Memorial University of Newfoundland - Marine Institute

Assignment #3

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Contents

1 Why Sustainability is Now the Driver of Innovation (Article #1)

Nidumolu, R., Prahalad, C. K., & Rangaswami, M. R. (2009). *Why Sustainability is Now the Key Driver of Innovation*. Harvard Business Review, 87(9), 56-64.

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In the article, “Why Sustainability is Now the Key Driver of Innovation," Nidumolu, Prahalad, and Rangaswami argue that sustainability is a driver of innovation and a key tool for the advancement of an organization’s competitiveness. Throughout the article, the authors present their case with the desired outcome to increase the reader’s understanding of how sustainability is linked with innovation. Understanding and making that link enables business executives to make an internal case for the promotion of corporate sustainability.

Nidumolu et al. argue that the pursuit of sustainability has to be more than simply demonstrating social responsibility, but more importantly, sustainability should be seen as an opportunity to seek out new benefits from an organizational and/or technological perspectives. As a basis for their argument that sustainability drives innovation, the authors studied a wide breadth of sustainability initiatives from thirty large companies. From their research, the authors discovered “a mother lode of organizational and technological innovations that yield both bottom-line and top-line returns" (Nidumolu et al., 2009, p. 3 - 4). In addition, they found that organizations tend to go through five separate stages on the path to sustainability.

The authors open their paper by highlighting the common attitude towards sustainability at a corporate level. Executives fear that sustainability activities will come at the expense of increased costs, short-term financial shortfalls, and a loss of general competitiveness. Nidumolu et al. approach these issues from an opposite, and slightly more optimistic, approach. With this approach, they argue that striving for enhanced corporate sustainability will actually result in a transformation of the competitive landscape, which will ultimately set a new path in motion - one that hopefully provides a healthy serving of innovation and competitive advantage.

One of the key findings of the authors research was the identification of stages that organizations travel through as they progress along the transitional road from sustainable laggard to sustainable leader. The authors note that organizations, upon deciding to pursue sustainability with earnest, go through five distinct stages of change. The five stages include:

1. Viewing Compliance as Opportunity
2. Making Value Chains Sustainable
3. Designing Sustainable Products and Services
4. Developing New Business Models
5. Creating Next-Practice Platforms

Drilling down into these stages, the authors use relevant case studies to support the delivery of key messages. With each stage, the authors highlight challenges, opportunities and the required competencies needed to circumvent the challenges and maximize returns.

In Stage 1, viewing compliance as opportunity, the authors argue that the first step a company faces when it comes to sustainability is the need to address applicable government legislations and regulations. The importance of government involvement in sustainability is reinforced by survey results from Berns et al. (2009a, p. 4) where sixty-seven percent of respondents believed government legislation had the largest impact on their business, in terms of sustainability. An in-depth look at the survey results can be found in Section 2 of this assignment. Organization's might believe it is only necessary to maintain the status quo or the bare minimum when it comes to compliance, but the authors indicate that this type of mindset limits an organization's ability to maximize its innovative opportunities. The authors also stress the importance of being a front-runner when it comes to sustainability, enabling the organization to influence future regulations and avoid hefty fines associated with non-compliance. Organizations that lead the sustainability pack are also positioned to potentially curtail the enactment of inappropriate regulations, which could inhibit change and progression, and present unnecessary barriers for them (Nations, 2012, p. 34). This is supported by a case study example where HP was able to influence regulators in delaying the ban of a hazardous chemical, hexavalent chromium, by one year to give the industry additional time to develop an alternative (Nidumolu et al., 2009, p. 5). I believe that front-runners have a greater understanding or are more in tune with government priorities when it comes to sustainability. In those cases, they are better positioned to not only influence regulations, but are also able to use foresight in determining how to effectively meet compliance in a timely fashion, instead of playing catch-up after it comes into place.

