

Sustainable Development

What does that really mean,
anyway?

Today

- Discussion of your groups
- Marketing Presentations
- What we mean by sustainability
- Appropriate Technology
- Markets
- Stakeholder analysis
- Discussion

Sustainable Development Definitions

- Normative definition
 - Development that meets the needs and aspirations of the current generation without compromising the ability to meet those of future generations.
- Our definition
 - Development which enables individuals and communities in underdeveloped regions of the world to raise living standards through profitable products, consistent with minimizing adverse environmental effects

Sustainability

- Major components:
 - Environmental
 - Economic
 - Social
 - Political

Environmental Sustainability

- Reduce, Reuse, Recycle
 - Developing countries are really GOOD at this!
 - Is this enough in rural Guatemala?
 - Is this a luxury in rural Guatemala?
 - Does this only delay the exhaustion of resources in the developed world (see “Cradle to Grave” McDonaugh and Braungart)
- Eco-efficiency
 - Being “less bad”

Environmental Sustainability

- Cradle-to-Cradle Manufacturing
 - Manufacturer is responsible for the product through entire life-cycle
 - Create products that are designed for “upcycling”
 - Technical and biological “nutrient cycles”
 - No waste, not less waste

Ford Web Site

[Recycling](#) Recycling

Discover our commitment to improving the health of your neighborhood, through conservation and preservation.

[Nature & Wildlife](#) Nature & Wildlife

Think globally, but act locally—read about ecological priorities, from the Wildlife Habitat Council to rainforest preservation.

[Cleaner Manufacturing](#) Cleaner Manufacturing

Find out how refurbished manufacturing plants are reducing the amount of existing hazardous materials.

[Air & Climate](#) Air & Climate

Discover why we're a globally recognized leader in emissions technology.

Ford

- Is this for real? Is Ford really creating sustainable products?
- Is this “greenwashing?”
- Can companies be green?

Are we just making greener widgets?

- A systems approach:
 - How do we make sustainable communities?
 - How do we make sustainable business eco systems?
 - How do we initiate the process?

Economic Sustainability

- Who is paying for your product?
 - User
 - NGO
 - Government
- Will they keep paying?
- Why?
- What is the value your product brings?

Social Sustainability

- Does your product fit into its social context?
- Are there people with the level of skill needed to repair/maintain your product?
- Does your product make people's lives better?
- Does any part of making/using/disposing of your product harm people?
- See article on building a road in Indonesia

Appropriate Technology

- Simple, Low-cost, Local (but effective)
- Labor-intensive methods
- Low capital costs
- “Junk” is good
- Use, Maintenance are simple

Give some examples

Why Appropriate Technology?

- Socially sustainable
 - semi-skilled labor jobs
 - employs available skills, teaches new ones
 - fits into social context
 - familiar

Why Appropriate Technology?

- Economically sustainable
 - uses readily available labor
 - avoids using scarce capital
 - avoids work stoppages associated with importing spare parts, foreign experts
 - Large factories in developing countries often run below capacity
 - Scalable on village level and village to village (consider issues of poor transportation and communication)

Markets: what are they good for?

- People will only pay for things they actually want
- Measurable
- Reality check
- Can be efficient method of allocating resource
- Discipline against “just pleasing yourself”

And what are they bad at

- Some people can't afford to pay for anything
 - e.g. wheelchairs
- Getting products to unprofitable markets
- Taking care of all stakeholders

Our assumption in this class is that our products will be affordable-even by the poor

Stakeholder analysis

- A systematic way to make sure you address everyone who will be affected by your product.

Why is this important?

- Some of these people can affect the success of your project (government officials, prominent citizens)
- Despite our mantra of making products that poor people can afford, we care about development, not just profits. But profits are the best we know of measuring the effectiveness of our products and this can be misconstrued

Stakeholder Analysis

Do for all stakeholders

Use numeric scores (1-10) where appropriate

Update regularly

- 1. Define clearly who the stakeholder is**
- 2. Define how important this stakeholder is for the success of the business**
- 3. What precisely do I need from this stakeholder? positive contribution? Avoidance of negative?**
- 4. What motivates this stakeholder? How is this stakeholder rewarded?**
- 5. How to reach the Stakeholder? Influencers?**
- 6. How can I get the stakeholder to help me in my goal?**
- 7. What do I do if the stakeholder is negative (risk reduction)?**

This is my take. Feel free to change at will

HW for Tuesday

Progress on Primary and Secondary Marketing Research

1. What have you learned so far?
2. How has your initial perception changed?
3. Write down the product characteristics that your design must satisfy or say when you will have this info

Time: 5 minutes plus 5 minute discussion

Submit ppt one hour in advance