingly becoming a part of business ethics dialogue. Whereas a common view of business ethics pays homage to Milton Friedman's claim that the only social responsibility of business is to increase its profits while maintaining compliance with the law, others recognize the tremendous impact that corporations have on environmental, social and economic systems and believe that it is the responsibility of businesses to sustain those systems indefinitely. As a result businesses have seen the emergence of the triple bottom line, that is, the development of a concern not only for economic profits but also for the well-being of the environmental and social systems that support those companies (Crane & Matten, 2007). Because businesses rely upon the existence of these systems and arguably have the largest amount of control over them, companies have an ethical responsibility to ensure that the systems operate in a way that can be maintained in the long term.

Organizations that now incorporate sustainable values recognize, at least to some extent, the power and responsibility they have to ensure sustainable development. However, some organizations, such as General Electric, see sustainability as a mechanism for competitive advantage, and strive for it so long as it increases the bottom line (Regani, 2007). Other organizations like Mountain Equipment Co-op claim that their sustainability initiatives are first for the good of the planet and that profits are of lower priority (Mountain Equipment Co-op, 2009). Such variation in rationale incites much debate on the part of would-be whistleblowers and sceptical consumers, who disagree

about the underlying ethics of corporate sustainability initiatives and the real intention behind them. Nevertheless, most critics still see any action as good action even if its social and environmental effects are marginally small.

For any potentially sustainable organization, both profits and social and environmental responsibility are important, and it will always be arguable whether it is more effective for one to take precedence over the other. For this reason it seems unfair to demand that organizations demonstrate an ethical orientation that focuses on sustainability for profit versus sustainability for the good of the planet, since there are several examples of both kinds of companies making significant progress towards being sustainable organizations.

4: Sustainability in Post-Secondary Institutions

Universities may look to the organization University Leaders for a Sustainable Future (USLF) for a definition of sustainability that encompasses more than just the sustainability of the organization itself:

> "Sustainability" implies that the critical activities of a higher education institution are ecologically sound, socially just and economically viable, and that they will continue to be so for future generations. A truly sustainable college or university would emphasize these concepts in its curriculum and research, preparing students to contribute as working citizens to an environmentally healthy and equitable society. The institution would function as a sustainable community, embodying responsible consumption of energy, water, and food, and supporting sustainable development in its local community and region." (University Leaders for a Sustainable Future, 2008)

The key difference between a higher education institution and a typical business is the idea that forming a community, or a group of individuals dedicated to a common purpose such as sustainability, is a necessary component of a sustainability model for colleges and universities, which are in turn an important part of larger social, geographical and economic networks. The freedom of thought typically promoted at universities is a valuable asset in the quest for sustainability, as university thinkers can be encouraged to

innovate with regards to responsible consumption and sustainable development, and ideas that either defend or contradict sustainability initiatives should be discussed within the university community. Community members may or may not be fully committed to the process of becoming sustainable organizations, but the contributions of those who disagree with the movement are still important insofar as they help prevent those who are deeply involved from being too idealistic. Nevertheless, the existence of a community atmosphere within the university is crucial to influencing the external communities beyond the organization.

Universities are often well-established institutions with long histories of innovation and research and as such are important parts of the cities in which they are located, but their impact extends globally, as the scientific, technological and humanitarian work done at universities has helped people better understand the world in which they live. In this sense, regional and global communities form around post-secondary institutions, in part evolving from the work that is done in higher education. Since universities are already understood to be one of the main conduits for new innovations, they are a natural choice to be leaders in all aspects of sustainability as it becomes such an essential part of society.

4.1 The University Status Quo is Not Sustainable

Universities have existed for hundreds of years, and as educational organizations they are certainly sustainable, since access to formal education and research fuels the global economy, advances society, and allows people to understand more about their world and what may exist beyond. These three crucial functions of the university mirror economic, social, and environmental responsibility, making higher education institutions a potentially powerful force for the advancement of sustainability initiatives worldwide.

However, despite their lasting power, much of what universities do is unsustainable. Operations, including materials and energy usage and space utilization, can be wasteful, especially in older institutions where buildings are aged and energy retrofits have not been done or were done according to standards that are now out of date (van Weenen, 2000). Education for sustainability is still not holistic enough, with many programs only having a course or two that specifically outlines how sustainability relates to a given discipline. A lack of action and commitment from university management can negatively affect sustainability efforts at lower levels of the organization. A mission statement that does not address issues of sustainability also creates a psychological barrier to action; the status quo remains as long as sustainability is not a part of organizational strategy (van Weenen, 2000). In this state, the university may remain, but the resources, environmental conditions, and the population required to support it may not persist, making it even more important for colleges and universities to become leaders in organizational sustainability and involve local communities in their journey.

4.2 The Sustainability Movement in Higher Education

If colleges and universities are seen as not only educational institutions but also as communities that shape the people who shape the future, then there is no better setting in which to nurture and fully adopt the concepts of sustainability. At a high level, hundreds of post-secondary institutions have indicated concern for sustainability and recognized the power of universities to influence the evolution of sustainable communities through several official declarations. Early declarations, such as the Tsibili Declaration of 1977, focused primarily on environmental concerns, in keeping with the ecological trends of the era (Wright, The Evolution of Sustainability Declarations in Higher Education, 2004).

The most significant of these declarations was the Talloires Declaration of 1990, which was signed by 265 university presidents and chancellors and still stands as formal recognition of the aspiration of post-secondary institutions to influence people to make sustainability central to their value systems and transfer those values to the economy and to society (Calder & Clugston, 1999). Although several similar declarations have been signed by university leaders before and since Talloires, it is significant because it was the first symbol that university administrators were concerned about sustainability on a global scale. The declaration includes ten actionable steps universities can take towards becoming sustainable organizations; Table 1 below summarizes the ten steps included in the Talloires Declaration. The Talloires Declaration is maintained and upheld by University Leaders for a Sustainable Future, and its signatories have grown to over 300 institutions, including British Columbia's Simon Fraser University and the University of British Columbia (University Leaders for a Sustainable Future, 2008).

The Talloires Declaration Ten Point Action Plan	
1.	Increase Awareness of Environmentally Sustainable Development
2.	Create an Institutional Culture of Sustainability
3.	Educate for Environmentally Responsible Citizenship
4.	Foster Environmental Literacy for All
5.	Practice Institutional Ecology
6.	Involve All Stakeholders
7.	Collaborate for Interdisciplinary Approaches
8.	Enhance Capacity of Primary and Secondary Schools
9.	Broaden Service and Outreach Nationally and Internationally
10.	Maintain the Movement

Table 1: The Talloires Declaration Ten Point Action Plan

Source: University Leaders for a Sustainable Future, 2008

5: The Sustainable University

A number of scholars have developed models of what a sustainable university might look like. All of them recognize the community or society external to the higher education institution as a crucial contributor to organizational sustainability. There is necessary collaboration between the population that the university serves and the university itself, for progress towards sustainability to be made. Hans van Weenen, a professor at the University of Amsterdam, coined the term 'Sustainity' to refer to an educational institution that has become economically, ecologically and socially sustainable (van Weenen, 2000). He notes that such an institution does not exist, but that many schools, including Canada's University of Waterloo, have implemented sustainability initiatives on various levels of the three pillars of sustainability, with much success. However, according to van Weenen, no higher education organization has yet to build a sustainable virtual university network, successfully incorporate sustainability into its mission statement, build interdisciplinary commitment to sustainability throughout the organization, pass that knowledge and dedication on to students, ensure maximum energy efficiency and waste reduction, and operate this way while embedded in a society, or local community of residents and businesses, that is also sustainable.

