



## **15. 990: STRATEGIES FOR SUSTAINABLE BUSINESS (H1)**

**Spring 2009**

**Tuesday, Thursday 2:30-4 pm**

**E51-325**

Professors: Rebecca Henderson, Richard Locke, Sarah Slaughter, John Sterman

Teaching Assistants: Laurel Hoffman, Rahul Kitchlu, Jon Potter

Course website: <http://stellar.mit.edu/S/course/15/sp09/15.990/index.html>

Office Hours by appointment

### Introduction

Today, organizations of all kinds - including traditional manufacturing firms, those that extract resources, a huge variety of new start-ups, non-profits, and governmental organizations of all types - are tackling the massive challenges of sustainability. For some, this shift offers real opportunities — for new products and services, for reinventing old ones, or for solving problems in new ways. Other organizations tackling sustainability are engaged in very real struggles in which the solutions are far from obvious. Alongside questions about the problems of sustainability and how to reconcile free-market capitalism with the need for more sustainable business practices are real questions about how to move along the path towards sustainability. How can we translate these real-world challenges into future business opportunities? How can individuals, organizations, and society learn and undergo change at the pace needed to create a sustainable world?

Using in-class simulations, cases, role-playing, and speakers, we'll explore emerging strategies for sustainable businesses and organizations.

This class is the pre-requisite for the 15.992 Sustainable Business Lab (S-Lab), which focuses on the “live” project during which participants will work in groups of three to four people with an organization that has requested the Sloan School’s help in thinking through an issue related to sustainability. Prior projects have included work with large companies like Disney, Intel and Nike, smaller companies like Good Energies, GoLoCo and Green Fuel Technologies and NGOs like Clinton Climate Initiative, US Business Council for Sustainable Development, and MiBanco. Past projects have developed new tools or approaches, structured new strategies for organizational sustainability, and assessed market opportunities.

### **Readings:**

Readings include a combination of analytic articles and company case studies drawn from a variety of different industries. A reading packet, available at the MIT Copy Technology Center (basement of E52) includes all of the HBS case. Additional articles, class notes, slides, and other resources related to the course will be posted on the Stellar course web site (<http://stellar.mit.edu/S/course/15/sp09/15.990/index.html>). Please check this site regularly.

## **Requirements**

The requirements for the course and the contribution of each towards the final grade are:

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|----|--------------------------------------|-----|
| 1. | Two (2) case write-ups               | 20% |
| 2. | Three (3) two-page discussion papers | 40% |
| 3. | Class Participation & Attendance     | 40% |

### **1. Case Write-ups**

The case write-ups should be brief, no more than 3 double-spaced pages. You may choose any 2 cases to analyze. Cases include both the traditional cases and company/industry cases discussed in some of the readings. **Write-ups are due before class on the day the case is to be discussed.** They are intended to be analytic discussions of some issue central to the case. Please do not write a summary or précis of the case or repeat case facts except to bolster your argument. Based on the information provided in the case materials, please be analytically judgmental and evaluative. You should propose alternate managerial views and action plans whenever appropriate and discuss the relevance and applicability of the frameworks proposed in the readings and lectures. In short, you should write what you think of the situation in the case and not merely what the author of the case says. **These case write-ups are INDIVIDUAL assignments.**

### **2. Two-Page Discussion Papers**

In addition to the case write ups, we will ask you to write 3 "2 pagers". 2 pagers should be written by teams of 2-3 people, and are intended to be brief assignments that give you a chance to reflect on the material we are covering in the course. There are four assignments -- you can choose any three, or if you write all four, we will drop the weakest grade. **The 2-pagers are due before class on the day the case is to be discussed.**

Due: (all are dates after a weekend, except the 12th, which is the last day of class)

***Feb 10<sup>th</sup> (Nike in class):*** Briefly outline the "business case for sustainability", if there is one. Write your paper in the form of a two page memo to a skeptical but interested CEO. Why should she/he be interested in the topic? (Or not) What kinds of opportunities might there be? What kinds of threats?

***Feb 19th (IBM in class):*** Imagine that you have been asked to head up a new sustainability effort for a firm like IBM. Where would you start? Why? What is the appropriate balance between passion/vision/emotions and policies and procedures in creating and building such an effort? How could you tell? How would you maintain it?

