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15.992 S-Lab: Laboratory for Sustainable Business  
Spring 2008

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# Laboratory for Sustainable Business S-LAB

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15.992 S-LAB Class #1  
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## Agenda

- Introductions
- Goals of Course
- Illustration: Nike Case
- Requirements, Course Overview, Key Themes, Important Dates



# Course Goals

- Introduction to key issues and opportunities for Sustainable Business. What Can Companies Do?
- Tools / Frameworks for understanding & responding to those Challenges / Opportunities. Operations. Supply Chains. New Products/Markets.
- Action Learning. Mini-Internships with Organizations seeking to promote more sustainable business practices (either through new start-ups or redesigned existing practices)
- Demonstrate that there is a lot that business / you can do to regenerate our planet and build a more sustainable economy



# Why Nike?

1. What is Nike doing?
2. Why is it pursuing these strategies?
3. How do they measure success / impact?
4. What do you think?



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# Why Nike?: Success Through Global Sourcing

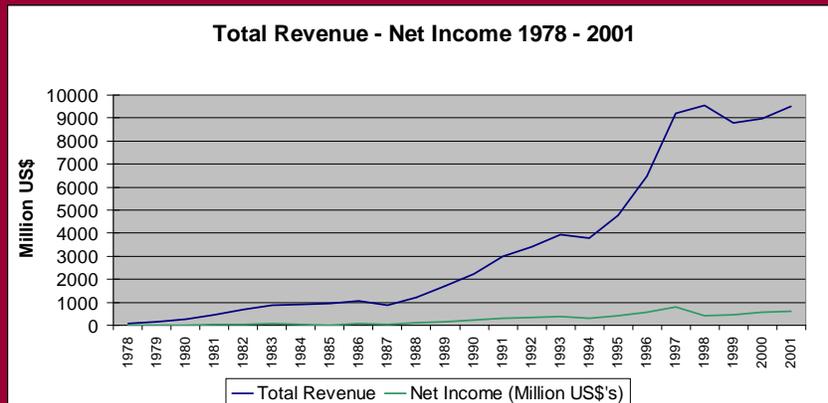


Figure 1 - Net Income

Sources:

a) 1978-97: HBS Case #9-299-084 "Nike, Inc.: Entering the Millennium," March 31, 1999.

b) 1998-2001: Company financial information



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# Why Nike?: Suppliers Engaged in “Poor” Working Conditions

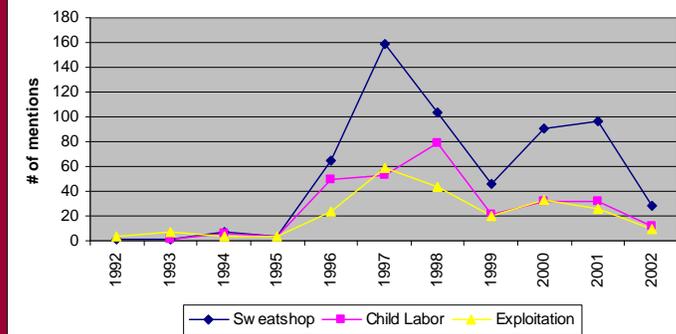
Images of Nike workers removed due to copyright restrictions.



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# Why Nike?

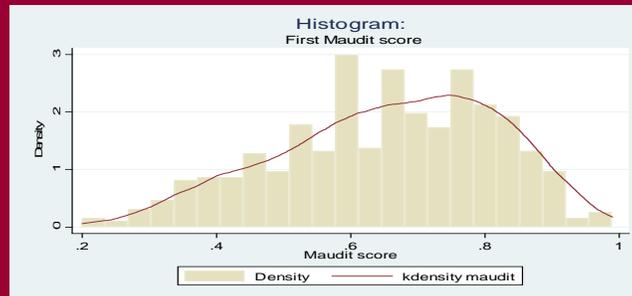
Unfavorable media mentions  
Major World newspapers



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# Factory Conditions Vary Across Sectors & Countries

First M-Audit Scores across all factories (Nov. 2002 to Jan. 2005)



**Number of Observations: 575**  
**Average M-Audit Score: 65%**



Similar patterns of variation within sectors (footwear, apparel, equipment) and within countries.