Velazquez et al. have presented a unique reciprocal model for sustainability in higher education where four key components of universities, education, research, community outreach, and on-campus initiatives, interact and innovate to make sustainability a meaningful goal (Velazquez et al, 2006). Though the model is essential,

more important is the top-down, phased approach to sustainability that the authors recommend. Operational sustainability initiatives cannot be successful if they are not incorporated into specific, strategic motivators that become part of the university system. Grassroots, bottom-up initiatives can be beneficial to both internal and external communities, but in most organizations need upper management buy-in in order to be successful (Bray, 2008). For sustainability initiatives to succeed, both top-down and bottom-up approaches are important. Key for higher education institutions is the recognition of the impact they have on society, and that they should take some responsibility "to help society make the transition to sustainable lifestyles" (Velazquez et al, 2006). This responsibility should be empowering rather than daunting, because the claim that universities must become leaders in sustainability also implies that they are in the most respected position to do so.

In turn, sustainable organizations will necessarily influence and be influenced by local communities and regions, and as such cannot act in isolation but must participate in regular exchange with the local environment (Jennings & Zandbergen, 1995). Post-secondary institutions because of their focus on education and research are natural nuclei for this type of learning exchange, and those schools that innovate successfully will have greater influence on their surrounding communities, can innovate through networking with other sustainable universities, and will become models for other organizations to follow.

6: Universities' Unique Opportunity: Fostering Sustainability Beyond the University

Because of their connections to and influence on the communities in which they operate, post-secondary institutions can be catalysts for societal action on sustainability. Universities have a considerable, yet perhaps unrecognized, impact on society, and with regards to sustainability can foster an evolution in value systems beyond their internal operations. This section discusses the relationship between higher education and consumer demographics, and describes examples of universities that have successfully fostered sustainability in both their internal and external communities.

6.1 'Green Shoppers' and Higher Education

A recent Deloitte study, funded by the Grocery Management Association, revealed new information about the increasing numbers of 'green shoppers,' or consumers who purchase sustainable products (Bearse et al, 2009). Although the study was developed from a retail and not an educational perspective, it nevertheless offers some insight into the type of consumer who is sympathetic to environmental and social concerns, and thus identifies those who universities might target as part of a goal of creating more sustainable communities both internal and external to the organization.

According to Deloitte's surveys, 95% of consumers would buy green products given comparable quality, availability and price, but just 22% of respondents actually bought green (Bearse et al, 2009). This 73% gap represents a group of consumers who may care enough about sustainability to consider making green purchasing a part of their

lifestyle, but currently do not make sustainable purchases for either financial reasons or because they don't know where to find the products or which products to choose. These consumers may be open to being educated about sustainability in partnership with local colleges and universities, which in turn could create a higher demand for green products and ultimately drive prices down, eliminating the cost barrier. The number compares with the 67% of Canadians who are believed to be receptive to the idea of sustainability and may only be looking for credible leadership to convince them to embody sustainable values (James Hoggan & Associates Inc., 2006). Here is where colleges and universities may bridge the gap, recruiting green sympathizers, providing leadership, and graduating students who are committed to forming sustainable communities. Although some community members may still dispute the value of educating for sustainable living, commitment from universities will still have a tremendous positive impact on their surrounding communities. Their efforts might not be sufficient to reverse the effects of unsustainable living, but they should create momentum and inspiration for more organizations to act sustainably.

Because higher education institutions have traditionally been "deeply involved in providing expertise for an 'unsustainable' world economy" (Calder & Clugston, 1999), they are partially accountable for the shopping and lifestyle decisions this new generation of consumers makes, and thus these consumer habits are an important influence on how universities approach the goal of creating sustainable communities. Post-secondary institutions can target a very large segment of individuals who are sympathetic to the issue of sustainability in an effort to influence not only shopping decisions but lifestyle choices. They can begin to provide expertise for a new, local economy, demonstrating

social and environmental responsibility and hopefully being influential towards both local and international populations.

Educational institutions have a unique opportunity to break down some of the barriers to sustainability that all organizations face, by becoming representative models for sustainability and creating a community atmosphere that can demonstrate how each individual's contribution is part of a larger effort. Especially in large, government-funded institutions, significant achievements in sustainability not only support the community atmosphere within the organization, but also demonstrate to the public that organizations can be trusted to make the right decisions to move towards sustainability through a collection of efforts by their students, employees, and managers. In turn, post-secondary institutions can become motivators for businesses to become more sustainable, as colleges and universities begin to produce more consumers who demand green products and share a vision of a sustainable planet.

Despite so many barriers preventing higher education institutions from moving towards sustainability, many university leaders and researchers realize that post-secondary schools "bear a unique responsibility for sustainable management...[they] represent the cutting edge of knowledge and ought to be forward thinking institutions" (Shriberg, Toward sustainable management: the University of Michigan Housing Division's approach, 2002). Despite substantial barriers to sustainability at post-secondary institutions, many universities have embraced the responsibility to be proactive and incorporated sustainability into their core operations and into their curriculum. Fortunately for these institutions, consumer demand is not the only motivating factor; students often bring a sense of idealism to their research, and faculty researchers are

increasingly recognizing the need for sustainability in business and in society. Many programs are student-led, which benefits schools from a cost-saving perspective but also represents a strong internal change driver (Wallace, 2009). The combined pressure of consumers, students, and faculty necessitates action on the part of colleges and universities to adopt sustainability policies and find innovative ways to embrace a new way of thinking about how our current lifestyles will affect future generations.

6.2 Some Examples of Sustainability in Higher Education

Because there are so many factors that drive sustainability management at colleges and universities, including "an obligation...to pursue management for sustainability" (Shriberg, Toward sustainable management: the University of Michigan Housing Division's approach, 2002), there have been many attempts to incorporate sustainability into the university system.

For example, the University of Michigan's Housing department aims to be completely sustainable, purchasing no more material for its operations than it can safely return to the earth. To get there, the department recognizes the need to involve top-level management in the development of a sustainability mission statement for the department, in part to help fully institutionalize an understanding of the importance of this goal. Having dedicated staff to oversee implementation of the program is also key. The department reaffirms the importance of a community model, noting that the "impacts of decisions on non-organizational stakeholders, as well as society as a whole, must be considered in evaluating actions" (Shriberg, Toward sustainable management: the University of Michigan Housing Division's approach, 2002). Although at the time of writing Housing had not reached its goal, recognition of the process, and constant

evaluation of progress, was clearly outlined. The Housing Department at the University of Michigan appears to be following a process model very similar to what van Weenen suggests is necessary for universities to move towards sustainability.