***March 3rd (Wal-Mart in class):*** Should businesses care about social sustainability, as well as environmental sustainability? Why or why not?

***March 12th (last class):*** Is there any appropriate role for private business in the politics of sustainability? How might the answer to your question depend on the nature of the business? Please give specific examples.

Or:

Individual paper – Reflecting on the readings, discussions, speakers, and cases, what opportunities have you discovered through this course for your own career or personal life? What do you think you could or might do differently – in selecting a job, in performing your work, or in other personal or professional choices?

### **3. Class Participation and Attendance**

Your active participation in the discussion in class is integral to the design of this course. **Class participation counts for 40% of your final grade.** We expect you to be fully prepared, and to have read the cases and assigned readings and to fully participate in the discussion. (Those of you whose native language is not English and/or may have difficulty speaking up in class are encouraged to meet with one of the faculty to discuss how your participation in class can be ensured.)

We have designed this class as an integrated whole, and if you miss class it makes it very difficult to maintain a coherent conversation. You'll miss ideas and concepts - many of them raised by your colleagues - that are not in the readings and you'll have a more difficult time contributing to the discussion. So, if for some reason you are forced to miss class – and we hope that this will be a very rare occurrence (!) – please let the teaching assistants know in advance to obtain an excused absence. For one unexcused absence, your grade will be lowered one grade; for two unexcused absences, 2 grades; and three unexcused absences will result in automatic failure in the course.

#### **Sustainable Business Lab (S-Lab) H2:**

We will post the list of potential host organizations and projects on the course web site in January 2009, and students will be expected to review the proposals and post their project preferences and interests during H1 to initiate team formation. There will be a **project mixer in early March** to form teams for the projects, and **Projects Bids are due on March 10, 2009.** We expect that if you submit a project bid you are committing to stay in 15.992 Sustainable Business Lab (S-Lab). If you don't submit a project bid, we will assume that you will not take that course. **Team matches to host organizations will be completed by March 13.**

## FRAMING THE CHALLENGE

### I. INTRODUCTION

#### **1. Course Overview:**

**February 3**

*Lead Faculty: Prof. Locke*

*What does it mean for a private company to act “sustainably”? This session provides an introduction to the course and to the central challenge of sustainability. Sustainability, defined broadly to include social equity, economic development, and environmental restoration, offers new opportunities (but also challenges) for business. To begin our discussion, we will begin with a discussion of the Herman Miller case. How do companies translate sustainability (e.g., cradle to cradle design) into their product development and commercialization processes? How do they implement these practices and remain competitive in the marketplace? What happens when some of their goals (cutting edge design, commercial success, eco-efficiency) contradict? How do they resolve these dilemmas?*

#### **Case:**

**Cradle-to-Cradle Design at Herman Miller: Moving Toward Environmental Sustainability (HBS Case # 9-607-003)**

#### **2. The state of the world**

**February 5**

*Lead Faculty: Prof. Sterman*

*Why is sustainability an important problem for business? A look at the science – and at the possible political and economic consequences of current trends.*

#### **Readings:**

*Impacts of Climate Change*, by N. Gilman et al., 2007, **Global Business Network**.

*Tracking the Ecological Overshoot of the Human Economy*, by M. Wackernagel et al., 2002, **PNAS**.

#### **Recommended Readings:**

*Human Population: The New Half Century*, by J Cohen, Nov. 2003, **Science**.

*Prospects for Biodiversity*, by Martin Jenkins, Nov. 2003, **Science**.

*Future of Fisheries*, by D. Paulie et al, Nov. 2003, **Science**.

*Science and Technology for Sustainable Well-Being*, by John P. Holdren, **Science**

### 3. Nike

February 10

Lead Faculty: Prof. R. Locke

*How does one embed “thinking green” into the product development processes of an organization in an effective way? How can people “on the ground” be given the information they need to make the right tradeoffs?*

**Case: Nike Considered: Getting Traction on Sustainability. MIT 08-077**

#### **Readings:**

Richard Locke, Fei Qin, and Alberto Brause, “Does Monitoring Improve Labor Standards?: Lessons from Nike,” *Industrial and Labor Relations Review*, Vol 16, No 1 (October 2007)

Richard Locke and Monica Romis, “Improving Work Conditions in a Global Supply Chain”, *MIT Sloan Management Review*, Vol 48, No. 2 (Winter 2007).

