Building the Sustainable Enterprise: Beyond Awareness

A user-centered case for transforming culture to support sustainable best practices

For company managers, consultants engaged in designing products and services, and the academic community involved with creating sustainable solutions this report, Path to Sustainable Enterprise, delivers key knowledge regarding definitions, important trends, barriers, references to current tools, and a new unified model for understanding how to recognize and implement sustainable agendas systematically throughout an organization.

Unlike former work done in this space, Path to Sustainable Enterprise recognizes that the key problem to solve is not technical—the technical work has largely already been done—but instead, a “hearts and minds” problem which must address the cultural chasms found within today’s large firms and account for economic, social, and ecological sustainability.

Building the Sustainable Enterprise

I. Intro/Value Statement

II. Shared Values/Statement of needs

a. Adoption curve -

b. Worldwide, there has been a shift in people's expectations and desired for sustainable products and services (Society) – cite some study

c. Resource and cost of business expenses are rising (Economics)

d. Governments have begun considering and instituting sustainable regulations – like the take-back program in Germany

e. Never has there been so many dollars invested in "Green" or sustainable technologies (Technology)

III. State of the art definition

a. Review of the classic interplay of Financial, Social, and Environmental forces in the context of sustainable development, and introduction of new forces in these domains that will affect your business.

b. Environmental

c. Social

d. Economic

e. Risk of Haphazard Initiative Setting

IV. Where Do We Start?

a. Setting Goals: Princeton on Stabilization wedges is a good goal (15- 30% reduction)

b. Balanced Scorecard/PEST model

V. Problem definition

– it is not a "technical" problem but instead a "hearts and minds" problem

a. There are many tools and organizations which deal with specific aspects of life cycle, etc. – but this is not the real problem

b. Detail the multi-chasm diagram

c. This chasm problem is exacerbated by functional groupings – we've become so specialized – solutions must be matrixed

VI. Making sustainability actionable

a. Stewardship

b. Transformation to Integration

c. Integration to Differentiation

d. Differentiation to Brand Strategy

VII. Organizational Barriers to achieving sustainable practice

a. Awareness & Education

b. Policy

c. Organizational Orthodoxies

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1. Organizations by Category

2. Reading

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Introduction

We can summarize the key uncertainties we face as follows:

1. What are the critical thresholds in soil, air, climate, water, and biodiversity, and how do we recognise these limits? How resilient is the global ecosystem?

2. What human social systems can best respond to the challenge of sustainable development?

Ged Davis et al. World Business Council for Sustainable Development: "Scenarios for Exploring Sustainable Development." 1998

State of sustainability

Organizations, both for profit and non-profit, in all types of industries around the world have started to change their ways to incorporate environmental and social practices as a way to achieve economic sustainability. It seems like almost every week publications such as Fast Company, Business Week, the Wall Street Journal, or the New York Times run stories about an individual or a company that has adopted to these forces and are succeeding in the face of traditional competition.

These same publications also run stories about the impending economic imbalance that will come if people and companies don't change their ways. So why aren't more organizations incorporating sustainable practices?

1. What are these sustainable practices? Is it just recycling, or is there more?

2. Adopting sustainable practices still seems like it is someone else's problem. Most individuals and companies are yet not directly affected by the effects of global warming, and therefore are unwilling to take on the risks associated with major changes to their company.

3. Achieving sustainability is inherently a long-term goal, and many companies are primarily focused on short-term profits.

4. There continues to be a misperception of sustainability: that it means lower quality, higher costs, and will only matter to a few customers. It is a loaded term, as is "green," that makes many roll their eyes as they envision Greenpeace fanatics camping out in trees trying to save the forest.

Businesses have enormous power to create change There is, however, an always increasing number of companies that have decided that it has become economically viable or even mandatory to start to change the way they do business. They are the trendsetters, and include companies such as Baxter Healthcare, BP, General Electric, Patagonia, and 3M, to name a few. What these companies have learned is that being sustainable doesn't mean that you have to do it out of good will towards the world, but that it is profitable both in the short and long term. Being sustainable can be as simple as driving efficiency to save costs; creating healthy work atmospheres for employees to improve productivity; and selling products that are smaller and recyclable, making them more desirable and easier for their customers to use.

While some tactics for adopting sustainable practices are simple, others can be very complicated. Some companies have adopted total cost accounting or product life cycle tactics, essentially transforming the way the entire system of their company runs. This is where companies' influence is most important, and where they can have the biggest impact.

Imagine the recycling efforts of a single person, versus the efforts of a multi-million dollar business. Each year, the individual might be able to divert a few hundred pounds of waste from the landfill, while the company could divert thousands to millions. They can also affect the ways that members of their supply chain conduct business, spreading their influence up and down to have the optimal effect.

While a company has much greater power than an individual, the paradox is that companies are made of individuals, and the culture derived from these individuals as a group drives how companies function. That means that ultimately, sustainability must focus on the individuals and get them to change their ways in order for it to work.

Models

Many enlightened individuals and groups have created innovative and powerful strategies and tactics that organizations have used to incorporate sustainability into their processes and structures. Many of these are listed in the Appendix. What is curious about these, however, is that nearly all are generic models, concentrating on what an organization as a whole could do, leaving a given company to hire a consultant or to figure out for themselves how to implement them in their own organization. Further complicating matters, some companies fiercely protect their processes as intellectual property, leaving other organizations who want to be sustainable to figure out on their own what to do.

Mission

Create a process by which an organization could take all of the literature, models, strategies, and tactics that currently exist, and apply them to their own company to create impactful change that will lead to economic sustainability through environmental and social best practices. The primary focus will be on the people that make up the organization as leaders, managers, teams, informal groups, and individuals and how to implement sustainable practices through them.

Value Statement

For organizations who are aware of the benefits of sustainability and want to incorporate them into their practices, this model will demystify generic and biased information, help the organization to create useful and implementable strategies and tactics that are specific to them.

Design's Role:

In this time of transition the practice of design research is well placed to embrace the multi-disciplinary requirements for systemic solution development.

In the face of market volatility and external social and environmental challenges, design research- as a practice- has much to offer. What are barriers of understanding sustainable practice? What motivates individuals to initiate change? To what degree do cultural and attitude shifts related to material growth and quality of life create latent demand for organizations seeking to transition toward sustainable practice?

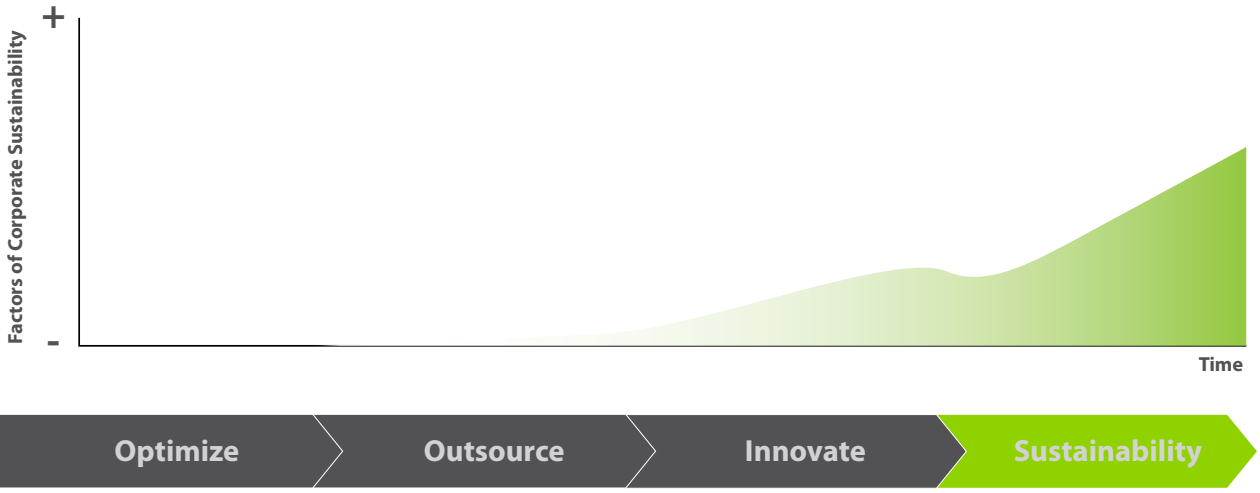
In large part, this awareness level has been heightened as information networks become available to more consumers. By empowering conscious choice, the platform for a civil economy across cultures (people and places) is supported through fair and responsible trade.

Pioneering organizations see these influences as integral to the nature of our post-industrial economy. As a result, business at large will have to adapt to these new rules of engagement. The frameworks and methods of this presentation will provide a grounded approach to sustainable innovation by recognizing the ability of design thinking in planning for these new challenges.

Shared Values/ Statement of Needs

Companies not interested in sustainable development issues will not survive long.

