

What Sustainability Brings to the Research Table

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Abstract. Sustainability is becoming increasingly important in today's corporate world. Businesses with dedicated sustainability programs are seeing a positive impact on their bottom-line, employee satisfaction as well as their brand image. However, sustainability is ever changing and businesses need to keep up with these changes for future success of their organizations. The evolving nature of this field offers great prospects for user researchers; particularly for those working in an enterprise software company such as SAP that offers a suite of sustainability products to help companies run their businesses more sustainably. Drawing examples from our research this paper will discuss the new roles, responsibilities, and unique opportunities user researchers have; and how we can bring about a positive impact in the field of sustainability.

Keywords: sustainability, user research, opportunities.

1 Introduction

Sustainable development was first defined as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." [1] While organizations may have earlier focused on addressing environmental impacts alone, today it is vital for them to consider the social and economic aspects of sustainability as well. According to Giselle Weybrect, "...we are quickly moving away from a 'sustainability is all about saving the world but not about business' mentality into the 'using sustainability to strengthen my business while also having a positive impact on society' one." [2] Many global corporate executives are including sustainability objectives in their top priorities. [3] The following figure shows the survey (conducted in 2007) results indicating the priorities of these executives for the next 5 years.

There is great pressure on companies to divulge information on how they are addressing social concerns such as their fair trade practices etc., economic and environmental aspects of sustainability in their business operations. The demands are coming from shareholders, employees, consumers, customers, governments, as well as the society at large.

To address these needs, SAP has a suite of sustainability products to help gain insight into operations and enable the creation of viable business strategies for sustainability. The products range from Carbon Impact, Environmental Health and Safety, Product Safety and Product Compliance to Sustainability Performance Management and People Health and Safety etc. The User Experience (UX) team is involved in conducting user research and creating designs for these products.

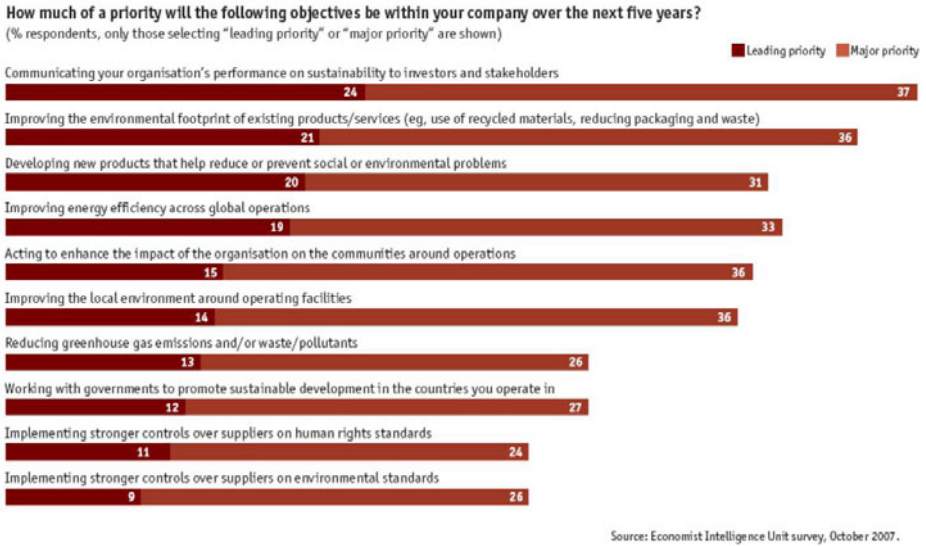


Fig. 1. Responses to one of questions in the Economist Intelligence Unit Survey, October 2007

The SAP UX team is located in multiple locations across the world. The ideas and examples used in this paper were gathered from our multi-country user research focused on sustainability conducted from June 2009 to December 2010. The user research activities included surveys, interviews, field research, contextual inquiries, user interface walkthroughs, formative usability studies etc. The user researchers were based out of Palo Alto, CA, Walldorf, Germany and Sao Paulo, Brazil while the product teams were globally distributed.

In the following two sections we will discuss how user researchers are uniquely poised with opportunities and added responsibilities to help shape the evolving field of sustainability.

2 Roles and Opportunities

2.1 Sustainability Is Beyond Compliance

Many companies have historically looked at corporate sustainability as having to do only with meeting regulatory compliance requirements. We can help companies understand that *sustainability is not just about compliance*, it is a whole new way to think and run your business. In April 2010 Reuters' Environment Forum identified that the number one trend in sustainable business was: "*A deeper understanding of what sustainability means*". Companies are asking the question "What does it mean to be sustainable?" when defining their corporate sustainability strategy. For many companies there was the belief that "sustainable development" will increase their operational costs. However it has been shown that corporate sustainability is a key driver of innovation and can actually positively impact the company's bottom-line in the long run by lowering their costs and increasing their revenues. [4] This holds true for companies like GE, DuPont Wal-Mart that have adopted aggressive sustainability strategies with positive financial gains.

In meeting with different customers during our research, we realized that they were at different stages in their implementation of sustainability programs and practices; many of them strictly focused on meeting regulatory compliance needs while others had started thinking of ways to make sustainability pervasive throughout their organizations. By using a Sustainability Maturity Model such as shown in Figure 2 user researchers can assess the company’s sustainability status. Identifying where a company is at enables the user researcher to then collaborate and brainstorm on how to advance a company to be more sustainable.

