Business, Innovation and Sustainability
Why Invest in Sustainable Business Practices?
What Does it Take to Establish Industry Leadership in Sustainability?
How is Scheller College of Business Leading in Sustainability Research and Education?
Resource Scarcity

Increasing World Population

Declining Natural Systems

1 Billion in 1970

6 Billion Today

10-15 Billion ??

Air Quality

Biodiversity

Water

Communities

Forests

Arable Land

Feedstocks

Courtesy of Marc Curran, ERM
Resource Scarcity

- Agricultural, industrial (inc. energy) and municipal
- Need for water expected to grow by 40% in 20 years
- 2.8 billion people live in areas of high water stress
Planetary-Level Changes

- UN Millenium Ecosystem Assessment
  - Over the past 50 years, humans have changed ecosystems more rapidly and extensively than ever (world population doubled and economy grew six-fold)
  - The majority of ecosystem services are degraded and at increased risk of nonlinear change.
  - The degradation of ecosystem services could grow significantly worse during the first half of this century (6-8 billion people by 2050, per capita income inc 2-4 fold)
  - Reversing the degradation of ecosystems while meeting increasing demands for their services is partially feasible, but these involve significant changes in policies, institutions and practices, that are not currently under way
Scenarios for the Future

High value-added products

1. Drought Days
2. Global Forestry Inc.
3. Carbon caretaker
4. The end of paper

Abundant resources

Commodity products

Business today

Constrained resources
Sustainability Leadership

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Sustainability Leadership

Why Sustainable Business?

- Legal reasons
  - Liability
  - Current and impending regulation
- Business reasons
  - Potential for cost/risk reduction
  - Marketing opportunities
  - Innovation opportunities
  - Reputation/consumer good will/right to operate
- Ethical reasons
  - Personal or institutional culture
Sustainability Leadership

Understanding Critical Dimensions

- Renewable versus non-renewable
- Concentration of supply
- “Local” versus global politics
- Competition with other uses (& basic human needs)
- Labor/environmental impact/social justice
- Substitutability
- Cost ($/energy) of extraction/generation
- Customer expectations
Sustainability Leadership

Comprehensive Sustainability Strategy

**Strategy:**
**Sustainable Technology**
Develop sustainable competencies of the future

**Corporate Payoff:**
Innovation & repositioning

**Strategy:**
**Sustainable Development**
Create a shared roadmap for meeting unmet needs

**Corporate Payoff:**
Growth path

**Strategy:**
**Eco-effectiveness**
Minimize input, waste & emissions

**Corporate Payoff:**
Cost & risk reduction

**Strategy:**
**Product Stewardship**
Value-chain perspective
Integrate stakeholder views

**Corporate Payoff:**
Reputation and legitimacy
Sustainability Leadership

“Reduce, Reuse, Recycle”

Sustainable Technology
Reduce embodied energy/carbon/water

Eco Efficiency
Reduce material intensity of product
Reduce material intensity of process

Sustainable Development
Facilitating and legitimizing scavenging

Product Stewardship
Closing the loop value-added asset recovery materials recycling
Sustainability Leadership

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Center on Business Strategies for Sustainability

CBSS addresses the two most crucial aspects of sustainability in business today:

1. Business strategies and innovations that promote economic, environmental and social value
2. The management and commercialization of sustainable technologies
Be a center of excellence for generating and disseminating high-impact research in business strategies for sustainability;
Educate the 21st century student who appreciates and integrates cutting-edge business principles, science and technology to further sustainability objectives throughout her/his career;
Partner effectively with industry not only to accelerate the adoption of best practices, but also to push the envelope on what constitutes best practice.
CBSS Faculty

- Beril Toktay: Operations
- Atalay Atasu: Operations
- Sudheer Chava: Finance
- Omar Rodriguez: Marketing

- Ravi Subramanian: Operations
- Manpreet Hora: Operations
- Terry Blum: Organizational Behavior
- Wade Chumney: Law & Ethics
- Lucien Dhooge: Law & Ethics
Engaging with CBSS@Scheller

- Benefit from customer-specific and degree programs
- Sponsor a Sustainable Business Practicum course project (MBA or Undergraduate)
- Set a challenge in Innovation Tournament for Sustainability
- Fund strategy/operations/marketing/... project on sustainability-focused business problem
Thank you!