- Malcolm Brinded, Chairman of Shell UK, 1999

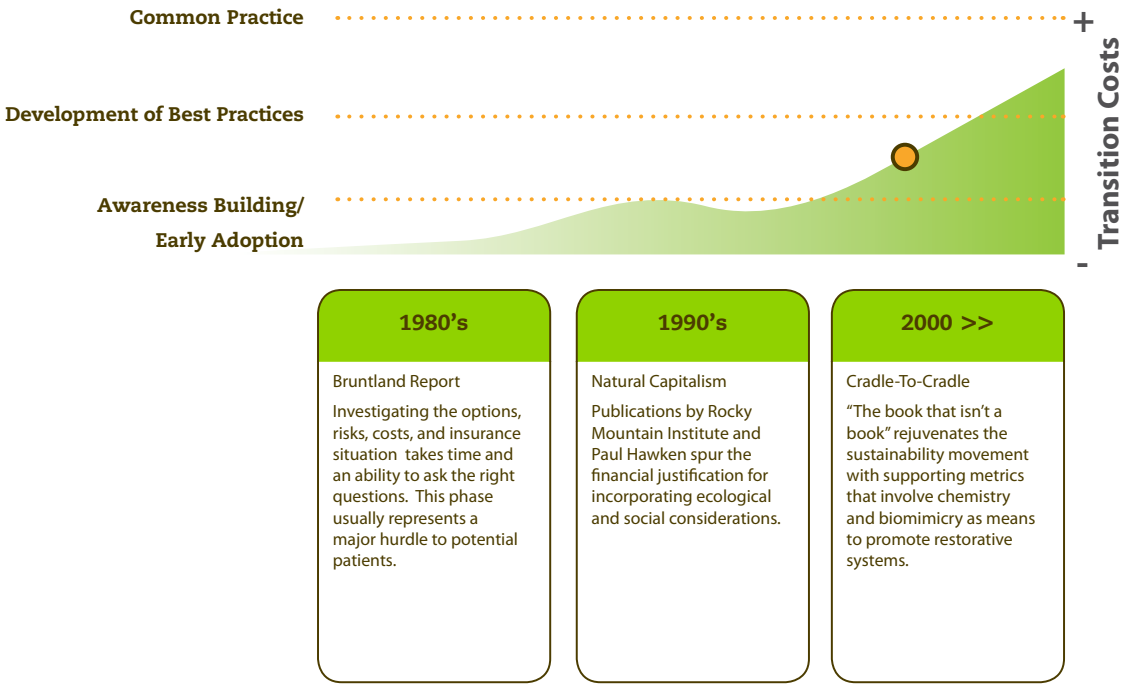


Perspective

We have moved through the past century becoming ever more efficient. Starting with Taylor and his scientific method, business has broadly optimized factories, companies, industries, and information—roughly in that order. The focus has been on profit and maximizing shareholder value through the establishment of highly specialized functional organization and supply chains and this produced profound benefits for consumers—consistent quality, variety, and lower prices. Supply chain management and information technology became the ground on which the last battle was fought, with Sam Walton and Walmart leading the way. At the same time, companies have realized they will be unable to continue to be successful focusing internally solely on these areas.

The response has been a focus on creating new products and the institutionalizing of Continuous Innovation both in goal and process within world's best organizations. It is clear from academia, the press, and the success of companies like Target, Apple, and Virgin, that competency in this space will be a cost of doing business. The next decade's best firms will be better equipped to understand and solve the systemic, unmet, and inarticulate problems of consumers like never before. In this way, they will continue to transform people's lives and society's expectations. But this is just the current focus and requirement of succeeding in business today—it will be adopted en masse.

The next fundamental demand and competency required for winning in the market will concern the balancing of ecological and social factors with economic sustainability. The environmental and human rights movements of the latter half of the 20th century were moderately successful in moving government to provide a base level of regulation with the introduction of the E.P.A. and various pieces of civil rights legislation. That said, corporations could with minor modification continue on "business as usual" with their focus on creating efficiencies, profitability, and economic sustainability. Firms have not yet fully had to come to grips and account for the externalities they cause to the environment and society—until now.



Macro Trends Driving Sustainable Enterprise

Macro trends in people's attitudes, government regulations, increasing resource costs and their impact on company finances, and a vast flow of investment capital to "sustainable" technologies marks the beginning of a fundamental shift. Indeed, we are at the beginning of a sharp adoption of sustainable practices in the market—the era of Sustainable Enterprise. Being good at balancing environmental and societal costs with financial success will no longer be a choice but instead will be required. Let us consider four driving macro forces which will bring this transformation about in a bit more detail.

Society's Expectations

Corporate social responsibility and sustainability is gaining importance with consumers worldwide. A growing number of people are willing to pay a premium for "Green" and "Organic" products. According to a study by the Natural Marketing Institute titled "Corporate Social Responsibility: Consumer Understanding and Influence," nearly 90 percent of U.S. participants indicated companies should not sacrifice the environment and society for profitability, 70 percent stated corporate mindfulness of the environment and society persuaded them to buy a company's products or services, and nearly 50 percent stated they would buy stock from socially responsible businesses.

This macro-shift in people's knowledge and expectations is forcing corporations to be more transparent in their efforts to institute practices of Sustainable Enterprise. This has been illustrated recently through changes in Nike's factory policies, Steve Jobs' open letter regarding Apple's plans to address environmental impact, and the mainstreaming the recognition of global warming because of Al Gore's movie, An Inconvenient Truth.

Government Regulation and Policy Changes

Government is responding to these shifts in societal attitudes by changing regulations to force industry's adoption of sustainable practices. While the U.S. federal government has yet to become a recognized worldwide leader in this space, Europe, some Asian countries, and some individual U.S. States have instituted legislation which require or encourage a sustainable approach.

One example of legislation in Germany, the WEEE Directive through the Electronic Apparatus Act (Law regarding the Placing on the Market, the Take Back and the Environmentally Compatible Treatment of Electronics and Electrical Goods) requires consumer electronics producers to provide a guarantee to ensure the financing of the proper disposal of electrical and electronic equipment (EEE) placed on the market, if such EEE can be used in private households. This registration and guarantee obligation is aimed at preventing producers from placing equipment on the market in an anti-competitive way without living up their take-back and disposal obligations ("free-riders"). Producers are also required to mark their products. This has forced big international manufacturers like Motorola, SONY, Samsung, among others, to reckon with take back programs in Germany or not sell to that market. The European Union at large is currently considering a similar program and we could imagine the U.S. following the EU's lead within the next decade. This type of legislation will have dramatic effects worldwide even if only parts of the world introduce them.

Cost of Business and Economic Viability

Perhaps the most powerful macro-trend driving Sustainable Enterprise is related to the cost of resources and viable profitability for large international corporations. In large and mature organizations, cost-cutting strategies seem to have run their course. While the institution of more repeatable innovation methodologies will allow companies to continue to generate new offerings, most large-scale improvements in efficiencies will need to come from an embrace of sustainable practices.

Walmart seems to be the poster child of using ecological sustainability to provide competitive advantage in both internal efficiency and as a marketing platform. Talking about the company's initiatives, Walmart CEO Lee Scott, has said, "Sustainability 360 takes in our entire company – our customer base, our supplier base, our associates, the products on our shelves, the communities we serve… we believe every business can look at sustainability in this way." While the firm has a long way to go to being fully sustainable (especially with regards to social wage and health care issues), it has followed up Scott's talk with big commitments in sustainable fishing programs, free trade coffee, organic food, decreases in consumer packaging, the installation of solar energy panels, and a massive reduction in fuel consumption. We can be sure every company will consider similar and more systemic practices.

Unprecedented Investment in Sustainable Technologies

Recognizing these shifts in consumer attitudes, government regulations, and rising resource costs in corporations, companies and venture capitalists are pouring money into sustainable technologies. In the automobile industry, Toyota leads investment in research and products like the hybrid hit Prius. Walmart has the capacity to change the cost dynamic of many "Green" products like low power lighting. Venture capital spending in solar energy has more than doubled year over year for three straight years with photovoltaics never being less expensive and more realistic to use. In all, there are hundreds of millions of dollars of investment in technologies which will transform our ability to maximize costly resources.

State of the Art Definition

Sustainable development.... "That which meets the needs of the present without compromising the ability of future generations meet their own needs"

(Brundtland Report 1987)

Graduating from the discussion in section 2 regarding the general forces influencing sustainable development, this section will focus on the three main domains under the sustainability agenda, often referred to as the basis for triple bottom line achievement: Economic, Social, and Environmental factors.

Often framed within these three domains, sustainable development requires balance to be achieved among the three criteria of financial returns, social contribution, and environmental stewardship. It is more likely that pressures to return profits to stakeholders will often prohibit expenditure toward R&D or environmental performance enhancement. Similarly, environmental agendas are often burdened by meeting existing regulatory requirements, or by the need to return an amortized investment in capital equipment costs, that investment in new technologies or processes is often not considered feasible.

But as new forces and new business models continue the model of creative destruction in the organizational context, existing businesses without an agenda addressing the following factors are, in the ironic definition unsustainable, and will likely feel the heavy pressures from stakeholders, shareholders, and regulatory actors related to their business.

"Fund managers polled say they would spend up to 14% more for a well governed company vs. a poorly governed one"

(McKinsey & Co. 2006)

While in no way do the following paragraphs challenge or attempt to restate the volumes of information available in the arenas of environmental, economic, or social development agendas, the topics covered should frame the motivations and opportunities in addressing these topics in the contemporary sustainability context.

Economic:

The 800 pound gorilla in most sustainability driven conversations wears the economic cap. The backbone of generations of MBA curriculums and growth in the global context rests in the domain of economic performance as primary driver to a businesses survival.

But the 21st century brings with it external forces that will shake the classic financial approach to profitability to it's very core. Imagine the following scenario: ACME corporation remains profitable through process efficiencies, but continues to loose market share to NewGuy Inc. who's brand value is more compelling than ACME. The market erosion continues and ACME is forces to sell assets, and eventually sells it's assets- essentially surrendering its license to do business. Bottom line? Our flattening world economy will pressure organizations to respond to stakeholder pressures in more ways than simply returning dividends on stocks and fund investments. (Davis, Lukomnik, Watson. The New Capitalists, 2006)

First Movers:

From the financial analyst perspective, groups such as Ceres (www.ceres.org) are answering the challenge for such groups as Goldman Sachs, State Street and other investment houses who see the future and are formulating responses that address social and environmental stewardship in the context of balanced economic performance ultimately reflected in the growth of DJSI (Dow Jones Sustainability Index).

Discovering Opportunity:

The ability to transform business capacities to fulfill new market niches will consistently yield new opportunities for those who are versed in the challenges of meeting new goals of sustainable development. For example, entrepreneurs who first ventured solutions in internet technology and web boom of the late 90's, are now recognizing incredible potential in- solar. Cleantech Venture Network, an industry trade group, estimates that clean energy investment in Silicon Valley topped $500 million last year, including not just venture capital but also corporate and some debt financing. The group estimates $3.6 billion was invested across the United States and Europe. (source: Anderson, Leonard. Environmental News Network-2007)

"There are huge forces at work right now," says Sunil Paul, an Internet entrepreneur turned alternative-energy investor. "With the subsidies that are already in place in California, and markets for carbon credits emerging, you have the perfect conditions for innovative companies to capture a piece of the $1 trillion U.S. electricity market. As a startup you have a massive number of customers to go after. And as an investor, it not only makes straight-ahead business sense to put money into these companies, but you can also be excited that you are doing something that's good for the planet. That is a powerful combination." (source: McNichol, Tom. Business 2.0 CNN Money-2007)

While this example represents a specific sector and technology solution, the underlying premise sounds across all industries in various sectors- opportunities await those who are willing to investigate the new opportunity spaces.