Often, student-led programs generate some momentum at institutions where faculty and staff sympathize with sustainability concerns. The Student Environmental Action Coalition (SEAC), a national student organization in the United States that focuses on campus greening, has had success at some universities, implementing recycling programs and motivating staff to take part in grassroots projects (Lounsbury, 2001). SEAC is networked with academic institutions across the United States, and their members are leaders in developing operational campus sustainability, some of them finding employment in sustainability departments at the universities from which they graduate (Lounsbury, 2001). SEAC was found to be highly influential at creating lasting recycling programs at universities where it had a strong presence, but its effect on addressing other aspects of sustainability is unclear. However, organizations like SEAC seem to be excellent groups to help post-secondary institutions implement ecological sustainability programs at the operational level and promote greener practices for all members of the campus community.

7: General Barriers to Sustainability in Organizations

Although several groups such as SEAC have successfully taken steps to make colleges and universities more sustainable, higher education institutions still face many of the same barriers to sustainability as other organizations do. To understand the obstacles that face all organizations looking to become sustainable, a discussion of general barriers to sustainability is worthwhile. The most common impediments for companies, higher education institutions, and individuals are described below, and include cost, mindset, mistrust and isolation, and the contradiction between sustainability as a process versus an end goal.

7.1 Cost

Organizational barriers to sustainability cannot be considered without a discussion of cost. A great misconception about sustainability is that it is expensive, and therefore the perception of cost becomes a significant barrier for many organizations. In fact, many companies that chose to "go green" in the early days of environmental awareness did not see the potential for both profit and reduced operating costs from implementing sustainability initiatives, but to their credit, not as much affordable technology was available two decades ago to help them. Even the executives at Wal-Mart, who are credited for an early if not half-hearted effort to be 'greener' in the late 1980s, saw some increased revenue potential in green products but claimed it could not make any money being sustainable (Denend, 2007). However, the state of today's economy requires businesses to be much leaner in terms of their operations and their spending, and some companies are finding that maintaining a commitment to environmental sustainability is

having positive results on their bottom lines (Berry & Rondinelli, 1998). As more organizations begin to rule out cost as a barrier to sustainable practice, a greater commitment to sustainability initiatives should begin to emerge. Cost as a barrier to sustainability will become less of an issue as companies compete to be more sustainable to meet consumer demands, and owners realize that not being sustainable is likely to cost them their business. However, it will still be difficult to completely rule out cost as a barrier to sustainability, since the attitude that it is costly to 'go green' is still predominant in corporate culture.

For colleges and universities, whose budgets rely primarily on government funding, cost as a barrier to sustainability cannot be ignored. With a limited budget, universities must find a way to incorporate sustainability initiatives without cutting other valuable programs. If governments do not support universities' sustainability agenda with dedicated funding, careful reallocation of money needs to take place. Cost savings from increased energy efficiency may be put towards on-campus sustainability programs or sustainability curriculum development; alternatively, universities may need to raise funds from private donors in the community who share a commitment to the issue. However the money is raised, restrictions on funding allocation within the institution may need to be relaxed so that funds can be moved among departments and reallocated more easily. It requires a systemic shift in the way that university funds are handed out to various departments and faculties, one that may be tremendously difficult to accomplish.

7.2 Mindset, Mistrust, and Isolation

In a report on sustainability by Vancouver-based James Hoggan & Associates, several barriers to taking action on an individual consumer level are discussed, including

mistrust (of government and corporations), mindset (individual efforts have no impact), and isolation (individuals are acting alone) (James Hoggan & Associates Inc., 2006). These barriers that commonly prevent individuals from living more sustainable lives can also create obstacles for organizations.

7.2.1 Mistrust

As consumers demand better CSR from corporations, they also grow more suspect about the authenticity of those initiatives and wonder whether companies are only superficially responding to consumer expectations or whether they actually have sustainability at the core of their corporate values (James Hoggan & Associates Inc., 2006).

To combat consumer mistrust, organizations must develop a clear definition of what sustainability means in the context of their business. Sustainability has already been defined at a high level, but simply applying the WCED definition to the values statement of a business is not enough to signal to stakeholders that the company really understands how it plans to become more sustainable (James Hoggan & Associates Inc., 2006). Some consumer mistrust may be explained by the tendency of companies to focus almost exclusively on environmental aspects in their sustainability strategies and ignore or give significantly less attention to other matters, like social responsibility, that are arguably equally important. Wal-Mart, for example, conducted stringent supply chain audits on their product suppliers in China, but the goal of these audits was to improve energy efficiency and reduce costs and waste, not to ensure that child and forced labour was absent from the factories (Denend, 2007). Such decisions imply that organizational leaders do not share a holistic view of sustainability or have not infused that view into

their operations. For concerned consumers, a company's partial commitment may instil mistrust in the organization and make consumers suspicious of the real reasons for the business's devotion to sustainability.

As mistrust in business grows, so does scepticism about government commitment to sustainability, and this creates barriers for government-funded organizations such as colleges and universities. In Canada, it is not difficult to see why Canadians would not trust federal dialogue about sustainability, as despite its rhetoric the government has not demonstrated much action on sustainability. In fact, Canada has made very little progress towards its Kyoto targets since the government announced its commitment to the protocol, actually increasing its emissions in 1999 by 2% (Karimi, 2005). Dialogue between federal and provincial governments is proving futile, and Canada has done very poorly on its emissions management even in comparison with the United States, allowing its total emissions to increase substantially despite a decrease in emissions intensity (Rabe, 2007). Meanwhile, the Alberta Tar Sands continue to be an important revenue generator for Canada, while also crowned as the least efficient and most polluting oil extraction project in the world (Hatch & Price, 2008). If there is so much hypocrisy at the government level, and higher education institutions are funded by the government and are essentially government institutions themselves, then it should be no surprise that Canadians would not trust colleges and universities to either become sustainable or be able to produce graduates who are committed to sustainability. As long as universities are not leaders in sustainability, they will not be trusted to produce those leaders either, so this barrier is particularly significant for higher education.

7.2.2 Mindset and Feelings of Isolation

Awareness about sustainability issues is growing, and it is needed in order to make change, but that awareness is also what makes both individuals and companies complacent. Instead of consciously shifting their values, many consumers and business leaders maintain the attitude that doing something is better than doing nothing at all. In Canada, the government reinforces the attitude that significant change is not needed now because Canada's environmental stewardship is already admirable; however, this is not the case, as Canadians are among the world's biggest consumers of unsustainable resources (James Hoggan & Associates Inc., 2006). Government inaction and individual overconsumption create an isolation barrier for companies that may find they are trying to operate sustainably without the support of either individual consumers or government leaders. The juxtaposition of Canada's complacent mindset with our population's record of overconsumption confuses the meaning of sustainability to Canadians and to Canadian companies, as consumers continue to live unsustainable lifestyles believing that individual actions won't make any difference, and companies in the face of these prevailing consumer attitudes are prevented from moving forward (James Hoggan & Associates Inc., 2006). In addition, individuals stand to look foolish if they completely embody sustainable values alongside others who do not; the fear of being different or strange, or not being integrated into capitalist society, certainly prevents many individuals from living truly sustainable lives even if they are sympathetic to green causes. Businesses trying to become sustainable may also feel isolated from the rest of their industry instead of differentiated for their green efforts.

