More on Industrial Ecology
Green Supply Chain Management

Objectives for the Day

• Ray Anderson, Interface Carpet Co. – Message on Sustainability

• Walmart Case Study

Ray Anderson, Founder, Chair of Interface Corp.
Carpet Manufacturer

When he started the company in 1973, he said-
“I just wanted to survive. I never gave one thought
to what we were doing to the earth.”

Environmental policy was “Comply with the law.”

Ray’s company is now more profitable than ever.

"Greenhouse gas emissions are down 82%; meantime
we’ve grown the business by two thirds and doubled
profit."

Eliminate Waste

• Eliminate all forms of waste in every area of business. For
Interface, this means redesigning products and processes to
reduce and simplify the amount of resources we use, so that
material "waste" will no longer be "waste" but instead will be
remanufactured into new resources, providing technical
"nutrients" for the next cycle of production.
• At one plant, 6 tons of carpet trimmings to landfill each day. By 1997, sending none.
• Interface cut waste sent to landfills in half while continuing to
increase production.
• Interface avoided a cumulative $250 million in cost from
waste elimination activities by 2004.
• Interface diverted over 100 million pounds of carpet from the
landfill by 2006.

Benign Emissions

• Eliminate toxic substances from products, vehicles and
facilities. Interface has moved aggressively toward
eliminating all its emissions into the ecosphere, striving
to create factories with no smokestacks, effluent pipes or
hazardous waste generated.
• New computer controls on boilers not only reduced
carbon monoxide emissions by 99.7%, but improved
efficiency of boiler.
• Interface reduced greenhouse gas emissions by more
than 30% through efficiency, process change and by
purchasing renewable energy.
• Interface has sold more than 50 million sq yards of its
climate neutral carpet product
• Interface has planted over 10,000 thousand trees as part
of it’s Trees for Travel and Cool CO2mmute programs
Renewable Energy

• Operate facilities with renewable energy sources – solar, wind, landfill gas, biomass, geothermal, tidal and low impact/small scale hydroelectric or non-petroleum-based hydrogen. Interface seeks to ensure that by 2020, all fuels and electricity to operate our manufacturing, sales and office facilities will be from renewable sources
• Use of fossil fuels down 45%
• 7 of Interface’s facilities operate with 100% renewable electricity
• By 2002, Interface reduced total energy use at its carpet manufacturing facilities by 30%.

Closed Loop

• Redesign processes and products to close the technical loop using recovered and bio-based materials. Interface is redesigning its processes and products to recycle synthetic materials to convert waste into valuable raw materials and to keep organic materials uncontaminated so they may be returned to their natural systems.
• Interface cut water intake at its carpet facilities in half.
• Over 25% of raw materials used in Interface carpet are recycled and biobased materials in 2007.

Resource-Efficient Transportation

• Transport people and products efficiently to eliminate waste and emissions. Working diligently to make transportation more ecologically efficient and are participating in voluntary partnerships focused on reducing pollution and greenhouse gas emissions, offsetting the carbon dioxide (CO2) emissions associated with our travel, including employee commutes.

Sensitizing Stakeholders

• Create a culture that uses sustainability principles to improve the lives and livelihoods of all of our stakeholders – employees, partners, suppliers, customers, investors and communities. Interface believes that when stakeholders fully understand sustainability and the challenges that lie ahead, they will come together into a community of shared environmental goals.
• Interface associates contributed in excess of $750,000 to external organizations in one year
• Interface associates volunteered more than 15,000 hours in community activities in one year
• Interface associates have delivered sustainability-related educational speeches to over a million stakeholders.

Redesigned Commerce

• Create a new business model that demonstrates and supports the value of sustainability-based commerce. Interface is creating new methods of delivering value to customers, changing its purchasing practices, and supporting initiatives to bring about market-based incentives for sustainable commerce, and has developed a model for other companies to chart their own evolution to a prototypical model of a 21st Century sustainable business.
• Changing the paradigm

Seems like a win, win

• Sustainability doesn’t cost, it pays
  – In customer loyalty
  – Goodwill in the marketplace
  – Employee morale
  – Esprit de corps if off the charts
  – Profits up
Inputs Impact Your Supply Chain

- Most supply chain managers do not focus on environmental concerns and are just looking at the supply chain costs
- Incur a multitude of costs by using unfriendly environmental inputs
  - Regulatory Costs (MSDS Sheets)
  - Permits
  - Storage Costs
  - By-Product Costs
  - Waste Disposal
  - Training Costs
  - Other Environmental Costs

Early Innovator

Henry Ford practiced an early form of up cycling when he had Model A trucks shipped in crates that became the vehicle’s floorboard when it reached its destination.

You can paint it any color, so long as it’s black

Create to Cradle – McDonugh & Braumgart -2002

Recycling

- Companies will eventually be responsible for end of life products
- Developing a Process
- Cradle to Cradle
- Making Other Products
- Savings

Wal-mart’s Efforts - Sustainability

Aspirational Goals
- 100% renewable energy
- Create zero waste
- Sell products that sustain our resources and the environment

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Early Efforts in 1989 -

• Promoted green products (as many as 300) with green tags
• No monitoring to substantiate claims
• Mostly green-washing
• Result: needed to look at entire value chain

Increased Scrutiny on Suppliers

Use Sustainability Scorecard
• Recycled content
• CO2 per ton of production
• Recovery value
• Energy efficiency

Use of Certification Systems

1. Organic Trade Association
2. Organic Exchange
3. Global Organic Textile Standard
• Key player in sourcing organic cotton

Use of Certification Systems

• Marine Stewardship Council
  – Third party audit throughout supply chain, “boat to plate”
  – MSC eco-label signals to consumer fish harvested and processed in sustainable manner
  – Goal: 3-5 years all fish marketed will be MSC certified
  – Challenge: getting enough fish to meet demand with fish sales increasing 25% annually

Consolidating the Supply Chain

• In past, infamous for leveraging suppliers against each other to keep prices down
• This meant lots of suppliers all competing to market their products through Wal-mart
• Now, they are moving towards giving the “sustainable suppliers” higher market share — provide them with economies of scale

What makes Wal-mart different from Interface?