Social:

A common line of thought regarding social aspects of development refers to supply chain, child labor, minorities, and healthy work conditions. These corporate oriented concerns have generated the support of CSR (Corporate Social Responsibility) initiatives aimed at engaging stakeholders and shareholders alike with the actions of good will and social enterprise agendas. Without standardized measure And while all valid concerns that absolutely should be considered in one's business operation- a tidal wave of social concerns around middle and developing economies is already driving commerce by future forward organizations.

Base of the Pyramid, and even more rapid development of Middle of the Pyramid economies in China and India and the BRIC countries will impact our global economic practices, and challenge our capacity to provide for developing economies with fewer and fewer natural resources.

First Movers:

The subject of several popular publications, redesigning the framework of our social economic models is central to our ability to achieve ultimately sustainable market results. Organizations such as Proctor and Gamble, Unilever, and even Dollar Store Inc have recognized market opportunities by satisfying customer demands at the Base of the global Pyramid. Other organizations such as the Grameen Bank and Kiva Micro-finance are amplifying the solution space for socially fair and equitable contributions that enable market development through better designed products and services.

Discovering Opportunity:

Arguably, the most nascent of the three domains of sustainable development, measuring social contributions or impact remains an art and science approach. There are a few attempts by life cycle providers and social science advocates to quantify the practice. Most notably, PRI International (makers of GaBi4 life cycle software) has announced initiatives to produce tools for measuring social and corporate governance measurement (see Sofi-software.com). Likewise, Mark McElroy of Sustainable Innovation has advanced a method for recording social footprint of initiatives.

While currently working in relative separate functions, the increasing pressure being applied to organizations by their stakeholders will surely see continued rapid response to the development of these tools.

Environmental:

In contrast to the Social aspect of sustainability initiatives, the Environmental initiatives are most associated with the underlying purpose for reassessment of our processes. Environmental impact from greenhouse gases and carbon emissions have been well documented, and have been scientifically agreed upon as contributing factors to climate change. Entirely new industries have been created for the purpose of trading carbon credits. And developing countries, especially in southeast Asia, are fast becoming aware of the environmental degradation brought on by over a decade of intense growth in the manufacturing and mining industries.

In many expert reports, the need to sequester carbon sees a short term goal of new technology development in coal gasification and pocketed carbon sequestration deep into the earth- but these “solutions” are transitional at best. True course of solution is to slow our rate of consumption in addition to creating more innovative ways to extend product life cycles with more benign materials.

Environmental Sustainability

First Movers

From the chemistry point of view, Bill McDonough and Michael Braungart of Cradle-to-Cradle fame, and Janine Benyus suggest methods for evaluating and re-designing the way we design and construct products. From a business model perspective, Ray Anderson of Interface Carpet had introduced a way to transform linear sales models, to a cyclical service model to reduce overall impact of his company's product portfolio. And Walmart has pressured their entire supply chain as well as operations of their retail locations to generate, and innovate on the basis of this new challenge of reducing energy consumption. Is there a long way to go? Yes. But if you take to heart the actions of any of these organizations, it's fair to say the writing is on the wall.

Discovering Opportunity:

A recent program at Timberland shoes discovered some very low hanging fruit. The chrome process used in tanning leather was an environmental nightmare. And so they asked the question: "How can we make this better?"

Bill Ford Jr's engagement, as documented in Cradle-to-Cradle, of installing a green roof on 450,000 sq/ft of roof at the River Rouge plant in Michigan. The relief from municipal fines for flash flooding of local streams, as well as the energy savings from cooling saw a 2 year payback of investment. Few product lines have that kind of return on investment.

Within every sector, and in every company there lies opportunity. This is the ultimate efficiency argument that industry has been striving for over the last 100 years of development. We simply have to recognize that there are yet other methods to explore in our production processes. There are values in our customers that allow us gain brand equity through quality while extending the ability of our products to perform over longer, more adaptable life cycles. In a world where it costs 5 cents to make a penny, we have to ask ourselves if there is in fact, a better way. The tools and programs in this report recognize that the information is there, the evaluation protocols exist, and the financial argument can be substantiated. Our challenge is a cultural one. How do we get the people across an organization to think differently. How to we establish these values as paramount in our license to do business? The CEO say's "GO"- Now what do you do?

Where Do We Start?

"The secret of getting ahead is getting started. The secret of getting started is breaking your complex overwhelming tasks into small manageable tasks, and then starting on the first one."

(Mark Twain)

Risks of Haphazard Initiatives

When embarking on the journey to address social and environmental concerns in an organizations operation and delivery of services and products- the task of "where to start" is daunting to say the least.

On top of that, we often are pressured, as in any other transaction, to show progress or some level if achievement to justify time and investment. So, we're not sure where to start, and if we pick the wrong initiative, we're likely to find ourselves fighting an uphill battle.

And so, even the best intentions can lead to an unhappy ending if agendas are planned randomly, and without merit to the overall strategy of the organization. The most powerful concept of sustainability is the ability to address solution development in a systemic nature. Without accounting for impacts across a system, individual decisions can often lead to unintended, negative results. Not only is this a failure in the sense of the initiative, but it also lends less credibility to future sustainability initiatives (if they're granted at all). No one wins.

Proposed here are several steps that can be taken to ensure a higher level of success when dealing with building initiatives. On one hand, the need to establish clear goals is paramount when developing and communicating a program's goals.

A suggested road map for engaging in the evaluation and development of sustainability initiatives.

Diagnose Situation

Step 1: Analyze Profit Pools

Declare Intent

Step 2: Analyze opportunities for growth and innovation

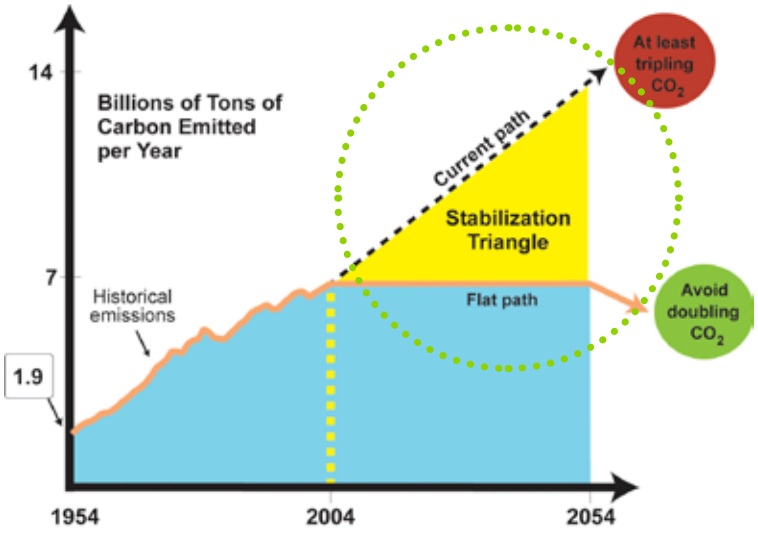
Set Initiatives

Step 3: Align sustainability goals to innovation agenda

Getting Started

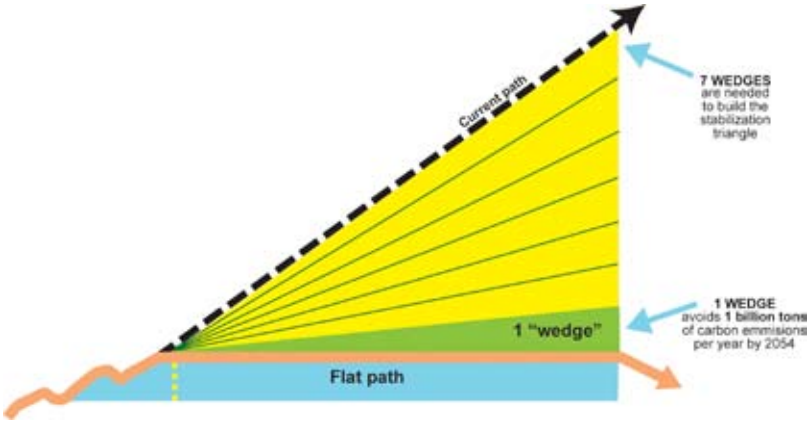
Blending social, environmental, and financial concerns can be a daunting task when considered all at once, but when taken independently, and in accordance with an appropriate level of applicability- the mission becomes more directed, and easier to communicate.

Let's start with the broad task of setting goals. If we consider the research done by Stephen Pacala and Robert Socolow of Princeton University, and highlighted in Al Gores "An Inconvenient Truth", sector solutions are proposed to "level" the output of greenhouse emissions. The "Stabilization Wedges" represent a series of directives across industries that call, on average, for a 20-40% reduction given current consumption and output models. Likewise, at a more granular level, the architectural LEED (Leadership in Energy Efficient Design) protocol promotes a best in class rating for designs that operate overall approximately 30% more efficient when compared to traditional designs in the same genre of building type. Lastly, without engaging in the controversies put forth by different countries perspectives of the Kyoto and Montreal Protocols, the general rule of reducing energy and emissions to 1995 levels in many cases would result in a goal of achieving approximately 15-35% reduction given current day standards.



Summarizing

We can roughly extrapolate from these standards that the "Going Green For Dummies" campaign would begin by setting a goal to be 20-30% more efficient within a set time frame. But even this is a broad, and potentially daunting goal, so start small and work your way up. Just like a sporting event, it helps to warm up.



Diagnosing the Situation:

With broader percentage efficiency goals in place, it's now necessary to evaluate, quickly and efficiently, where in the organization agendas would have the most benefit. This can be associated with identifying "low hanging fruit", but it must remain in the context of the overall initiatives and strategic outlook of the company.

This requires interaction and competent communication between the executive level leadership and the middle management layer of the organization.

A helpful tool already in use by thousands of organizations is Norton and Kaplan's Balanced Score Card taxonomy for organizational alignment. If you have your own, use it. The key point here is that you need "something" as reference to communicate agendas, and evaluate the organization as a system rather than pocketed operating units.