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# Are Things Getting Better?

Change in Compliance Rating Inspections

Change in CR Rating	Freq.	Percent
-3 (Down by 3 degrees)	20	2.62
-2 (Down by 2 degrees)	74	9.70
-1 (Down by 1 degree)	181	23.72
0 (No change)	323	42.33
1 (Up by 1 degree)	116	15.20
2 (Up by 2 degrees)	42	5.50
3 (Up by 3 degrees)	7	0.92
<b>Total</b>	<b>763</b>	<b>100</b>



Note: A is 4, B is 3, C is 2, and D is 1, and the change in CR rating is the score in the most recent audit minus the score from the earliest audit, ranging from -3 to 3. For example, if a factory has a score C in the earliest audit and a score A in the most recent audit, then it has a change of +2.

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# Qualitative Analysis

## – A Tale of 2 Factories

### Workplace Characteristics

	Plant A	Plant B
Average Weekly Wage	\$ 86.00 USD	\$ 67.80 USD
Team Work	Yes	No
Job Description	Multi-Tasks	Single Task
Job Rotation	Yes	No
Worker Participation in Work-Related Decisions	Yes	No
Nationality		
<i>Managers</i>	Mexican	Chinese
<i>Supervisors</i>	Mexican	Chinese
<i>Production Workers</i>	Mexican	Mostly Mexican
Overtime	Voluntary and Within Limit	Mandatory and Over Limit



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# Qualitative Analysis

## – A Tale of 2 Factories continued

### Comparison of Production Systems

	Plant A	Plant B
Total # of Workers in one line or cell	6	10
T-Shirts per Day per line or cell	900	800
Daily Wage per Worker (Fixed Salary + Bonuses)	\$ 17.20 USD	\$ 13.60 USD
T-Shirts per Worker	150	80
Cost per T-Shirt	\$ 0.11 USD	\$ 0.18 USD



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# Qualitative Analysis

## – A Tale of 2 Factories continued

Comparison between Old and New System of Production in Plant A

	Old System ( <i>module</i> )	New System ( <i>cell</i> )
Total # of Workers	10	6
T-Shirts per Day per module or cell	1200	900
Productivity per Worker	120	150
Average Weekly Salary	\$ 67.80 USD	\$ 86.00 USD



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# GEN III: Evolution

FROM:  
GEN I & II

1. Firefighting.
2. Policing.
3. Providing 'Answers'.
4. Giving Specific Solutions.
5. Informing BU's of progress.
6. Focus on Issues.

TO:  
GEN III

1. Coaching.
2. Capacity Building.
3. Providing data for the factory to provide answers.
4. Giving guidance.
5. Engaging BU's for leverage.
6. Focus on systems & root causes.



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# 2001 MOU with WWF

## WHERE WE WORK &

### MOVING PEOPLE:

Reduce carbon dioxide (CO<sub>2</sub>) emissions  
13% below 1998 levels by 2005.

Includes:

- CO<sub>2</sub> from Nike-owned facilities and business travel
- Conserving energy, buying green power, and investing in community energy-efficiency projects

## MAKING PRODUCT &

### MOVING PRODUCT:

Supply Chain CO<sub>2</sub> baseline—2003  
Footwear and Apparel contracted manufacturing  
Logistics

Remove GHG from Products (pre-existing commitment)