Once an organization is able to maintain pace with its regulatory and legislative obligations, it can begin to switch gears and focus on making their value chains sustainable, or Stage 2. The crux of Stage 2 is for an organization to focus on increasing operational efficiencies from their supply chains, operations, workplaces, and product returns. Those more obvious areas for improvement, such as the supply chain, are usually addressed by organizations first. Moving from there, organizations begin to address the less obvious areas such as allowing product returns and recycling (Nidumolu et al., 2009, p. 5). The authors seem to apply an even weighting to the importance of each stage. I'm inclined to believe that Stage 2 is one of the more important stages of the five. Supply chains alone account for a large percentage of an organization's carbon footprint. As an example, the United Kingdom's National Health Service, a publicly funded healthcare system, attributes sixty percent of its carbon footprint to its suppliers (Kane, 2012, p. 44). Given the extent of environmental impact from the supply chain, it becomes clearly evident that organization's should direct considerable efforts to develop innovative ways to address these issues while ensuring that appropriate investments are made. The author suggests one innovative approach to increasing the sustainability of the value chain. That is, to develop compact and eco-friendly packaging (Nidumolu et al., 2009, p. 6). The effectiveness of this suggestion has been demonstrated on numerous occasions by large organizations. For instance, Wal-Mart committed to implementing a 5% reduction in the amount of packaging used for its products by 2013, which ultimately would require Wal-Mart's suppliers to cut the amount of packaging (Nidumolu et al., 2009, p. 5). This example provided by the authors is effective in showing the power that an organization can wield with its suppliers.

In Stage 3, designing sustainable products and services, the main challenge that organizations face is the difficulty in developing and offering eco-friendly products and services to consumers.

Consumers are becoming increasingly more knowledgeable on the subject of sustainability than previous generations. This is particularly the case as communication barriers erode with the advent of the Internet and social media (Jones, 2001). Consequently, consumers are seeking more transparency and accountability from organizations. Although, this will require organizations to pay closer attention to their sustainability practices, it will likely benefit them in the long run. Developing eco-friendly products and services not only appease the eco-savvy consumers, but provides an opportunity to draw consumers to a product or service they might not have been drawn to in the past. The authors reinforce the importance of consumers perceptions by providing a case study example of Clorox and its household cleaning products. In the United States, household cleaning products are the second biggest environmental concern after the automobile industry. Being cognizant of the concerns of its consumers, Clorox focused on the development of nonsynthetic cleaning products and was able to grab a 40% of the $200 million dollar US market in 2008 (Nidumolu et al., 2009, p. 8). This example clearly demonstrates the importance of Stage 3, and the value of paying close attention to the concerns of consumers.

The next stage in the path to sustainability is the development of new business models. The difficulty of developing new business models stems from the challenges faced by organizations in identifying alternative ways of doing business, but also in overcoming inertial tendencies. Executives and their organizations need to question the status quo, move out of their comfort zones, and develop new delivery mechanisms for their businesses (Nidumolu et al., 2009, p. 9). The message that the authors are delivering with this stage is that businesses seeking sustainability often fall victim to inertia, or the general tendency to preserve the status quo. The development of new business models is particularly difficult for mature industries where executive support for the introduction of new ideas or changes is difficult to obtain. Related to the core challenge of this stage is the short-sightedness of organizations with regards to profitability. Implementing changes is often a long and arduous process. This issue is demonstrated in the cement industry where market prices tend to be consistent within a region. As a result, cement companies are less likely to enter into long-term sustainability investments that could impact their short-term cash flow (Placet, Anderson, & Fowler, 2005).

In the final stage, creating next-practice platforms, the authors emphasize the importance of executives needing to question the implicit assumptions behind current practices (Nidumolu et al., 2009, p. 10). The authors do a good job of explaining this concept in a case study regarding the emergence of the smart grid, which is a holistic approach that encompasses the Internet and energy management.

This article was produced during the most recent economic downturn during the mid to late 2000s, and highlighted the point that an innovative thought process allowed organizations to see themselves through times of increased fiscal restraint and challenges. During these times of recessions, businesses quickly begun to understand the need to reduce waste, increase efficiencies, and seek out new markets in which they could flourish. This is possible when organization's pursue sustainable initiatives, as outlined in the discussion on the various stages above.

Nidumolu et al.'s article provides a useful overview of what an organization will face along the path to sustainability. The article itself could help those responsible for enacting sustainability practices in their organization identify which stage of sustainability their organization is currently seated. Being able to identify or categorize the extent of sustainability is a useful exercise to evaluate the progression towards leadership in sustainability. In addition, the various competencies that the author presents with regards to each stage could be useful for identifying shortcomings in an organization. Addressing any shortages in necessary competencies for a stage will help organizations progress further and have a higher impact with their sustainability initiatives. The innovative opportunities that the authors present would also be useful for organizations to pay close attention to, in order to maximize their sustainability investments.