Department or Function	Daily Activity	Planning Activity
General Manager (President, CEO)	All management functions for the organization, leadership, strategy, key project management, planning, problem resolution, legal, coordination-both internal and with outside or higher levels.	Coordination of all others, SWOT analysis Stakeholder analysis Overview
Finance	Treasury (accounts receivable, payable)	Profit & Loss
	Accounting	Balance Sheet
	Forecasting	Capital budget
	Stockholder relations	Cash flow
	IT (frequently)	Risks and opportunities
	Planning (occasionally)	
	Stockholder relations	
	Banking	
	Wall Street	
	Taxes	
	Capital accounting	
Marketing	Product management	Market size and forces
	Customer service and order entry	Market share-current and projected
	Market research	Market growth potential
	Product service	4 "Ps"
	Public relations	Profitability-contribution
	Contracts	Competitor analysis
	Advertising & promotion	
Sales	Sales planning	Actions
	Meeting with the customer and insuring meeting the customers needs Closing the order (making the sale)	Sales forecasts
	Market research	
Product Development	Engineering/product design	Project technical management, development (how it will work) and scheduling
	Research	R&D projects
	Testing	Organization requirements
	IT support/interface	
	Manufacturing support	
	New product evaluation and test	
	Customer problem resolution	
	Identifying new suppliers	
	Coordinating supplier actions required for new product launch	
Operations	Manufacturing/production or providing the service	Quality programs, both in-house and supplier
	Purchasing	New suppliers
	Production planning (professional staff planning)	New product coordination
	Inventory control	Process improvements for quality or efficiency
	Quality control (may be separate function)	Employee improvement, empowerment & training programs
	Rework	Organization requirements
	Repair	Scheduling
	Manufacturing (industrial) engineering	
	Product Test	
	Shipping	
Human Resources	Recruiting	Recruiting systems
	Personnel administration	Training plans, especially in cooperation with operations
	Training	Merger integration
	Benefits	Major HR programs – TQM, Six Sigma, etc., in cooperation with operations
	Pay/salary administration	
	Human resources legal (with legal dept.)	
	OSHA and other government agencies	
	Merger and acquisition integration	

sustainability example framework

Department or Function	10 Market Forces Objective	GRI Measure How success or failure is measured using the triple bottom line (Sustainability Reporting Framework)	Target The level of performance or rate of improvement required
Finance	"Green" Customers	Energy Consumption footprint (annualized lifetime energy requirements) of major projects	Annual reduction in energy footprint for new products
	Energy Crunch	Direct Energy use segmented by source	100% renewable energy sourcing
	Financial	Increase/Decrease in retained earnings at end of period	Increased earnings
Internal	Pollution and Health	Standard injury, lost day and abssentee rates and number of work-related fatalities (including subcontractors)	0 lost-time injuries & fatalities, or long-term illnesses
	Climate Change	Total Greenhouse gas emissions	Annualized reduction of emmissions
	Governments and Regulators	Incidents and fines for non-compliance with all laws and regulations	0 incidents or fines
People + Knowledge	Civil Society + NGO's	Policies, guidelines and procedures to address needs of Indigenous people	Number of Indigenous employees
	Activist Shareholders	Business units currently operating or planning operations in or around protected or sensitive areas	Number of employees trained in environmental management practices
Customer	Erosion of trust/transparency	Policy to exclude all child labor	No child labor in supply chain
	Globalization backlash	Supplier performance related to environmental commitments	Use of 100% organic and sustainably produced goods (coffee, cotton, lumber, etc)

Source: GreenBiz.com

Making it Relevant:

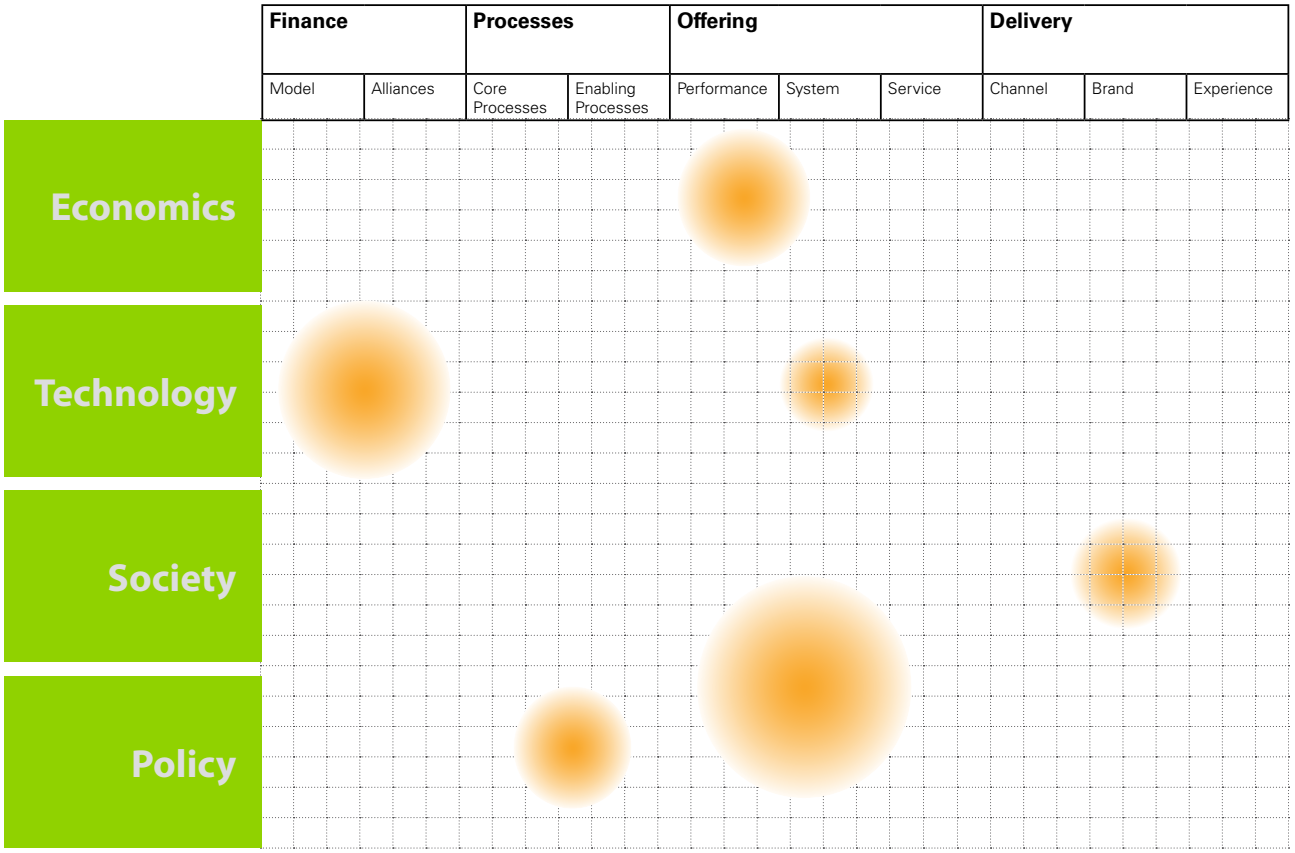
The benefit of a scorecard approach in the context of this report comes in the ability to visually communicate, and engage in clear discussions about a company's road map and it's impacts across all the departmental functions of that organization.

We leverage this information and understanding, and introduce a heuristic evaluation tool that leverages the knowledge inherent in building the Balanced Score Card. By tapping middle management, a custom balanced scorecard can be produced that's relevant to attaining social and environmental performance goals.

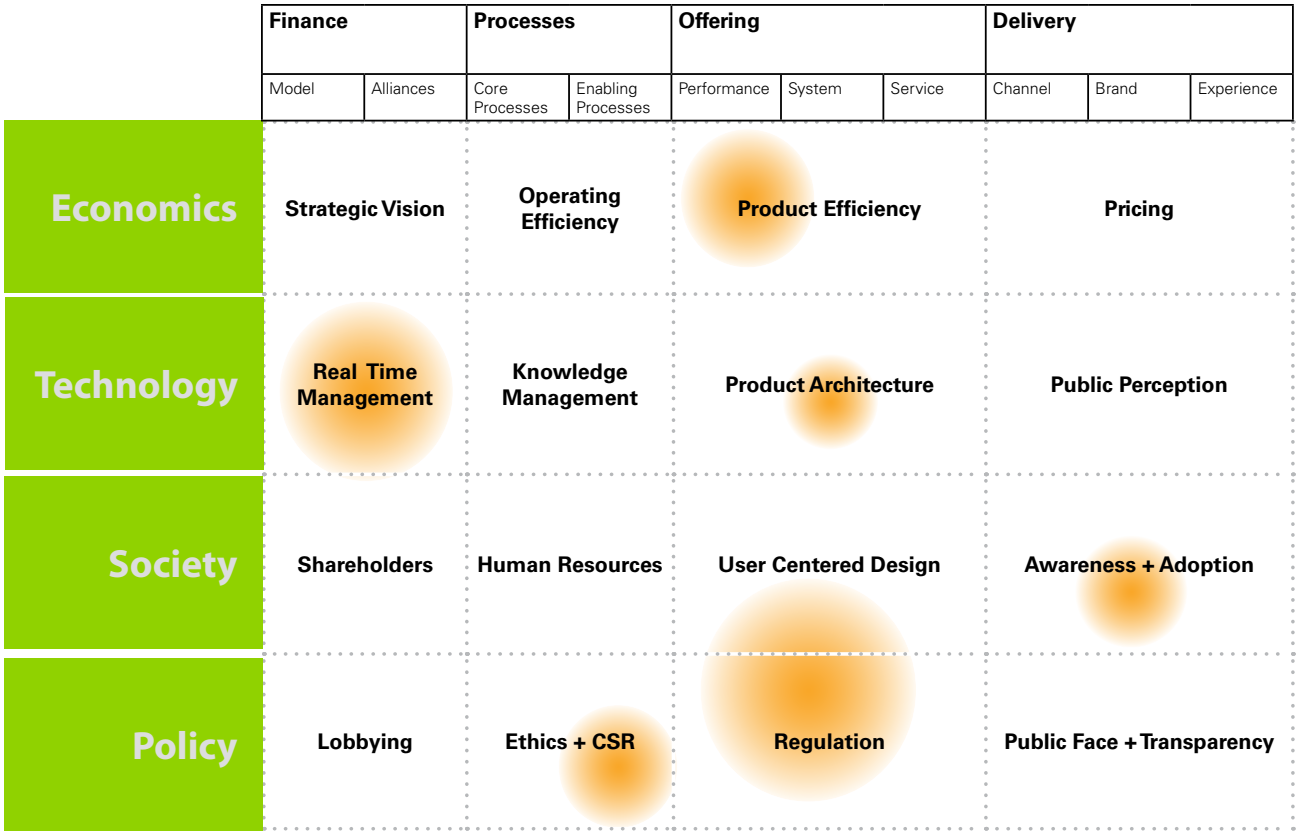
Discover and Diagnose:

With this new scorecard, the challenges of attaining those goals can now be addressed. In this manner, agendas and solutions are delivered with an increased relevance to the overall direction intended by executive leadership.