Related to the mindset barrier to sustainability is the sense that individual efforts are futile because the difference they make to the planet is too insignificant to matter.

There is not a strong enough sense of the impact that our collective efforts really have on the evolution towards sustainable communities. Statistics on emissions and waste reduction are readily available, but the numbers bear little testament to the tangible impact of individual efforts, and as such are discouraging to consumers (James Hoggan & Associates Inc., 2006). Removing these feelings of isolation is dependent on creating a community where individual efforts are expected, where everyone contributes, and where the results are objectively measured. Higher education institutions contain both the human and technological resources to remove this societal barrier to sustainability.

7.3 Process vs. End

Another reason why organizations, including higher education institutions, have not become sustainable may be that sustainability is a process first, and an end goal second. Although many have attempted to visualize what a sustainable university would look like, once it is achieved, there is still work to be done to ensure it remains sustainable; thus, the process never really concludes. Since universities can be very slow to adopt institutional changes, the very act of changing is what becomes most important for higher education; however, the key to management for sustainability is the emphasis on "systemic change in addition to incremental improvement" (Shriberg, Toward sustainable management: the University of Michigan Housing Division's approach, 2002). Constant evaluation of efforts, revision of goals and standards, and regular internal and external dialogue is necessary to move towards sustainability, if indeed it is even achievable. Like any organization, to become sustainable a university first has to break down the barriers and resistance to change that are often deeply institutionalized, sometimes for hundreds of years, at the same time as it attempts to shift those paradigms

(van Weenen, 2000). But the process of becoming sustainable can help define sustainability itself as it relates to the organization, and constant dialogue creates meaning for its participants.

8: Barriers Specific to Higher Education

Despite the pressure, the high-level commitments and various local examples, sustainability is not so easily embraced in the universities themselves, and there are many barriers preventing post-secondary institutions from becoming sustainable organizations. The top-down approach suggested by many researchers actually occurs at very few institutions, and only about 8% of institutions that have implemented sustainability initiatives directly address sustainability in their mission statements (Velazquez et al, 2006). As a result few colleges and universities have managed much success in the quest to become sustainable. In a so-called climate of mistrust with regards to corporate and institutional commitment to sustainability, colleges and universities are uniquely positioned to be either credible representatives of sustainability in action, or dubious symbols of unnecessary wealth and overconsumption.

This sensitive pendulum of public perception could easily swing either way, making it increasingly important for higher education institutions to recognize barriers to sustainability within their organizations and begin to nurture trust from the public. This section identifies key barriers to both higher education institutions and to organizations in general, in order to identify solutions and recommendations for action by colleges and universities.

Not only do universities face the same barriers as companies do, but there are also several unique obstacles to sustainability in higher education that must be overcome in addition to what all organizations face. These include a lack of internal and disciplinary

leadership, the time lag dilemma, resistance to government mandates, and a lack of business management training for university leaders. It is essential for university leaders to see these challenges as opportunities for change rather than barriers if they are to realize the goal of transforming higher education institutions into sustainable communities.

8.1 Internal and Disciplinary Leadership

A lack of leadership in sustainability has been noted in both higher education institutions and private businesses as a significant barrier to progress in sustainability. Although many universities now have dedicated staff and departments that focus specifically on sustainability, a truly sustainable organization embodies these values in every aspect of its operations. Colleges and universities, with designated academic units that often carry out their work in partial isolation from the rest of the organization, face a unique problem in that sustainability must become central to all disciplines *and* be applied across all disciplines, in order for the institution to meet the goal of being a sustainable organization (Calder & Clugston, 1999). Executive leaders, who often have very specific academic backgrounds, may not be qualified to impose a particular application of sustainability to more than one or two disciplines, so the leadership must come from within each academic and administrative unit, the departments taking it upon themselves to incorporate sustainable values into their research and teaching methodology. Because formal recognition of new ideas and programs can take time, the problem of adequate disciplinary leadership becomes a critical dilemma. Regular interaction among disciplinary leaders, although it may stimulate creative thinking, could actually slow down the sustainability innovation process. Therefore, coupled with an

interdisciplinary approach must also be a streamlined approval process whereby new ideas reach students and communities faster.

Related to a lack of disciplinary leadership is variance among definitions and meanings of sustainability from experts in different disciplines. Although variance among personal definitions of sustainability will vary in any organization, the concept is a subject of research at many universities and there is likely to be internal conflict about its meaning from those who might call themselves experts on the subject. Sociologists, engineers, economists and others may disagree on the meaning of sustainability, but this conflict could help form a collaborative, university-wide sustainability strategy rather than a set of divergent opinions that cannot be productively resolved.

To embody the principles of the Talloires Declaration and overcome disciplinary boundaries, post-secondary instructors and researchers must make "ecologically sensitive theory and sustainable practices...central to the scope and mission of their fields" (Calder & Clugston, 1999). True success depends on interdisciplinary collaboration, which is the seventh step of the Talloires Declaration (University Leaders for a Sustainable Future, 2008). There must be active dialogue among all departments that encourages and motivates disciplinary leaders to work together towards a common purpose, which will also mitigate the isolation barrier that occurs when individuals feel they are acting alone.

8.2 The Time Lag Dilemma

Many colleges and universities are organizations mired long chains of hierarchical approval processes and paperwork, with important changes in programming and curriculum renewal often taking several years to complete (Desha, Hargroves, & Smith, 2009). As a result it can be difficult to move quickly towards sustainability as these

organizations need to in order to change public perception, and some universities even find ways to block change, especially when it is mandated (Adomssent, Godemann, & Michelsen, 2007). A flatter organizational structure that provides a platform for interdisciplinary collaboration and faster approval of new programs and curriculum could help reduce the time lag between developing ideas for sustainability and actually implementing them. Where experts agree that our population is running out of time to stop or reverse the effect of industry pollution, greenhouse gas emissions and other human-caused environmental destruction, the planet will not wait for bureaucracy to run its course. Thus, more dialogue is needed within institutions and between schools and regulatory bodies, to encourage new programs to be implemented faster so their impact can be recognized sooner.

The need for disciplinary leadership in universities contributes to the time lag barrier, partly because it requires a drastically different and unique organizational structure to be successful. Increasing dialogue among academic departments may make it more difficult to achieve consensus on sustainability issues and institutionalize the concept; thus, getting the product to market, i.e. current sustainability knowledge to the students and surrounding community, may become an arduous task. Operational structure, including the curriculum approval process that can be quite lengthy, should be streamlined so that the dialogue going on at the universities reaches stakeholders earlier. A complex procedure can frustrate those involved in sustainability dialogue and decrease motivation for change. The world's environmental and social problems may escalate too fast for higher education to get its quickly evolving ideas to surrounding populations.

Good intentions may stagnate, and the Talloires Declaration would remain little more than names on paper.