### 4. Getting Unstuck: Addressing the strategic & organizational challenge

February 12

Lead Faculty: Prof R. Henderson

*Why do firms have trouble addressing the problem of “worse before better”? How would you recommend a firm facing the problem – for example, a firm that is highly overloaded – address it? Why do firms find it so difficult to do new things?*

#### **Readings:**

*Nobody ever gets credit for fixing problems that never happened.* Nelson Repenning and John Sterman, *California Management Review*, 2001.

*Past the Tipping Point: The Persistence of Firefighting in Product Development*  
Nelson P. Repenning, Paulo Gonçalves, Laura J. Black

#### **Recommended Readings:**

*Corporate Managers’ Operational Discretion to Sacrifice Corporate Profits in the Public Interest*, by Einer Elhauge, Chapter 2 – pages 13-76 – from *Environmental Protection and the Social Responsibility of Firms*. Ed Bruce Hay, Robert Stavins, Richard Vietor (eds), 2005.

*The Coming Market Shift: Business Strategy and Climate Change* by A. Hoffman, Chapter 7, from *Cut Carbon, Grow Profits: Business Strategies for Managing Climate Change and sustainability*, K. Tang and R. Yeoh (eds).

### 5. IBM

February 19

Lead Faculty: Prof. R. Henderson

*How important are formal processes in leading a company to be sustainable? Where does one draw the line between what’s best for the business, best for the environment and*

*what looks good in the newspapers? Are procedures and passion complements or substitutes?*

**Case:** Steady as a Rock: Sustainability at IBM. MIT Case #xx.xxx

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**6. GridLogix**

**February 24**

*Lead Faculty: Prof. R. Henderson*

*Energy efficiency in construction is often cited as one of the most effective ways to reduce green house case emissions. Gridlogix has a product that promises to reduce energy use by 20% with double-digit returns. But to whom should they sell it? Why are there so few customers?*

**Case:** Gridlogix MIT 07-051

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**7.Nestle**

**February 26**

*Lead Faculty: Prof. R. Locke*

*Increasingly, companies are reviewing and reforming their supply chains in order to reduce their footprint and promote sustainable business practices. But what are the principal direct business benefits of these strategies: guaranteeing long-term supplies of high quality inputs at competitive prices? Managing (reputation and supply chain) risk? Enhancing the company's reputation? Promoting social standards among local producers? All of these? None?*

**Cases:**

Nestle: Sustainable Agriculture Initiative (HBS Case # N9-705-018)

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**8. Wal-Mart**

**March 3**

*Lead Faculty: Prof. J. Sterman*

*Wal-Mart has made enormous investments in greening their facilities and in selling green products. Can the world's largest retailer make a real difference? Does their strategy make sense? For whom?*

**Case:** Wal-Mart's Sustainability Strategy OIT-71.

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**9. Fishbanks simulation**

**March 5**

*Lead Faculty: Prof. J. Sterman*

*We explore the dynamics of renewable resources in market economies. Through an interactive computer-based simulation, you will play the role of entrepreneurs seeking to maximize your profits as you invest in and manage a fishing fleet.*

**Reading:** Fishbanks Briefing and Role Description

**10. Fishbanks debrief**

**March 10**

*Lead Faculty: Prof. J. Sterman*

*We will discuss the implications of the simulation for the design and implementation of effective policies to promote sustainable and productive use of renewable resources, including ecological, political, institutional, and other issues. The Marine Stewardship Council case examines how Unilever looks at the collapse of the world's fisheries. How should they respond?*

**Case:** The marine stewardship council (A) IMD008

**Readings:**

*Globalization, Roving Bandits, and Maine Resources*, by F. Berkes et. al, March 2006, **Science**.

*The Sea, A Survey*. The Economist, January 2009.  
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*Can Catch Shares Prevent Fisheries Collapse?* C. Costello, et al. (2008). *Science* **321**, 1678.

**11. Reflections & Conclusions**

**March 12**

*What are the implications of our work together for individual responsibility and personal action? How should one think about the link between business and politics?*

**Recommended Readings:**

*The limits to growth revisited* by D. Meadows, 1991, in **The Global Citizen**.  
Living Lightly and Inconsistently on the Land, *Donella Meadows*,