Taking the art and science of organizational evaluation one step further, a framework is introduced here. In this model, the capabilities of an organization to respond to environmental and social measures relevant to their business are evaluated through a simple scale. Again, this exercise emphasizes collaborative spirit among the departmental representatives, and supports the evaluation of the system through its many parts.



Phase 1: A profile is generated based on scorecard and innovation attributes of an organization. This is valuated to show "hot-spots" where the organization is vulnerable to sustainability factors from political, economic, social, and technological perspectives.



Phase 2:

Based on specific vulnerabilities, different tactical categories can be identified as considerations for developing strategies to improve environmental and social performance of internal operations and external offerings.

“Culture Eats Strategy for Breakfast”

(Ford Motor Company)

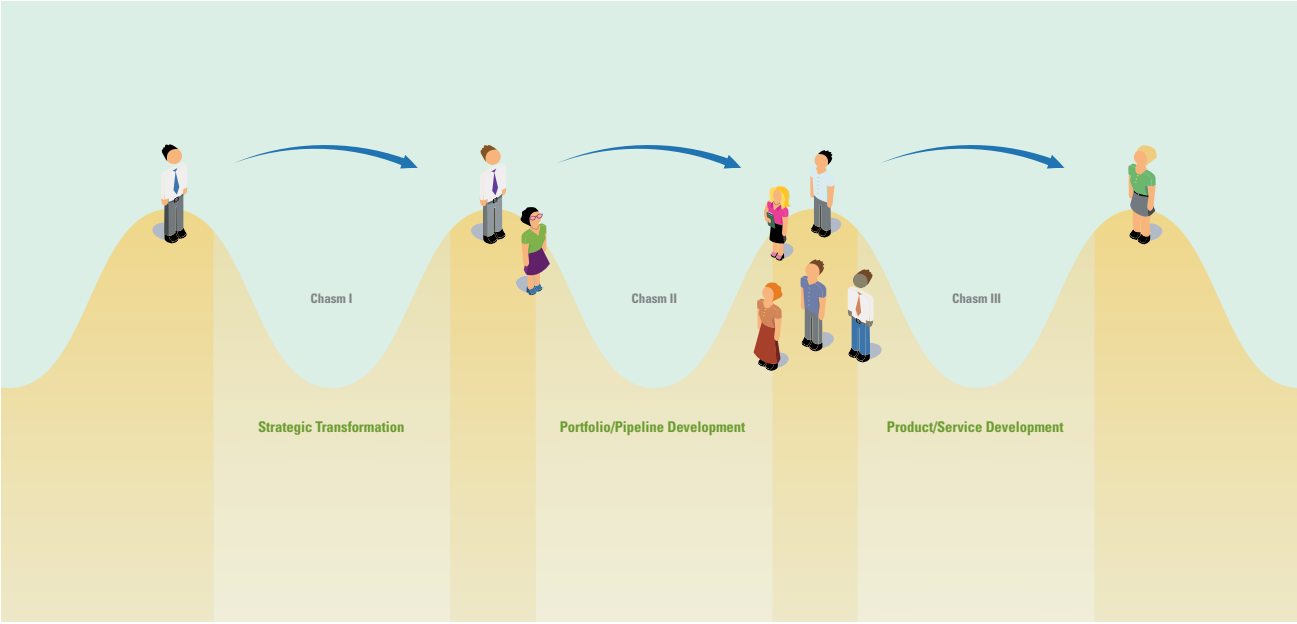
The Real Problem in Building Sustainable Enterprises

As discussed, there are many smart individuals and organizations working on the technical aspects of how organizations can be financially, ecologically, and socially sustainable. They have generated specific processes, metrics, and tools to handle many of the key pieces of this complex puzzle—technically, we could make organizations sustainable now. So why don't we?

From the research and workshop our team conducted, it is clear that the over arching issue in building sustainable enterprise is the lack of a unifying model to explain how individual roles fit into an organization's larger sustainability initiatives. By understanding the large gulfs which exist between executives and middle management, middle management and rank and file company employees, and employees and customers, individuals can more easily choose metrics, processes, and tools to be sustainable. For this, we present the Organizational Chasm Model.

Organizational Chasm Model (OCM)

At a high level, the OCM visualizes the communication and cultural gaps which exist in modern day enterprise. More specifically, the model illustrates the differing foci and day-to-day activities of Executives, Middle Managers, and Rank-and-File Employees. By recognizing and highlighting these differences, individual contributors can more easily know what specific sustainable practices to implement and how they interrelate.



Chasm 1: Strategy to Portfolio Management

Executives working at the "Chief" level (CEO, CFO, etc.) are concerned with setting high-level directives for their firms. They guide middle management on which markets to enter and how, at a high level, to win. Additionally, they must answer to answer to an oversight board and shareholders

Chasm 2: Portfolio Management to Offerings

Middle management's job is to translate strategy into a portfolio of defined products. Often the recipients of executive level demands for performance and initiative building, plans are developed and communicated to the department level employees and managers.

Chasm 3: Offerings to Customers

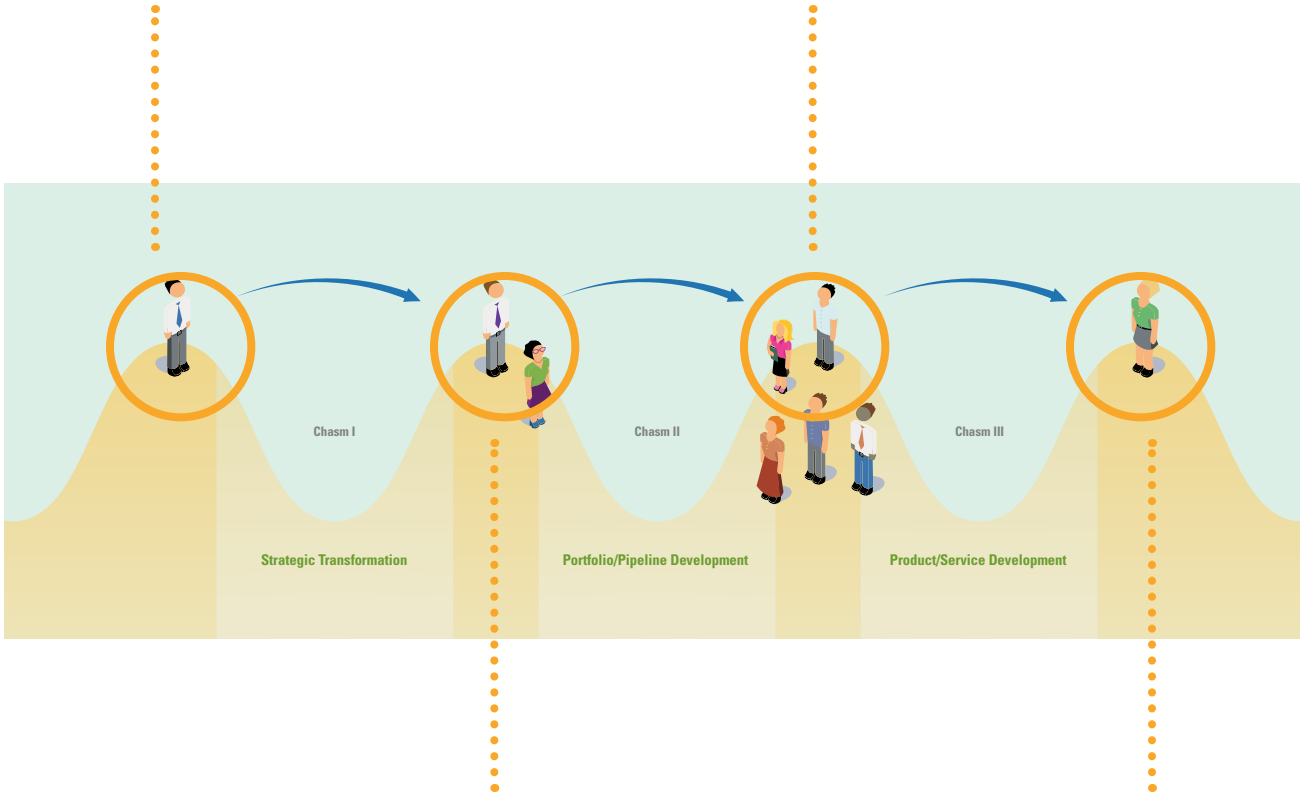
The challenge at a tactical level is to convey the intention of the over arching strategy into tangible aspects of the product or service. Traditionally driven to communicate value, provide aesthetic differentiation, or cost efficiencies, this role is expanding as a portal to consumer preferences and needs.

Stewardship

Create a vision for the company's sustainable future. Set goals.
As Steward, the executive management must provide a strategic initiative to create systemic changes. Enlist middle management and employees to define initiatives and align with the company's capabilities to assure success.
Inspire the brand by building awareness in the marketplace and illuminating advantages to the customer.

Inform and Transform Consumption

Inform consumers of the improvements to the brand. Leverage advantages to the consumer through all available communication channels.
Transform the consumers' appreciation of the products by defining advantages and demonstrating how the changes provide a superior experience.



Portfolio Evaluation + Initiative Building

Evaluate portfolio and organizational structure to establish a shared understanding of brand, organization, processes, and systems.
Balance the scorecard and set long-term and short-term goals.
Middle management must identify areas to build initiatives that align with the company scorecard.
Engage employees with specific directives for improvement.
Embrace the consumer's point of view of the company's brand, aligning internal efforts to the new strategy.