8.3 Resistance to Government Mandates

Although government legislation may be the only way to force corporations to act more sustainably, leaders of post-secondary institutions may be resistant to similar government mandates that go beyond mere compliance with the law. Like many organizations, universities are typically resistant to change, even though the university structure and its role in society makes it a perfect hub for action on sustainability. The predominant view is that "once established...[university] activities may stay the same for years as long as the university is attracting good students, and faculty members are conducting successful research" (Ferrer-Balas, et al., 2008). The perception that a university is sustainable if it meets those two qualifiers is a narrow view, but nevertheless one that may present a barrier if colleges and universities are mandated to implement sustainability initiatives.

8.4 Lack of Business Management Training

Much criticism has been directed at the trend toward operating government institutions such as universities like corporations, where cost efficiency, response to market demand, and competition are paramount concerns (Box, 1999). There are certainly flaws with this outlook, but from a sustainability perspective it is important to consider the educational institution as a business where efficiency is important and outcomes are quantifiable and regularly evaluated. The real problem with operating

universities like businesses is the lack of business perspective that university leaders need to manage higher education institutions efficiently and effectively.

University executives typically come from academic disciplines, rise up through the ranks of the university until they become administrators, but never formally learn how to manage a business or any large organizational system. The innate skills of managing people and relationships are often present and are crucial to successfully managing a university for sustainability, but formal training on managing systems and organizations is sometimes lacking (Eley, 1994). This can leave university leadership floundering, trying to save face while going through the motions of running the institution as directed by the government, but without the business expertise or knowledge to understand how the organization is operated and why that set of operations was chosen. This lack of knowledge is an important barrier to universities becoming sustainable organizations. University leaders must understand how sustainability can improve their organizations from a business perspective, including the financial, human resources, and public relations benefits and implications.

Colleges and universities, like any other organization, have stakeholders who they must answer to. In fact, higher education institutions arguably have more widely varying groups of stakeholders than most for-profit companies do. The sixth actionable step in the Talloires Declaration is to "encourage involvement of government, foundations, and industry in supporting interdisciplinary research, education, policy formation, and information exchange in environmentally sustainable development" (University Leaders for a Sustainable Future, 2008). Colleges and universities must answer to government, students, businesses, donors, other colleges and universities, and professional

organizations. In this sense it becomes even more important for executives to understand the university as a business entity, responsible for appropriately distributing funding, operating as efficiently as possible, producing products and services (graduates and research), responding to societal and economic trends, and appropriately managing revenues and costs. At its core a post-secondary institution is like any other business, but is usually not operated by businesspeople (Eley, 1994). Without the skills and knowledge required to answer to a multitude of stakeholders, it may be unreasonable to expect that sustainability as a business and operational strategy could be successfully incorporated into an organization entrenched in a way of thinking that is no longer consistent with society's demands, whether it be a university, an NGO or a for-profit company. It is especially important for post-secondary leaders to be able to address the needs of all interested parties and involve them in the process of becoming sustainable, and business knowledge can help. By learning to respond appropriately to stakeholders and run a university effectively, some business training for executives along with an ability to understand the distinct perspectives of each group is crucial.

Although many post-secondary institutions are attempting to transcend the barriers that prevent them from becoming sustainable organizations, colleges and universities have approached the situation in different ways with widely varying results. The next section provides some rationale for why sustainability works differently across organizations and how several schools have prioritized their commitments.

9: Variance Across Organizations and Factors Correlated with Success

There is substantial variance across colleges and universities with regards to their commitment to sustainability initiatives. Among institutions that have signed the Talloires Declaration, some have taken almost no action to legitimize their high level commitment to sustainability by implementing the Declaration's actionable steps (Wright, Definitions and Frameworks for Environmental Sustainability in Higher Education, 2002). Several institutions that are not signatories of the Talloires Declaration have nevertheless written sustainability policies and implemented successful programs (Wright, Definitions and Frameworks for Environmental Sustainability in Higher Education, 2002). Still others only react to the idea of sustainability as more of a trend or a cost-saving measure; they create web pages that divulge their environmental activities but do not demonstrate an institution-wide commitment to becoming fully sustainable organizations. Okanagan College, a public post-secondary institution situated in a dry region of British Columbia that frequently experiences water shortages, could emerge as a leader in sustainability initiatives for the Thompson-Okanagan. However, with no formal commitment or declaration to make it accountable for its action on sustainability, Okanagan College's efforts are almost solely environmental projects focusing on low-cost activities like creek cleanup (Okanagan College, 2009). However, even among those institutions that have signed declarations inking their recognition of the need for

universities to be leaders in sustainable innovations, very little concrete results can be found.

The Halifax Declaration follow-up survey conducted by UBC graduate student Tarah Wright revealed that variance across Canadian institutions was related to the availability of capital funding to support sustainability initiatives and the dedication of senior administrators to the cause (Wright, A Tenth Year Anniversary Retrospect: The Effect of the Halifax Declaration on Canadian Signatory Universities, 2003). Those universities with leaders who were particularly concerned about or had done extensive research in the area of sustainability were more likely to have implemented the Halifax Declaration's plan for action. With dedicated funding already in place, post-secondary institutions will more easily embrace sustainability initiatives even where cost should not be a substantial barrier.

A large piece of the explanation for variability in sustainability initiatives across organizations is the presence of dedicated staff members to oversee sustainability programs and lead the organization through its changes. In institutions such as UBC, where sustainability is a key component of research and innovation and many staff are dedicated to the movement, more institution-wide commitment can be observed. The school is developing a "Sustainability Academic Strategy" and inviting consulting from the university community and external contributors; UBC was also the first university in Canada to implement a sustainable building policy (University of British Columbia, 2009). These examples are indicative of a systemic transformation within the university community, especially because the high-level commitment is accompanied by transparent data about UBC's successes in emissions reduction, cost savings through energy

reduction, and other quantifiable initiatives. In other organizations such as Okanagan College, where grassroots sustainability initiatives are taken on by concerned staff members with extra time to devote to the issue, creating buy-in is more difficult, and sustainability programs are small, unfunded, unmeasured, and have very little impact on the organization as a whole.

Publicly funded higher education institutions also tend to have different approaches to sustainability than private colleges and universities. Typically, accreditation and curriculum approval procedures for private institutions are less stringent and formal, meaning that curriculum changes can generally be implemented more quickly. This opens up opportunity for private schools to experiment with innovative courses and respond to changing consumer expectations about sustainability. Sustainability education is still hard to find in Canada, with only a few post-graduate diplomas available to potential students seeking skills and knowledge on the subject. For the most part, formal education about sustainability is incorporated into full degree programs, which are not a realistic option for much of the general population. Because private institutions offering certificate and diploma programs can create and implement new curriculum faster than publicly funded institutions, they may be at an advantage to lead the movement towards sustainability in higher education.

With so much variance across higher education institutions with regards to implementation of sustainability initiatives, it is clear that most organizations have not developed a workable model or vision of what a sustainable college or university would look like. Although several theoretical models exist, there is no one-size-fits-all solution that can simply be applied to an organization. However, the common thread among all

discussion of sustainability in higher education is the idea that universities must create internal communities and interact with external communities in order to become sustainable and successfully influence societal systems to do the same.