Throughout the article, Nidumolu et al., strongly emphasize the ability of sustainable practice to promote long-term financial benefits to an organization. However, I believe that the authors fail to highlight the importance of effective sustainable/environmental portfolio management. Most corporate asset portfolios carry with them a high degree of uncertainty, particularly for those projects that take on something new and innovative. Faced with this uncertainty, organizations need to arrange their portfolios using a risk management approach. That is not to say that executives should avoid high risk ventures, but that they carefully consider all the potential costs, benefits, and associative uncertainties of a project to ensure that a project does not severely impede the development of an organization's capital base (Costanza et al., 2000, p. 151).

The authors conclude their paper by indicating that as traditional approaches to business fail, organizations will need to depend more on the development of innovative solutions, both operational and technological. The need for new and innovative thought processes and business approaches become evident as you face the many challenges presented along the five stages of sustainability proposed by the authors. It is only through innovation that organizations will be able to overcome these challenges and transition from a sustainability laggard to a sustainability leader.

2 The Business of Sustainability (Article #2)

Berns, M., Townend, A., Khayat, Z., Balagopal, B., Reeves, M., Hopkins, M. S., & Kruschwitz, N. (2009). *The business of sustainability: what it means to managers now*. MIT Sloan Management Review, 51(1), 20-26.

Note: This article review will include a review of a supporting interview related to the research summarized in the main article (listed above). The detailed interview can be found towards the end of Appendix B.

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In the article, "The business of sustainability: what it means to managers now," Berns et al. present the results of what they are calling the *Sustainability Initiative*. Through a partnership with The Boston Consulting Group and SAS, MIT Sloan Management Review performed a sustainability survey of over fifteen hundred executives and managers from across the globe. In support of the survey, over fifty in-depth interviews were undertaken with thought leaders. Interviewees included individuals from companies such as Unilever, General Electric, Nike, and BP. Based on the results of this research, the authors have set out to provide a snapshot of present day corporate sustainability, and to provide readers with a glimpse into where sustainability is headed.

The authors open their paper with a seemingly positive global outlook for corporate sustainability. Over ninety-two percent of survey respondents indicated that their organizations were pursuing sustainability in some form or another. This high percentage is indicative of the increased global attention to economic, social and environmental issues, and should not be entirely surprising. Sustainability, as a topic, is beginning to grab the attention of increasingly more people, including governments. The Canadian Government clearly indicated their commitment to sustainability with the enactment of the *Federal Sustainable Development Act*[1] in 2008. One should not read too deep into this statistic, as the scale of sustainability activities may vary considerably between organizations. In other words, one organization might encourage the use of water coolers to reduce

[1] "The Government of Canada accepts the basic principle that sustainable development is based on an ecologically efficient use of natural, social and economic resources and acknowledges the need to integrate environmental, economic and social factors in the making of all decisions by government" - http://laws-lois.justice.gc.ca/eng/acts/F-8.6/page-1.html#h-3

the consumption of bottled water, whereas another organization might be implementing a multi-million dollar technology that will reduce their carbon emissions by 20%. Both organizations are pursuing sustainability, but at very different scales. This level of detail was not captured in the survey.

Another related aspect where the survey may have fallen short is with regards to determining how many organizations had a formalized sustainability strategy. This information would have been important to capture as sustainability strategies are important tools for the promotion of an integrated and coherent approach to sustainability - one that would likely result in the largest impact across the organization. In a similar survey/research program, Bonini and Görner (2011) found that only thirty-six percent of executives indicated that their organization had a strategic approach to sustainability. The shear difference between the statistics that Berns et al. (2009a) and Bonini and Görner (2011) demonstrates that organizations may not be approaching sustainability in an integrated and effective manner.

Berns et al. (2009a, p. 4) of the survey also demonstrated that "opinions diverge on some aspects of sustainability." For instance, those respondents who considered themselves sustainability experts were able to define sustainability in more detail than novices. In addition, it is important to note that fifty percent of the same experts were able to see a compelling business case for pursuing sustainability in their organization, whereas only ten percent of the novices could (Berns et al., 2009a, p. 4). This provides us with insight into the value of sustainability education. Educating organizations on sustainability will likely increase an employee's understanding of how sustainability has a role in their organization, and help them see the benefit of pursuing sustainable practices from. In other words, it will encourage people to get on board with any sustainability practices being encouraged from within their organization. The divergence of opinions on sustainability is not to be unexpected, as the survey reached out to many different sectors including agriculture, automobile, construction, and health care, among others, as outlined in the detailed report on the surveys and interviews (Berns et al., 2009b, p. 78). Within these sectors, sustainability priorities could vary significantly. For instance, environmental impacts and concerns in the health care industry will be considerably less than those in the oil and gas industry. These considerations should be kept in mind when reviewing the results of the survey.