Tactics and Tools

Improve processes, products, and systems with tactics that support the initiatives.
Align the efforts with the directives specified on the company scorecard.
Employees implement tactical changes.
With the oversight of middle management, the high level strategic initiatives are distributed and realized at the employee level.

Making Sustainability Actionable

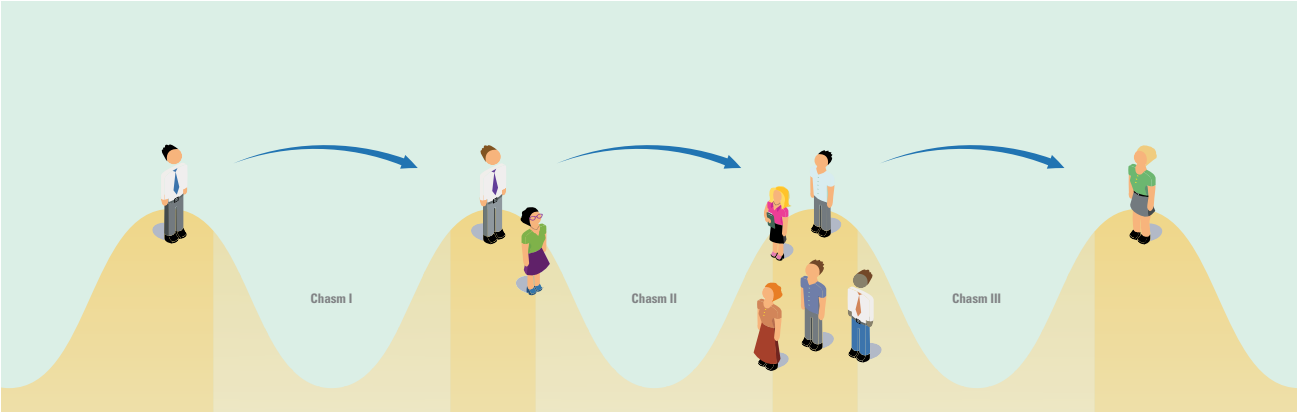
Breaking down the silos

The focus on processes and efficiency models throughout the past decades have optimized functions within the siloed organizational structure. The issue now facing these same organizations is that the rigidity of these models are crippling their ability to transform process and system thinking.

We now face a new challenge, to break down the height of some of these silos to connect the right people across functions in order to achieve a level of collaboration and flexibility in order to change behavior within the culture.

We've become so specialized, that we now must challenge ourselves to think outside of our specific functions, incorporating an understanding of systems, and how our contribution impacts the larger system.

The following section reports on the chasms that exist in the organizational management model, and it's relation in the context of sustainable practices.



Bridge Chasm I
Stewardship to Transformation

Stewardship

It is fundamentally assumed in this study that at the outset of a sustainable initiative the company leadership has embraced the need to move forward. Once the company leadership initiates a "Green" initiative, the vision needs to get out of the leadership's head and into the mainstream embrace of the workforce. Competitive advantage is more likely when a well-grounded vision is nurtured along the throes of development and seen through to implementation. The successful vision is less about pushing organizational initiatives and more about fostering cultural values that individuals can act upon. As Wal-Mart's CEO Lee Scott says, "We will not be measured by our intentions, we will be measured by our actions."

A steward engages the full life cycle of the company's products and services and improves wherever possible during the change process. We see this systemic strategy emerging in Steve Job's vision for a Greener Apple, "…to remove toxic chemicals from our new products, and to more aggressively recycle our old products."

Customers and shareholders deserve to know these initiatives are in place. The company's extended value network benefits from open communication of sustainable improvements. Greater transparency and shared value propositions set the stage for each player to quantify the advantages they see across the life cycle. Mutual advantages are realized from social equity or improved environmental and economic measures. Each link in the chain of a networked economy is enriched by the economy of scale they share.

Company leadership is uniquely positioned to promote value networks of systemic sustainability. Here lies the power to negotiate win-win strategies shared across executives, employees, suppliers, environmental groups and regulators. Employ incentives and benefits for workers, driving improvements at the grass roots level. At an organizational level, departmental level, and personal level, this builds shared values, and shared ownership.

Portfolio Evaluation & Initiative Building

At the outset of a sustainability initiative, senior and junior management need a clear picture of the company portfolio and organizational scorecard. Using whatever measures appropriate to understand the span of systems, processes and finances, the startup goal is to grasp a solid framework for identifying and tracking improvements. The management can identify opportunities for improvement throughout the greening initiative and track systematically which impacts, savings and costs result in the various domains of the company. This systematic perspective allows for a net exchange of credits across domains so the sum gain can be measured.

There's no absolute correct place to start. Just jump in the water and get your feet wet. Encourage modular initiatives, so they can be rolled out over time and customized within departments. Promote heuristic measurement systems to evaluate departmental performance and improvement.

Don't just tell employees what to do, but give clear guidelines. Give them an idea of where to start. Include initiatives including communication platforms; brand value, or an environmental signage campaign that shows the organization is invested in this systemic and departmental improvement.
Of course, what works in one company culture may be less effective in another. Encourage trial and error. Use workshops to evaluate ideas or to exercise simulation techniques to reduce risks. Cost estimates for social well being and difficult to measure environmental benefits can be treated as informational or educational expenses to get the projects going. As improvements are realized, communication is key to building a shared understanding of what works and what doesn't work, and how to measure success.

Bridge Chasm III
Integration to Differentiation

Tactics and Tools

Motivational tactics across the workforce can build to make a sizeable difference in the company's bottom line and profoundly impact the brand equity. After all, the brand of a company can easily be interpreted as the reputation of the company – and of the employees. People are motivated to make a positive impact on the company, the community, the world, and on their earnings and benefits.

Employee engagement is a strategic business in and of itself. Some groups are motivated by the sharing of the overall vision. In such groups, a clearer picture of the extended value chain can open individuals' understanding of tactics they personally could employ to make a difference.

Some groups are motivated through individual incentives and benefits. Friendly competitions between departments for the most impactful changes can elicit some highly engaged ingenuity. Sustainability initiatives can be listed as a range of choices for employees to choose from. such as encouraging an individual to leverage a supplier relationship and negotiate waste reduction in the supplier's production line. Buyers can be more selective in their choice of vendors, based on pre-meditated criteria.

Decisions at work are often disassociated from personal lifestyles. If the company's developmental process frames employees' contributions in a personal context, the benefits will reach far beyond the workroom floor. Personal contributions should be rewarded, and "Champions" held up as role models. Employ viral tools like blogs, open source and networking to leverage the shared ownership of success.

Bridge Brand to Customer Differentiation Brand Strategy

Inform and Transform Consumption

As has been mentioned in this report, the momentum toward green is becoming mainstream in the minds and spending habits of consumers. People are keen to see improvements in the way companies manage their production, the ways they treat their workforce, and they want to see less waste and damage caused by the materials used in making products.

Any improvements made toward this greater good, must be shared with the consumers and shareholders. At every opportunity, whether the improvement is ambient or foundational, the small parts build to an improved whole and customers deserve to know of advances that have been made.

Consider the case of Nike. At the corporate campus, recycled materials are used for pavement, but this value wasn't conveyed to the public with signage or other awareness campaigns. Consider how such a beneficial trend could spread if successful green innovations like this are identified as part of a tradition of public awareness. Other companies adopt the technique, and the benefits grow and grow.

Communicate auxiliary benefits related to efficient or cleaner processes and practices. Spanning the triple bottom line, Economic, Environmental and Social Equity – leverage the range of benefits through communications across all available channels, i.e. report if a result of better worker benefits result in lower turnover, a healthier workforce and lower insurance. The brand is largely about the company's reputation, and a reputation for improving the lives of the workforce, the community and the environment balance very well with a profitable, sustainable strategy.

Organizational Barriers to Achieving Sustainable Practice

User Centered Focus Areas:

Synthesizing information from organizational change themed workshops and interviews, the following categories define the major “buckets” to be addressed by any sustainability agenda.

Awareness + Education

Across all levels of the organization programs must begin by communicating the appropriate levels of awareness and education on the subject. Appropriateness must be considered when addressing the challenges at each chasm.

Shareholder Pressures

Translating initiatives among internal stakeholders (supply chain) as well as end consumers requires an understanding of motivations and implementation incentives that can transform and amplify the potential of success for sustainable agendas.

Organizational Orthodoxies

As mentioned in the organizational chasm diagram, the silos that currently exist in many business structures are challenged in their ability to collaborate and communicate effectively. User centered approaches on a B2B level are necessary to facilitate better lines of communication and understanding across these boundaries.

Conclusion:

Many efforts by individuals and organizations address the technical aspects of how organizations can be financially, ecologically, and socially sustainable. While these efforts have generated specific processes, metrics, and tools to handle many of the key pieces of this complex puzzle—the lack of angst and understanding across organizational culture often grounds the capability leadership to make the transition from the status quo to a more sustainable trajectory.

This report introduced a unifying visual, the Organizational Chasm Model to explain how individual roles fit into an organization's larger sustainability initiatives. By understanding the large gulfs which exist between executives and middle management, middle management and rank and file company employees, and employees and customers, individuals can more easily choose metrics, processes, and tools to be sustainable.

This topic is large, and requires more research to gain a better understanding of environmental, social, and financial balance. Standards are constantly evolving according to regulatory and environmental pressures from global and national entities. In this dynamic state, there is no tried and true answer.

Each organization much embrace the messages and level of heightened awareness that the sustainability movement will bring. This awareness must be translated through leadership unto the tiers of the organizational structure. And finally, tools and tactical educational effort must empower the people within that culture to promote and innovate around new rules of engagement.

How do we educate at these levels of the organization?

What communication tools tell the right message?

What innovative actions can leadership take to provide inspiration and positive examples?

How can heuristic tools be developed to improve the efficiency and timeliness of evaluating performance?

Change the culture, and the rest will follow.....