10: Towards a Community-Based Model for Sustainable Higher Education Institutions

Though most research on sustainability in higher education points to the university as a hub for community action and participation, existing models do not adequately incorporate the local environment. Velazquez's model includes community outreach as a factor in the sustainable university, but the college or university also needs to be a central hub for its local community and the activities of that population so that people look to their local post-secondary institution for ideas, motivation, and resources to make their communities more sustainable (Figure 2). Community outreach is what makes Velazquez's model feasible and is arguably the most important component.

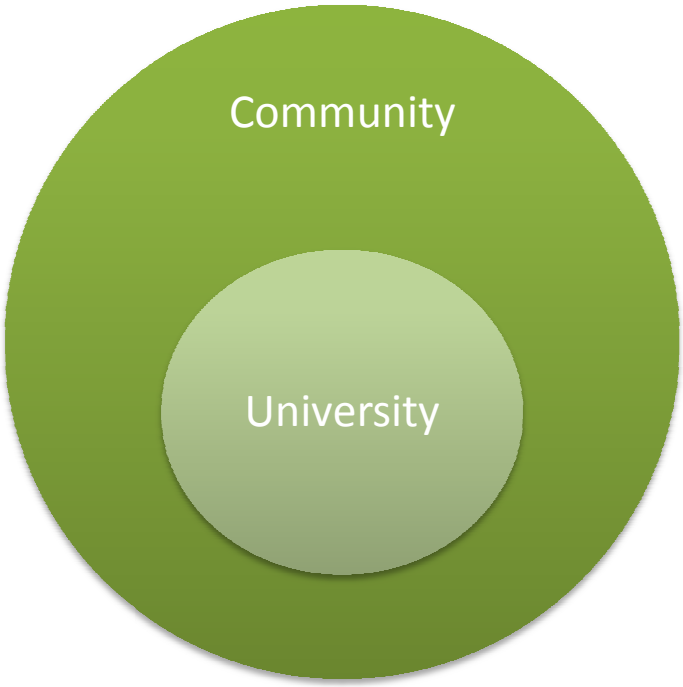

Figure 1: The Community Hub Model

As the university graduates its students into the workforce, these individuals become lines of communication between the activities of the university and the activities of the community, keeping the goals and objectives of both units in parallel. Meanwhile, post-secondary institutions remain aware of what other colleges and universities are doing with regards to sustainability, making sure to draw comparisons and regularly evaluate their own and each other's progress (Figure 3). A simple networking model shows how higher education institutions can interconnect and progress faster towards being sustainable organizations.

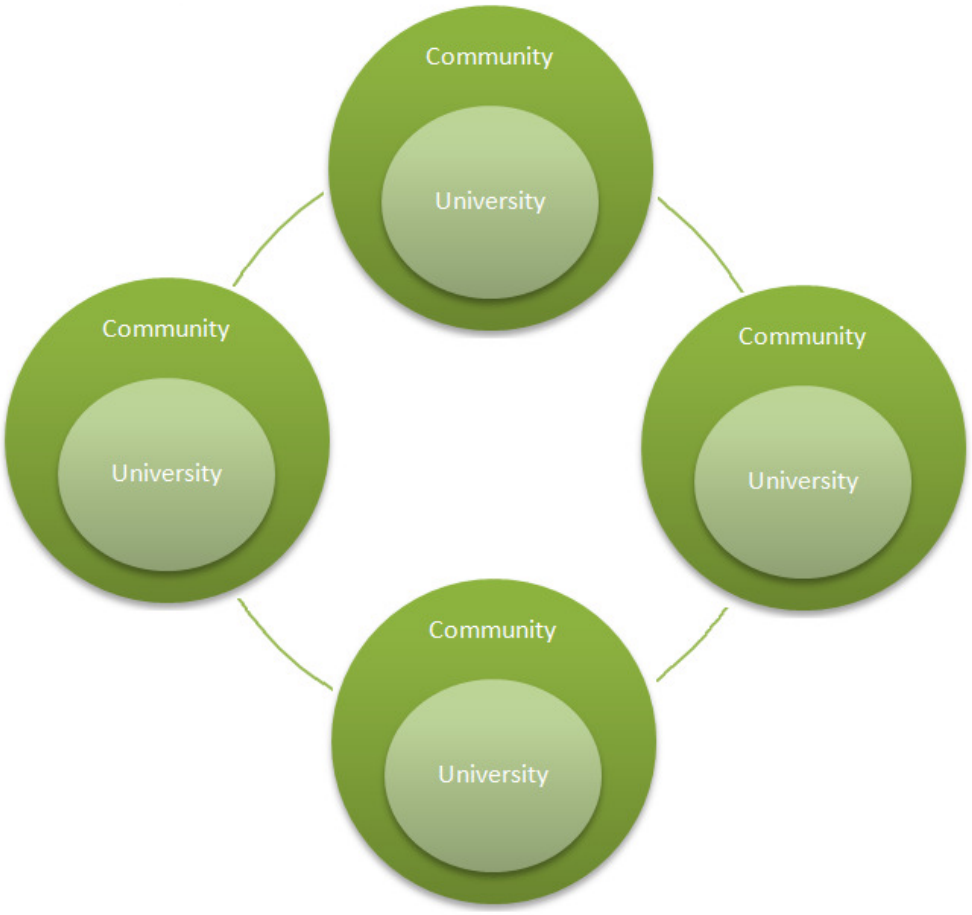

Figure 2: The University Network Model

Regular communication between schools also allows graduating students to find other community-university networks in other locations should they choose to leave the community serviced by their alma mater. Although local activity is a key component of any sustainability initiative, the issue is a global one and innovation must be transferable to other locations.

There are many reasons why colleges and universities should be central to the economic, social, and ecological activities of their surrounding communities. Besides offering current education and research related to sustainability, the diversity of university employees presents enormous potential for the exchange of new ideas and information both within and outside of the organization.

11: Solutions

Although some scholars argue that educated people are in large part responsible for the degraded state of the planet, through their skills and knowledge they also have the greatest capacity to reduce or even reverse the damage (Wright, The Evolution of Sustainability Declarations in Higher Education, 2004). The following section describes several recommendations that could lead to solutions to the obstacles colleges and universities face in the quest to become sustainable. The proposed solutions include enhanced measurement and benchmarking systems to ensure that sustainability initiatives have significance, an assurance of campus-wide dedicated staff, and an incentive structure that motivates faculty and staff to embody sustainable values in their everyday work. A structure for a model institution is also suggested, as is a perspective on goal-setting for these organizations.

11.1 Enhanced Measurement & Benchmarking

Those companies that strive to be more sustainable organizations need quantifiable data and qualitative measurements to evaluate the impact of their sustainability initiatives, otherwise stakeholders may reject such efforts as either ineffective or fiscally irresponsible. Attempts at measuring sustainability vary among industries and sectors, but overall, companies that strive for sustainability need to use “green metrics” to calculate their environmental impact, and to evaluate their mission, vision and values to determine whether these statements accurately reflect company strategy. Currently, common

measurements of sustainability focus on the ecological side of sustainability and include such data as greenhouse gas emissions saved and amount of materials recycled. Some of these initiatives can be converted into cost savings and can appear to represent the economic sustainability of organizations; these operational efforts are easy to quantify and are included in CSR reports as demonstrative of a commitment to sustainability. Social sustainability is harder to measure, but some companies attempt to quantify social impact through volunteer hours or funding dedicated to social projects and programs. Economic sustainability can be measured through reporting of decreased energy costs and should please financially minded stakeholders who are primarily concerned about the company's bottom line. All of these efforts are intended to help convince stakeholders that corporate sustainability efforts are having a positive impact on the earth and helping to ensure that the planet's resources will remain for future generations to subsist on. However, measuring operational sustainability efforts is not sufficient as an overall evaluation of the success of corporate sustainability programs.