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# Achieved Goal

**COMMITMENT:** Reduce carbon dioxide (CO<sub>2</sub>) emissions 13% below 1998 levels by 2005.

FACILITY AND TRAVEL CO<sub>2</sub> SUMMARY

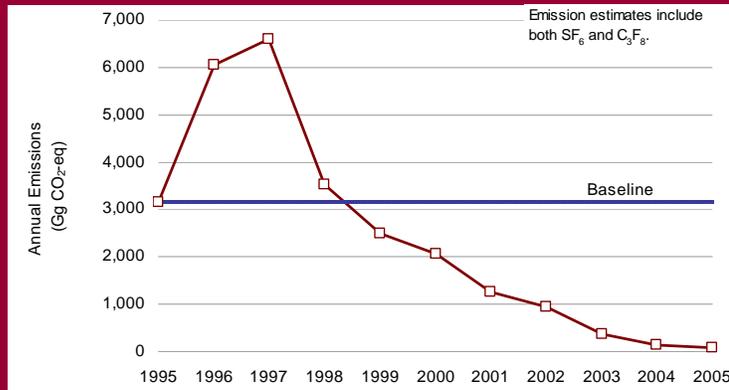
YEAR	Facility Electricity TCO <sub>2</sub>	Facility Gas TCO <sub>2</sub>	Green Power	Total Facilities GHG TCO <sub>2</sub>	Travel TCO <sub>2</sub>	Travel Offset TCO <sub>2</sub>	BETC Projects TCO <sub>2</sub>	Total travel TCO <sub>2</sub>	TOTAL CO <sub>2</sub>
1998	84,597	12,364	0	96,961	30,177	0	0	30,177	127,138
1999	85,791	12,585	(450)	97,926	29,648	0	0	29,648	127,575
2000	90,152	13,157	(771)	102,539	30,618	(4,341)	0	26,277	128,816
2001	87,895	12,610	(771)	99,734	30,234	(5,067)	0	25,167	124,901
2002	89,269	12,493	(846)	100,916	36,283	0	(15,331)	20,952	121,868
2003	89,234	12,370	(3,637)	97,966	38,109	0	(46,263)	(8,154)	89,812
2004	86,212	10,740	(8,259)	88,693	50,795	(4,000)	(15,040)	31,755	120,448
2005	84,409	10,750	(17,475)	77,684	47,754	(8,143)	(13,299)	26,312	103,996
<b>GOAL</b>				<b>96,961</b>					<b>110,610</b>



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# SF6 Elimination from Product

- Began R&D in 1995, Completed phase out in 2005
- Measured and verified by ERT



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# Our Climate Goals

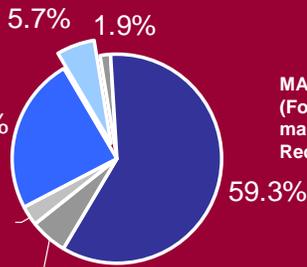
**WHERE WE WORK**  
 Nike Brand Climate Neutral Facilities by 2011  
 Nike, Inc. Climate Neutral Facilities by 2015

**MOVING PEOPLE**  
 Climate Neutral Business Travel by 2011

**MOVING PRODUCT**  
 (Logistics to first point of distribution)  
 30% Absolute Reduction in CO<sub>2</sub> footprint from 2003 Baseline by 2020

**MAKING PRODUCT** 2.9%  
 (Equipment contracted manufacturing)

**MAKING PRODUCT** 5.6%  
 (Apparel contracted manufacturing)



**MAKING PRODUCT**  
 (Footwear contracted manufacturing)  
 Reduction Target TBA

**Nike Footprint:**  
**1.36 m**  
**metric tons**



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# Course Overview

1. Systems Approach. Not Silos
2. What Can Companies Do?
  - Get House in Order (Operations)
  - Supply Chain Redesign
  - Launch New Products / Markets
  - Engage with other Firms, NGOs, Governments
3. Cases. Simulations. Speakers. Action-Learning.  
DISCUSSIONS



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# Review Syllabus

1. Requirements:

– Class Participation & Attendance	30 %
– Project Work Plan	5 %
– Intermediate Report	20 %
– Final Report	45 %
2. Read Syllabus. Due Dates
3. Visit Course Website



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