Road map:

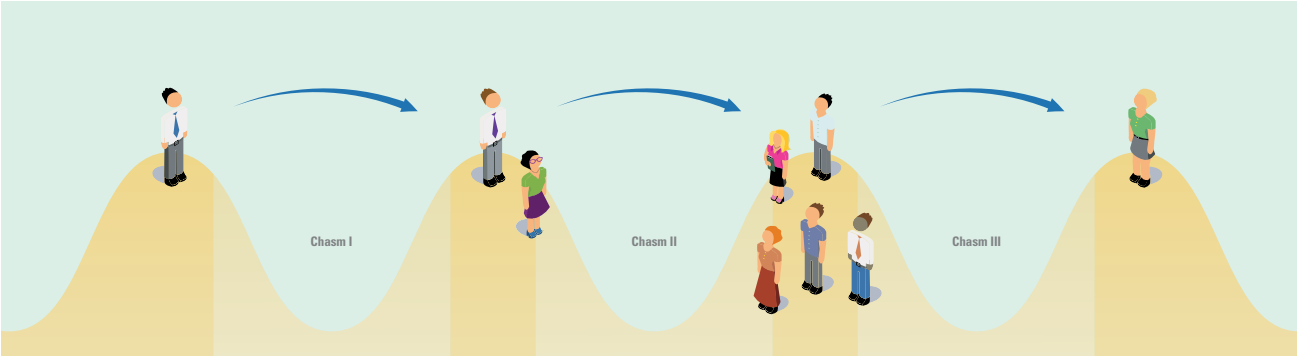
Institute of Design Programs

Project Areas:

Building on the foundation of organizational change chasms, programs related to strategy, portfolio planning, product/service definition, and development are suggested as continuation of the foundational work show in this report. Categorical references for future development are listed below.

The following pages outline areas for exploring solutions within different chasms, it will be important to choose the appropriate categories from which to draw insights and principles for design. Insights list can be found in the Appendix.

User Centered Focus Areas



Awareness & Education

Organizational Orthodoxies

Shareholder Pressures

Market Opportunities

Measurement

Goal: Using the PEST matrix as a baseline heuristic, continue to develop a user friendly tool for measuring departmental vulnerabilities. Recorded information is to be used to strategically align "first mover" initiatives to those areas in an organization that are most apt to benefit from such initiatives.

Initiating & Motivating

Goal: Leveraging implementation models such as the "Propeller Model" to initiate change within a set of agendas. Cultural Human factors research within an organization to discover communication, actions, and tactics for making employees "believers" of the executive level announcement to become more sustainable.

Customer Values

Ethnographic research to classify needs based on reactions to sustainability. Toyota Prius was marketed as "quiet" rather than "fuel efficient". What are the parallel associations that organizations can address in sustainable efforts?

Awareness Building

Beyond executive level buy in, what awareness campaigns can an organization leverage their brand to promote a more social or environmentally conscious agenda?

Tactics

Tools and methods to be used for evaluation, measurement of individual and systemic solutions. User evaluation for ease of use, consistency of reporting and effectiveness.

Project 1: Design Analysis and Synthesis

Develop a Sustainability Road map based on Building the Sustainable Enterprise model

Generate an analysis and synthesis of sustainable migration for a specific company using the model presented in the Building the Sustainable Enterprise (BSE) project. Introduce a sustainability road map across the corporation and draft a five-year plan specific to the organization. Leverage the work they've recently done with their Appreciative Inquiry project to leverage the buzz and momentum around positive organizational relationships. Generate future scenarios and actual targets for implementation across the company. Reference the BSE model and employ the breadth of domains and tools as appropriate.

Company recommendation:

Pactiv Corporation (NYSE: PTV) is a leader in the consumer and foodservice/food packaging markets it serves. With 2006 sales of $2.9 billion, Pactiv derives more than 80 percent of its sales from market sectors in which it holds the No. 1 or No. 2 market-share position. Pactiv's Hefty® brand products include waste bags, slider storage bags, disposable tableware, and disposable cookware. Pactiv's foodservice/food packaging offering is one of the broadest in the industry, including both custom and stock products in a variety of materials.
http://www.pactiv.com/

Pactiv is currently involved in an Affirmative Inquiry project and has expressed interest in teaming with the Institute of Design for our mutual benefit. Contact Jeremy Alexis for more information and contacts.

Appreciative Inquiry is the study and exploration of what gives life to human systems when they are at their best. It is an organization development methodology based on the assumption that inquiry into and dialogue about strengths, successes, values, hopes and dreams is itself transformational.

It is founded on the following set of beliefs about human nature and human organizing:

- People individually and collectively have unique gifts, skills and contributions to bring to life.
- Organizations are human social systems, sources of unlimited relational capacity, created and lived in language.
- The images we hold of the future are socially created and, once articulated, serve to guide individual and collective actions.

Through human communication (inquiry and dialogue) people can shift their attention and action away from problem analysis to lift up worthy ideals and productive possibilities for the future.

Project 2: User Centered Research

Conduct an ethnographic research project inside a medium-size company

Create a research report communicating motivations, roadblocks and behavior patterns related to company-specific sustainability potentials. Begin with a basic organizational overview. Design the research to span the pillars and chasms illustrated in the Building the Sustainable Enterprise (BSE) project. The research report will be an effective means for mobilizing a specific company toward actionable improvements in their sustainability practices.

Generate journeys, narratives, and activity diagrams that can support a subsequent communications project.

A follow-up communications project is summarized as a suggested next project. See project 3.

Project 3: Communications Design

Develop a communications program for an organizational sustainability program

Using the Building the Sustainable Enterprise (BSE) project as a starting point, design a series of informational and motivational communications for a specific customer. Once the specific organization is identified, reference the BSE model to identify specific areas in the company where initiatives will need to be linked and expedited through the company leadership, operations, systems, and culture.

Submit an addendum to the BSE archive, building the knowledge base of this ongoing research project.

Project 4: Planning Implementation

Creation of an implementation plan for a sustainability initiative within a company

Create an implementation plan for a major change to be introduced to an organization. Choose a company that is likely to embrace broad sustainability initiatives due to strong consumer pressure, more than by regulatory pressure.

Objective: clearly demonstrate feasible cultural changes by mapping initiatives to the existing processes, systems, people, and leadership. Using the Propeller model, perhaps McKinsey's Seven S's, and Kotter's Eight Forces, draft a plan that will lead to a systemic culture change. The project must address the triple bottom line: Economic, Environmental, and Social Equity.

Submit an addendum to the BSE archive, building the knowledge base of this ongoing research project.

Project 5: Problem Framing

Take a failed sustainability case and analyze the failure – outline a successful alternative case

Some first movers have tried to structure their business plans around values that are motivated by sustainability goals. Cases such as Insight Carpets, while initially sounding promising in the tradeshows, are performing poorly in the market. Using any of the techniques presented in the Problem Framing course materials, analyze what went wrong. Summarize the story, analyze the strategies, and chart a theoretical path for greater success.

Framing tools include:
- Identify the Right Problems
- Identify Framing Errors
- Ecosystem Framework
- Identify Assumptions
- Fishbone Analysis
- Explore with Objectives
- Explore with Permanence
- Explore with Rules
- Analogous Case
- Problem Types -- Five Tensions
- Puzzle vs. Mystery
- Policy Pyramid
- Driver-based Research Planning
- Compelling Experience
- Project Charter

Special thanks to the team of students, professors, and advisors who assiited in the development of this study-

“Building the Sustainabile Enterprise: Beyond Awareness” at the Institute of Design, IIT. ~2007