Some analysts argue that a "full cost accounting" approach should be applied to corporations to measure the total cost of doing business, including not just financial aspects but ecological and social elements (Atkinson, 2000). Full cost accounting attempts to monetize the ecological, economic and social impact of a company's operations, including not just the cost of the resources consumed but the value of leaving those resources untouched (Atkinson, 2000). Other evaluation methods include Sustainable Value Added, which instead of monetizing all aspects of sustainability, benchmarks ecological, social and economic indicators and then measures added value against those constants (Figge & Hahn, 2004). The trouble with these methods is that

they are still difficult to conceptualize, and therefore the results of such evaluations may be difficult for all stakeholders to interpret. Thus, being able to measure corporate sustainability efforts holistically and in terms that can be easily understood is a crucial component of stakeholder management that may not yet be effectively addressed.

In order to measure their progress towards becoming sustainable organizations, universities must have appropriate mechanisms to evaluate their successes or failures. With subjective criteria for sustainability, such as interdisciplinary leadership, accurate measurement of the impact of such initiatives can be nearly impossible. Institutional research departments may have inadequate tools for internal evaluation and may not be able to deliver an unbiased evaluation of sustainability initiatives. Thus, universities must somehow be audited to determine how well their attempts at shifting the central purpose of their business and research activities are working, and whether the model of the university as a sustainable community leader is actually evolving. In fact, the Talloires mandate to create sustainable institutions is nowhere near enough of a motivator for action. Few institutions that signed it, or the subsequent Halifax Declaration of 1991 that had a Canadian focus, have realized any quantifiable progress towards becoming sustainable or leading other organizations in the same direction (Wright, A Tenth Year Anniversary Retrospect: The Effect of the Halifax Declaration on Canadian Signatory Universities, 2003). Both proactive efforts and the consequences of inaction must be measured in order to determine the real difference sustainability efforts at universities can make. As with any business, an economic perspective should be used with sustainability assessments, giving a “measure and value...for the rates at which economy consumes

nature" so institutions can see the real impact of both their efforts and their inaction (Shriberg, 2002).

Cross-institutional evaluation methods are useful because they mitigate the complacency factor and don't allow universities to be satisfied with their efforts as long as there are comparable schools doing more. These methods also address variance in sustainability initiatives across organizations and force higher education institutions to evaluate the reasons behind their lack of full commitment to the issues. Shriberg highlights eleven assessment tools for higher education, including Herremans and Allwright's environmental performance survey, which attempts to quantify environmental conservation efforts at North American universities and compares those results across institutions (Shriberg, 2002). The drawback of this tool is its focus on ecological sustainability, which is not sufficient or holistic enough to measure whether an institution is truly sustainable. In fact, most of the evaluation tools identified have significant disadvantages, meaning that a true assessment of sustainability in higher education would require the use of multiple tools and resources and may be too large or expensive of an undertaking for many schools.

Another measurement of sustainability in higher education is the degree to which universities have implemented calls for action in declarations such as the Talloires Declaration or the Halifax Declaration. In 2001, ten years after sixteen Canadian universities signed the Halifax Declaration, those universities were surveyed to determine how well they had implemented the subsequent 40-step action plan created by the Declaration's signatories (Wright, A Tenth Year Anniversary Retrospect: The Effect of the Halifax Declaration on Canadian Signatory Universities, 2003). The results revealed

that most of those who completed the follow-up surveys indicated that their university had not taken any of the steps outlined in the action plan, or if it had, they could not describe how (Wright, 2003). The study clarified that better concrete assessments of sustainability in higher education were needed to influence universities to act on their high-level commitments. As institutional assessment tools for higher education institutions are refined, post-secondary institutions will better be able to form networks that promote innovation in sustainability using the mechanism of constant comparison and even competition.

11.2 Campus-wide Dedicated Staff

Research has shown that when colleges and universities employ dedicated staff members to lead recycling programs and other environmental initiatives in their organizations, the programs are more likely to succeed (Lounsbury, 2001). However, when employees are asked to take on sustainability projects in addition to their regular job duties, resistance often occurs, and commitment to the project wanes quickly. As well, since most colleges and universities are unionized workplaces, the expectation that employees will add a new responsibility to their jobs that does not replace an old one will incite a backlash from union watchdogs. So, it is important to create staff positions that are devoted to sustainability both to provide leadership and guidance but also to assume responsibility for sustainability programming. This suggestion is not without its drawbacks, however, because creating a ‘sustainability department’ in an organization risks creating another disciplinary box in which research and action happens in isolation from the rest of the organization. The purpose of dedicated staff is, hopefully, to educate

within the organization and to demonstrate how the breakdown of such contrived boundaries is essential to effectively answer the call for sustainability.

11.3 Incentives for Implementation

Despite the reality of a deteriorating planet, most organizations still need extra incentives to incorporate sustainability into their core values and operations. For colleges and universities, the most important of these incentives must come from government, since government is ultimately responsible for funding university programming and because government mandates are sometimes rejected by post-secondary institutions, which often elect to manage operations independently of their funders. Faculty incentive structures at universities tend to be very rigid (Ferrer-Balas, et al., 2008), so academic staff may resist incorporation of sustainable values if they are not intrinsically motivated to do so. Therefore, more flexibility needs to be introduced into the faculty incentive system to motivate more interdisciplinary collaboration and to make sustainability a central focus of research and education.

Although a budget for sustainability initiatives can be very important for universities, governments also need to emulate sustainable practices regardless of fiscal constraints and begin to expect the same behaviour out of government-funded institutions such as universities. Penalties may be imposed if post-secondary institutions fail to meet collaboratively set goals for initiatives like emissions and waste reduction, but those goals must assuredly be both achievable and measurable before any potential penalties are handed down to the schools.

Once incentives are offered to colleges and universities as a whole, internal incentives may need to be applied in order to create buy-in to the idea of integrated, interdisciplinary sustainability practice.

11.4 Structure for a Model Institution

11.4.1 Executive

Academic executives come from a wide variety of backgrounds and each one brings a unique worldview to his or her administrative work. Because of this diversity in education and research, executive committees can act as model caucuses for interdisciplinary collaboration and leadership in sustainability. They can also act as high-level support for operational campus sustainability programs, and through their enthusiasm can help sustainable values become institutionalized in higher education. Where top executives can ensure that sustainability is incorporated into their institution's mission statement and develop a clear and achievable vision for a sustainable school, the probability that sustainability initiatives will succeed and gain momentum will increase dramatically.