The authors move on to discuss the main barriers that impede the ability of executives to take decisive actions towards attaining sustainability. They flag three major issues, including:

1. inability for organizations to fully understand what sustainability is and how it is important for them;
2. difficulty in finding and defining a business case for sustainability; and
3. when organizations do decide to implement sustainable practices, the execution is often flawed.

The disparity in levels of sustainability understanding in an organization and the increased need for knowledge on industry-specific sustainability drivers and issues contribute to an organization's shortfall when it comes to sustainability. These issues could be addressed through a sustainability education program. As we saw in previous results where self-declared sustainability experts had a broader understanding of sustainability and could clearly see the benefits of its pursuance, so to can novices through proper training and education. An important first step would be to ensure all employees are on a level playing field to face sustainability. As the article mainly provides a glimpse of the survey results, with little analysis, this is something that one would hope readers would discern from the results.

In the survey, the authors found that approximately seventy percent of respondents believed their organization did not have a strong business case for sustainability (Berns et al., 2009a, p. 7). The authors attribute this statistic to the challenges faced by organization's when: (1) forecasting and planning beyond a short-term horizon; (2) understand the breadth of the impacts of sustainability investments; and (3) planning in an environment that is riddled with high uncertainty (Berns et al., 2009a, p. 7). An organization's struggle to find a business case for sustainability can also be linked to a shortfall in education. The importance of having a clear understanding of sustainability, and the issues that your organization and industry are facing is paramount. Obtaining this level of enlightenment will allow executives to manage their portfolios in a risky environment, balance short-term and long-term sustainability investments, and have their business cases for sustainability resonate well with the entire organization.

As organizations gain an upper hand on the first two issues listed above, they will need to face the execution challenges inherent to sustainability practices. In tackling this issue, executives need to find out a means to ingrain sustainability into their organization's backbone. In addition, even when a sustainable activity is implemented, it is challenging to measure, track, and report on the sustainability efforts (Berns et al., 2009a, p. 7). These challenges are not limited to changes resulting from sustainability initiatives, but form part of any change management process.

The article concludes by providing a short look ahead to where sustainability is going. Many executives are faced with the challenges of being able to assess their current state of sustainability, knowing where they need to go and how they will get there (Berns et al., 2009a, p. 8). There is a common understanding from the survey results and interviews that sustainability will continue to have a large impact on the way organizations are operated. Some of the trending topics that the authors highlight include the value of listening to consumers, shareholders, and the government; the importance of considering government agendas as they advocate for sustainability; and the advantages of being first movers when it comes to sustainability.

In support of my article review, I will also extract related points from the article "What Companies Are Doing Now - and What They'll Do Next" (near the end of Appendix 2). This article provides two interviews with the following individuals from SAS[2]:

- John Sall, SAS Executive Vice President and Co-Founder
- Alyssa Farrell, SAS Global Marketing Manager for Sustainability Solutions

One of the key messages from the first interview with John Sall was the importance of market pressures as a driving force for sustainability. Market pressures from consumers resulting from concerns over environmental impacts of products, or chemical usage in products, will likely be the largest drivers of change for organizations. Without consumers an organization will not be

[2]"SAS is the leader in business analytics software and services, and the largest independent vendor in the business intelligence market." - http://www.sas.com/

able to make profit and will likely be out of business fairly quickly. Interestingly enough, the response from this interviewee does not necessarily jibe with the results obtained from the survey, where sixty-seven percent of respondents identified the government as the major influencer of sustainability.

One key point that was raised in Alyssa's interview was the importance of corporate leadership when it comes to sustainability. She highlighted the importance of having buy-in from an executive level, such as the CEO, COO or CFO. Although it is important to have executive-level buy-in for sustainability, it is also important to recognize the importance of the bottom-up approach. It is the individuals at the working level that would be influenced by any top-down executive decision, and therefore it is their efforts that would likely determine the success of a sustainability initiative or program. As guidance on sustainability trickles down from the top, bottom-up ideas will likely meet them and further promote the acceleration of sustainability adoption.

In reviewing the article and supporting interview article, it becomes evident that the intent of both articles was not to discuss in detail the significance of the results, but to take a snapshot of corporate sustainability and allow the reader to make inferences based on the results. The real value from the articles arise from a reader's ability to identify common issues and challenges shared amongst the corporate world. The key points that readers should take away are the importance of government and consumers for driving sustainability, addressing the lack of basic sustainability education, and the necessity to have buy-in from an organization's senior executive in order to promote sustainability.

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