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Appendix

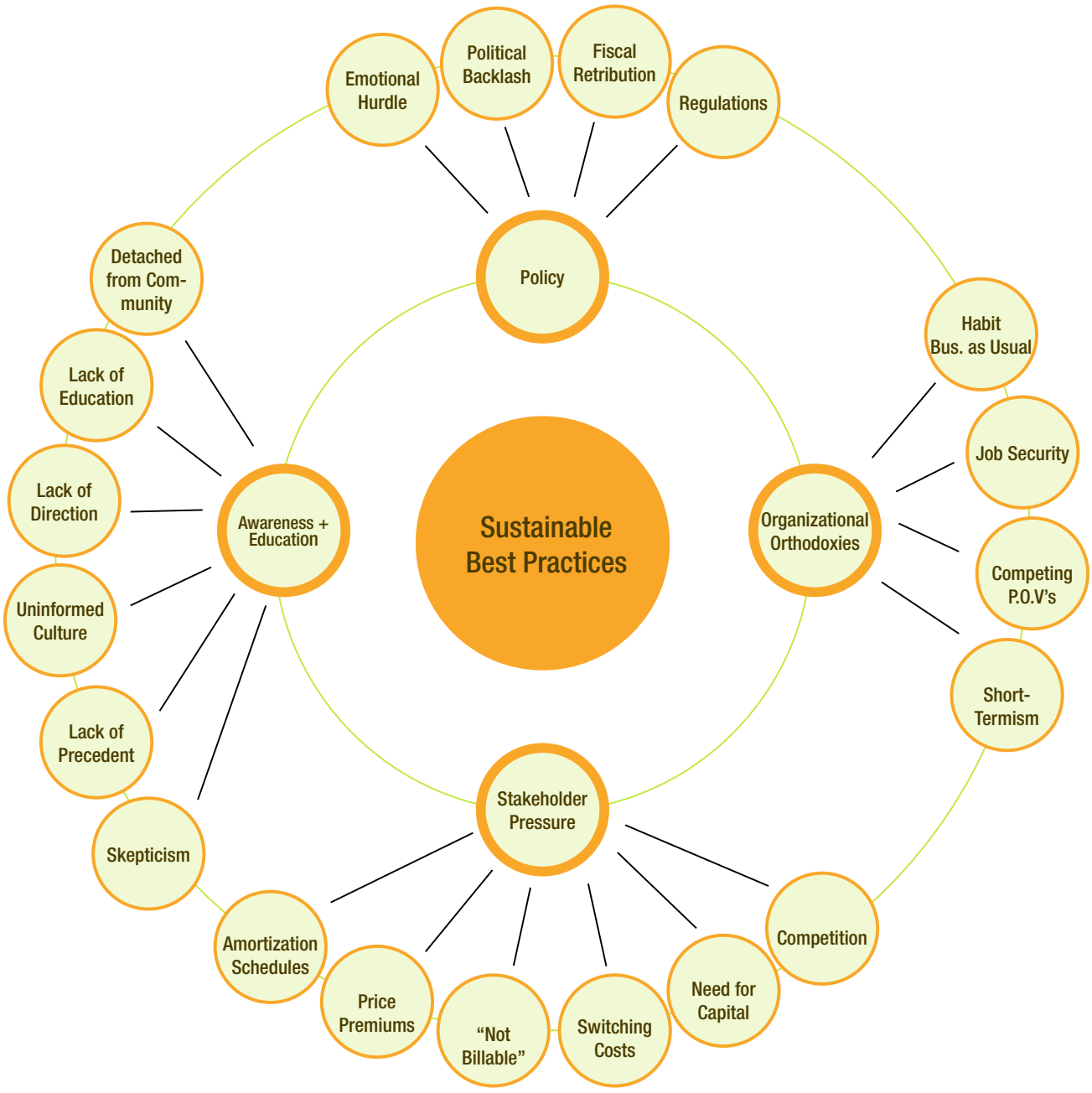
workshop 4.20.2007

Academic, Manufacturing, Brand Groups

workshop 4.20.2007

Goals, Barriers and solutions clusters

Synthesis: Organizational barriers to sustainable practice



Synthesis: Criteria for Chasm Challenges

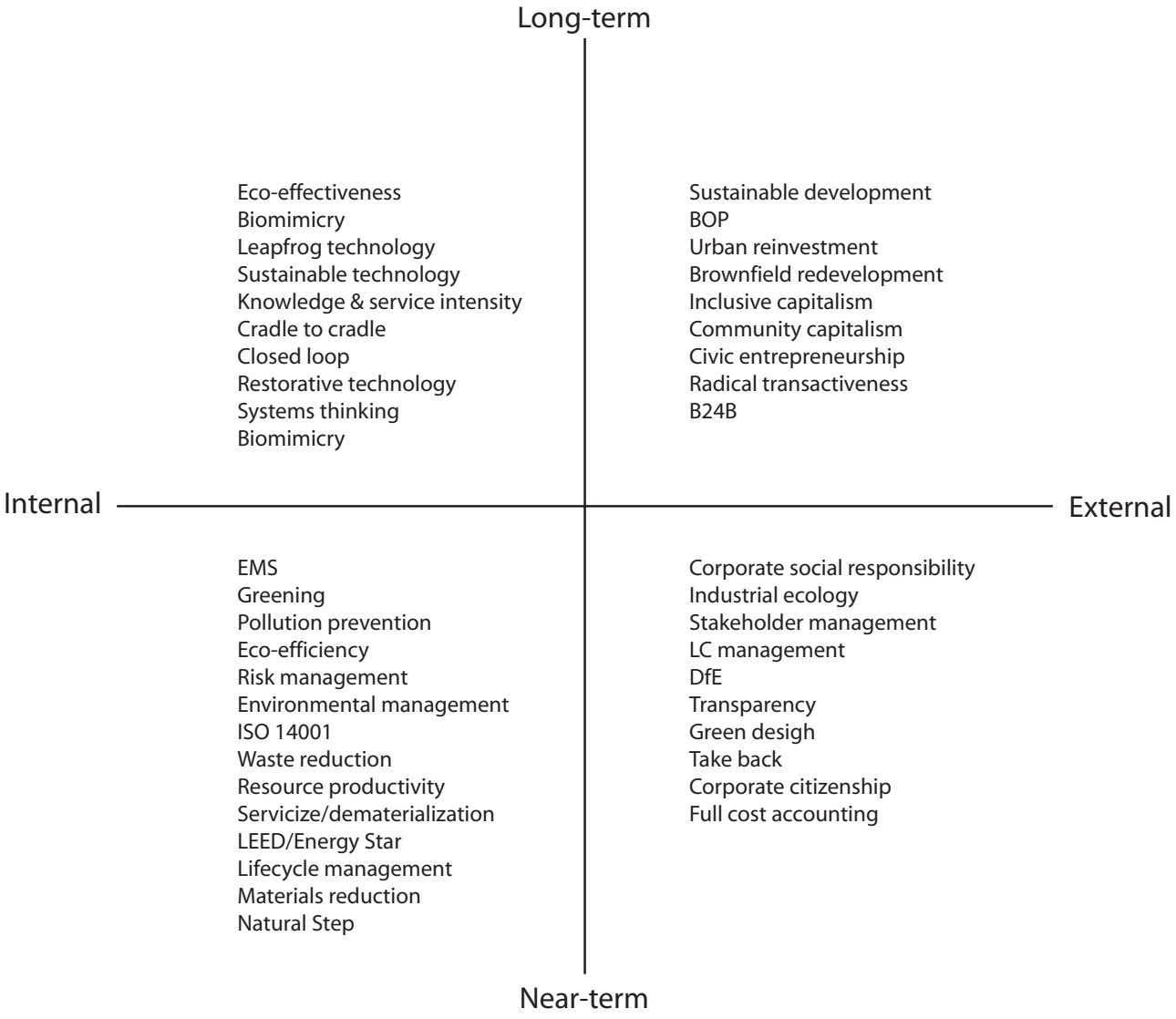
#	Insights	Principle	Category	
1	People need better ways to quickly measure impacts of decisions	Provide non-technical, relatively accurate social + environmental measurement methods	Measure Impact	Measurement
2	Problem solving through anecdotal evidence can lead to wasted time and expenditures	Incorporate standard Life-Cycle Analysis throughout operations to assess high impact areas	Measure Impact	
3	"People have no idea"- People lack the ability to recognize the impact of consumption through their daily activities	Daily or weekly recordings of mundane consumption shall be leveraged to communicate opportunities to lessen impact (ie # of coffee cups per week)	Measure Impact	
4	Managers stereotype "green" as "cost"	Develop planning tools that show costs for incremental first steps- only.	Measure Financial Value	
5	Profitability issues often doom efforts to measure and assess social and environmental impacts	Leverage social and environmental cost estimates as informational and Education-ONLY tools in accounting practice	Measure Financial Value	
6	System benefits often show the most encouraging reasons for sustainable behavior.	Communicate auxiliary benefits related to efficient or cleaner processes and practices (lower turnover, healthier workforce=lower insurance	Measure Financial Value	
7	organizations become overly reliant on rhetoric as a means to show intent	Facilitate incremental progress through open workshops that evaluate topical challenges	Motivational Communication and Support	Initiating & Motivating
8	People are reluctant to be first movers due to risk associated with failure.	Allow "good" bad decisions to be explored through simulation techniques	Motivational Communication and Support	
9	Designers and Marketers too often focus on immediate use of a product or service- not accounting for associated affects.	Full life cycle should be visually communicated to empower considerations beyond immediate customer	Motivational Communication and Support	
10	Initiating agendas can be difficult without upper level management sign off	Sustainability opportunities should be listed for people to evaluate and pick from	Motivational Communication and Support	
11	Too much strategizing can lead to analysis by paralysis	JUST DO IT	Motivational Communication and Support	
12	Organizations need to establish a sense of pride and ownership within their workforce	Incorporate rolling, departmental challenges to "define" and "do better"	Motivational Communication and Support	
13	Good will expectations are a difficult means to garner widespread contributions of ideas.	Provide incentives/competition based on dematerialization/energy savings processes and savings.	Motivational Communication and Support	
14	Many options flatly state- "Our customers don't want that"	Solutions should incorporate value associations to validate consumer preferences. Eco-freak (tree-hugger) vs Healthy (whole foods shopper)	Consumer Acumen	Customer Values
15	Social value is difficult to portray when deciding on an agenda	Trends of opens source and crowd sourcing should be leveraged in evaluating social "worth" of sustainability programs	Consumer Acumen	
16	Benefits of products often communicate associated benefits (alternative materials, free trade)	Sustainability efforts need to be conveyed through personal benefits and values	Consumer Acumen	
17	Personal agenda's or emotions drive decisions and concept development	Facilitate meetings using nature's metaphors	Promote Education	Awareness Building
18	"Pass the buck" mentality inhibits true collaboration	Equalize personnel to eliminate hierarchy, and to promote shared values	Promote Education	
19	Progress is measured by too narrow a scope	Justify decisions in the global context	Promote Education	
20	Distance from the source of a problem often promotes indifference	Expose stakeholders to the full life cycle of a product through hands-on experience (landfill, recycling plant, etc)	Promote Education	
21	Enterprise solutions (ie Wind Credit Purchasing) is difficult to associate to on an individual level	Clearly communicate values and benefits at an organizational level, departmental level, and personal level	Promote Education	
22	Individual members have a difficult time accessing management and recent agenda's.	Empower viral blogging and social networking events through company websites and memos	Promote Education	
23	Decisions at work are often separated from lifestyle	Development process should frame decisions in a personal context	Personalize Solutions	
24	Impact of solutions is never acknowledged	Project members should be listed as "Champions" by showing improvement AND slips in environmental and social performance of products/services	Personalize Solutions	
25	programs lack sense of ownership, prompting "what can I do about it" attitude	Develop ownership criteria by rewarding individual contributions for dematerialization,	Personalize Solutions	
26	Reflections of personal efforts bolster self esteem and promote other's participation.	Encourage protocols that reward or recognize individual contributions to agenda (waste reduction, social volunteering, etc)	Personalize Solutions	
27	Organizational strategy differences makes "one size fits all" solutions difficult to implement	Solutions should be modular, allowing organizations to customize plans depending on size, capital, etc	Enable Best Practices	Tactics
28	"What are "THEY" doing?" people and departments are curious to their standing in the organization	Promote heuristic scoring systems to evaluate departmental performance and improvement	Enable Best Practices	
29	Which process or system to be used.	Where possible, solutions should incorporate a natural- bio-mimicry approach to evaluation	Enable Best Practices	
30	Design needs to incorporate aspects beyond the design of the immediate product- including extended life options and production waste "designs"	Full life cycle costs and by-product should be incorporated into design as design potential (industrial ecology 2.0)	Enable Best Practices	
31	There is no magic wand	Process and market specific consultants should be leveraged to coach and audit specific agendas in the context of the whole system.	Enable Best Practices	

Strategies for sustainability

How do companies decide which is best for them?

In order to get any measure to succeed, the company must address & manage:

Upper management
Middle management
Employees
Customers
Community
Shareholders



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www.rmi.org

Reading

ref: www.sustainablebusinesscouncil.org/sustainability/readinglist.html

Cradle To Cradle
Biomimicry
Natural Capitalism
Ecology of Commerce