11.4.2 Faculty and Employees

Although it is crucial for higher education institutions to have dedicated staff who drive sustainability progress within their organizations, it is important that sustainability not be considered its own discipline, and that faculty and employees nurture interdepartmental collaboration to achieve sustainability goals. In fact, by nature the concept of sustainability is cross-disciplinary, and has applications across all possible areas of expertise. Sustainability is not a discipline in itself, but rather "cut[s] across

virtually all disciplines and [has] fundamental importance to the human enterprise" (Brown et al, 1996). Thus, the potential for sustainability to bring isolated groups together to work towards a common purpose is nowhere more feasible than at the university, but it requires an evolution of the typical hierarchical organizational structure of most post-secondary institutions. Indeed, it requires that faculty and staff not only build expertise in a particular knowledge area, but also learn to see sustainability more holistically, and begin to work productively with interdisciplinary teams to achieve specific, measurable goals that move the university, and eventually communities, from consumption addiction to lifestyle maintenance.

11.4.3 Students and Curriculum

Students represent a powerful force in the effort to break down barriers to sustainability in higher education. Youth, idealism, and energy abound as university students create their own perspectives of the world they live in, and this is the ideal time to instil the sense of community that is so essential to creating a sustainable organization. Universities can no longer educate students to strive for an "impossible dream of perpetual growth" (Brown et al, 1996); instead, students should be mobilized to establish and promote sustainable societies. Such programs have a direct cost benefit to higher education institutions, which can lend the tools to support student-led sustainability initiatives without the high cost of compensation for labour. Partnerships with organizations such as SEAC should be developed and nurtured. Students can do projects for course credit at a low cost to the university, and all stakeholders benefit from the results.

The University of British Columbia's SEEDS program demonstrates how student projects can influence a university's operations. Utilizing student research provides schools with a large resource pool from which to draw ideas, and student workers are generally less expensive than hiring a team of researchers to look at sustainability issues. SEEDS (Social, Ecological, Economic Development Studies) begin in the mid-1990s as a collection of student projects related to sustainability. While these projects were active, UBC established its official sustainability policy in 1997 (Brunetti et al, 2003). Today, SEEDS connects students with sustainability-related internships and applied research projects, which provide a benefit not only to the students but to the university community where much of the student research is later applied. SEEDS strengthens the bond among students, the university, and the community and is successful as a low-cost method of learning how to make UBC and its surrounding community more sustainable.

Other student-focused sustainability initiatives have been undertaken at universities such as Pennsylvania State, which developed a sustainability course and practicum designed to empower students to think of sustainability not just as an ideal state but as a necessary part of their lives (Brown, Cochrane, Gerwing, Kulakowski, & Uhl, 1996). Interestingly, Pennsylvania State has not yet signed the Talloires Declaration, but its researchers still recognize the need to incorporate sustainability into the core curriculum of the institution. Sometimes, sustainability initiatives are also more prevalent in universities that have a strong chapter of SEAC (Lounsbury, 2001). Student-led organizations such as these can put tremendous pressure on higher education institutions to support the call for sustainability. By providing leadership to these students instead of rejecting their cause, the students may in turn become leaders in the movement towards

sustainability and will hopefully invoke this changing value system in their work lives after graduation.

11.4.4 Community and First Nations

As negotiation and cooperation with First Nations bands is one of Canada's most important domestic issues, higher education institutions in Canada have a tremendous resource in the traditional knowledge of First Nations people. Incorporating traditional indigenous knowledge into formal decision making automatically takes sustainability into account, so an appreciation for and an understanding of this knowledge can be very beneficial for universities moving towards sustainable management (Kuhn & Duerden, 1996). As many Canadian universities already incorporate First Nations culture on their campuses, traditional knowledge is already accessible and an established part of the university community. First Nations people represent valuable leadership that is needed to educate university leaders on how to envision the sustainable university and embed a focus on sustainability within the university and externally with local societies.

11.5 Goals and Objectives

Although all goals and objectives should be both challenging and achievable, more emphasis must be put on the challenge if universities have any hope of becoming truly sustainable community leaders. Quantifiable objectives should be set, such as emissions reduction targets and cost savings targets, but there is only one goal; that all colleges and universities need to become economically, socially, and ecologically sustainable. Objectives will be specific to each organization based on their current progress on sustainability and their understanding of what is realistically achievable.

12: Recommendations

Although colleges and universities are a conduit through which students are pushed into the work world to survive on their own, the university also functions as a hub of community dialogue on how best to make surrounding communities sustainable. However, a stronger focus on the latter function is needed in Canadian post-secondary institutions. Universities can also work together to create a network whereby students leaving the geographical area near one university can be connected with the nearest university to their destination and continue their sustainability efforts there. This collaborative model for sustainable university operations requires a shift away from the traditional hierarchical structure of the university and towards a network of schools and communities that share a common system of values. To make this happen, several recommendations are presented:

Recommendation 1: Make training in management for sustainability mandatory for incumbent and new senior managers and executives. Senior managers need to understand how sustainability can be applied to basic business concepts, in order to effectively and sustainably run a large educational institution. Sustainability training must maintain an economic focus, since the university is like a business and funding is limited. Fiscal responsibility is essential for success.

Recommendation 2: Develop and maintain a network of Talloires Declaration signatories to promote accountability among participating organizations. All Talloires Declaration signatories must share a vision of sustainability that is transferable to any

community in the world. In this sense, higher education institutions, not large corporations, can become the most powerful and influential organizations, with the ability to affect consumer purchasing decisions, promote sustainable living, and influence government regulations.

Recommendation 3: Create an external body of auditors to evaluate and compare post-secondary institutions for their performance based on multiple sustainability indicators. Several assessment tools should be used and aspects of economic, social, and ecological sustainability must be evaluated on a regular cycle. This regulatory body would be responsible for developing and refining institutional assessment tools to ensure they remain effective and relevant to the organizations using them.

Recommendation 4: Work with First Nations bands to gain access to traditional knowledge. First Nations have a powerful sense of community and universities can learn to empower communities by adopting a similar mindset.

Recommendation 5: Develop incentive programs for faculty and staff to encourage them to incorporate sustainable practices into their work lives.

13: Conclusion

Some analysts believe that “management for sustainability, if it is to become a societal norm, must be led by institutions of higher education” (Shriberg, Toward sustainable management: the University of Michigan Housing Division's approach, 2002). There is no question that post-secondary institutions have tremendous influence on and opportunity to nurture generations of individuals to be aware of the crucial need for sustainable management and the importance of bringing this knowledge to the community and the workplace. However, higher education institutions face several barriers to sustainability in addition to those that every organization faces. Universities can be very slow to adopt a process for becoming sustainable, even though humanity is running out of time to find solutions to the world’s many problems. It is these challenges that should be the inspiration for colleges and universities to become quickly moving, progressive organizations that shape the people who will bring economic, ecological and social sustainability into the workplace not as an ideal state, but as a necessary condition for operating in a global economy. Higher education institutions may become internally sustainable only by producing graduates who can ensure that the systems that have continued to bring students and researchers to universities for centuries still exist for hundreds of years to come. Hopefully, this vision is enough incentive for colleges and universities to become leaders in management for sustainability.

14: Bibliography

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