During interviews with safety managers at one of our multi-national mining customers, it was apparent that their immediate need was to be compliant with MSHA¹ regulations for their US mines. In our discussions, we learned that they desired to be more proactive and move beyond compliance; however, they did not have the tools or technology to make that happen. By understanding what stage the company is currently at, we can help them think beyond the limitations of existing technologies and create a radical vision of how to run their business in order to become a more sustainably mature company.

Level 1	Level 2	Level 3	Level 4	Level 5
Inactive Non-Compliance - Managers don't know or don't care about environmental and social issues - Regulations and standards do not apply or are ignored - No sustainability efforts	Basic Compliance - Limited awareness of issues - Reactive compliance to regulations - Minimum effort when required - Rely on outside skills	Beyond Compliance - Voluntarily exceed regulations - Sporadic efforts and results - Some public disclosure - Some inside skills	Integrated Sustainability - Proactive company-wide sustainability program - Triple value-based business model - Whole – system resource productivity principles - Board level oversight - Corporate Sustainability reports	Sustainability Leadership - Vigorous global environmental and social development - Set leading standards and performance that others follow - Values embedded in corporate culture - Sustainability advocate

Fig. 2. Corporate Sustainability: Capability Maturity Model by Spectrum Innovation Group © 2008

¹ MSHA (Mine Safety and Health Administration) is an agency of the United States Department of Labor which administers the provisions of the Federal Mine Safety and Health Act of 1977 (Mine Act) to enforce compliance with mandatory safety and health standards as a means to eliminate fatal accidents, to reduce the frequency and severity of nonfatal accidents, to minimize health hazards, and to promote improved safety and health conditions in the nation's mines.

2.2 Co-create and Enable Sustainability Best Practices

From many companies' perspectives sustainability is largely undefined and there are few or limited standard guidelines or best practices. Our role as user researchers in this case is different from other areas of enterprise business like Finance, HR etc. that have well established best practices and business processes. As user researchers we collect data from multiple customers, industries and countries and then we are tasked with synthesizing all this information to create a consolidated view of standard sustainability practices. These new sustainability best practices may be shared with customers to be included in their sustainability strategies and programs. These best practices can also be translated into designs and concepts that are then incorporated into our products supporting customers to implement them in their business operations.

2.3 Help Modify or Define New Roles and Responsibilities

In helping define what sustainability is, we may come up with new roles and responsibilities that a company never had, or redefine existing ones. When talking with manufacturing customers about Energy Management we learned that the role(s) performing energy management related tasks in a company comes from a wide variety of different organizational departments for example Operations, Facilities, and Maintenance etc. In cases where a dedicated person is not responsible for energy management monitoring and analysis, different people from different departments are assigned the tasks. As in the case of an Energy Manager at a multi-national chemical company said, "I spend the first two weeks of the month just creating reports. My job is to focus on improvement related activities instead of worrying about creating reports!" Through research, we were able to identify areas that could be easily automated and also integrated with our existing solution. This would enable him to move from monitoring data and creating reports to focusing his efforts on strategic energy reduction programs while an *Energy Analyst* could assume the responsibility of monitoring, analyzing and reporting energy consumption.

On a recent site visit to one of our medical devices manufacturing customer, we were told that RoHS² regulations will begin applying to medical devices in 2014 under a proposed recast. The customer was struggling to include all the restricted substances in their current database and update other business processes to comply with the new regulation. They were also unaware of the *Compliance Specialist* role that seems fairly common in industries where such directives apply. We were able to share our experiences of talking to other customers, how the role of compliance specialists fits in their organizations, and what job responsibilities might entail. This provided our medical devices customer a deeper understanding of such a job profile and they were willing to consider including such a role in their organization in the future.

² Restriction of Hazardous Substances (RoHS) is a directive that was officially adopted in July 2006 by the European Union, for the purpose of protecting both people and the environment from hazardous chemicals found in both electronics and electrical products.

2.4 Push the Technology Envelope

Sustainability can drive innovation and we have seen examples of this in recent years with hybrid cars, Ford SmartGauge with EcoGuide, UbiGreen [5] etc. User researchers are uniquely positioned to help push the technology envelope. We can collect data that inspires developers and technologists to think “outside the box” and come up with novel solutions. As an example, during an interview with a Safety Manager at a mining customer he stated, “Aggregation of safety information across US mining industry could help in discussions around safety by driving clarity. There is a potential cross-industry benchmarking opportunity which would allow mines and MSHA to benchmark themselves against the industry to locate unsafe operations more effectively.” Such a combined view of data doesn’t exist today. This along with other data was turned into user needs and requirements for our development team. Developers now have the opportunity to create visionary technology to make this happen, leading to successful adoption of the product.

2.5 Enable Creation of Comprehensive Solutions

Sustainability is a big umbrella with many underlying topics, and this is true with our sustainability suite of products as well. Following our multi-country environmental health and safety research, we found underlying linkages with completely unrelated products that had not been considered before. The finding led to a major integration project that fostered collaboration between different teams within our organization. This laid the foundation for shared innovative thinking resulting in a holistic product for our customers.

3 Summary

The nascent field of sustainability offers user researchers numerous opportunities to practice our work in exciting new ways and makes it possible for us to influence its establishment in the future.

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