JUST THE TIP OF THE ICEBERG

- Berkeley – Build it Green
  - Councils, guilds for professionals, developers, regulators in green building field (welcome suppliers)
- Semi Conductor Manufacturers International (SEMI)
  - Working groups, voluntary standards setting committees
- Silicon Valley Toxics Coalition
- East Bay Sustainable Business Network
- Green Chamber of Commerce

MARKET (AND SOCIAL) DRIVERS

A. Hoffman, Competitive Environmental Strategy (2000). 17
Eco-labels, certification to help consumers

Germany’s Blue Angel  
Dolphin Safe Tuna  
Bird friendly Product  
EPA’s Energy Star

GREEN CONSUMER SEGMENTS

True-Blue Greens 20%
Greenback Greens 5%
Sprouts 31%
Grousers 9%
Basic Browns 35%
Current status: C2B RELATIVELY WEAK DRIVER in US

- **US**
  - FICKLE AMERICAN CONSUMER
  - CONFUSING ECO-LABLES
  - CYNICISM
  - CHEAP

MORE IMPORTANT: B2B

- **MUCH STRONGER IMPACT**
  - Corp. procurement
    - Corp. Environmental Supply Chain Management (ESCM)
  - Government procurement
    - Navy
→ MARKET DRIVERS


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**Walmart case**

➢ How did WM operationalize its Sustainability Initiative?
What do you think of its approach to operationalizing sustainability in supply chains?

Which aspects do you think seem most likely to lead to successful outcomes? Which seem less likely to do so? Why?

Link to

Opportunities Identification, Prioritization, and Engagement Process

Activities:
- Research internal business drivers and ongoing projects and initiatives.
- Research state of industry, science, and opportunities for improvement.
- Discuss with business leaders, EDF Capital, and suppliers.
- Prioritize high potential and high value (cost, trust, quality) reductions.
- Set goals, develop action plan, and implement project.
- Measure and assess.

Actors:
- Capture Opportunities: Walmart, ClearCarbon
- Research Opportunity: ClearCarbon
- Research Internal Feasibility: Walmart, EDF
- Recommend Innovations: Walmart, ClearCarbon, EDF
- Engage & Implement: Walmart, ClearCarbon, Suppliers
- Demonstrate & Measure Results: Walmart, ClearCarbon, PwC

Figure 1: Selection of Product

Figure 3. Qualification Decision Tree
WM’S GC COMMITMENT (p.10)

As part of this commitment, Walmart will work with suppliers to reduce their emissions – which they otherwise may not do – in some cases resulting in additional positive ripple effects. Walmart will work to reduce emissions that result in GHG effects from the six primary Kyoto Protocol gases:

- Carbon dioxide (CO2)
- Methane (CH4)
- Nitrous oxide (N2O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulphur hexafluoride (SF6)

To achieve the supplier GHG reduction goal, Walmart will identify opportunities to reduce carbon impacts in coordination with select suppliers. Reductions may be identified in any phase of a product’s life cycle. A product’s life cycle includes the following primary stages:

- Raw material extraction
- Manufacturing
- Packaging
- Distribution
- Usage
- Disposal

In each phase of a product’s life cycle there may be an opportunity to engage with suppliers to implement carbon reduction efforts. In some cases, Walmart will also have to develop consumer education materials to affect the way that consumers use a particular product.
ESCM ADOPTION PRESSURES GO BACK TO 1990S

- End Market Pressures (European Market)
  - Regs: Take Back Laws, REACH
  - Eco-Labels
  - ISO-14000, EMAS, other EMS certification programs
  - Government Procurement rules
  - Customer Inquiries

ESCM ADOPTION PRESSURES

- Exposure to Internal Environmental Risks
  - “Dirty” Manufacturing Processes
  - Facilities in Environmentally Sensitive Locations
    ✷ Regulatory Requirements/time issues
    ✷ Legal Liabilities
    ✷ Supply chain disruption concerns
    ✷ Image/Reputation concerns
Environmental Pressures in the Computer Industry Supply Chain late 1990s

- **Market Influence (EMS)** (Primarily European)
  - OEMs with Low Vertical Integration
  - Printed Circuit Board Assemblers
  - Networking Companies
- **Risk Exposure (DFE)** (Internal Processes)
  - OEMs with High Vertical Integration
  - Disk Drive Manufacturers
  - Disk Drive Equipment Suppliers
  - Semiconductor Equipment Suppliers
  - Semiconductor Fabricators

Companies Leading in the Adoption of ESCM (EMS and/or DFE) (late 90s)

- **OEMs with High Vertical Integration**
  - Hewlett-Packard, IBM, Motorola
- **Semiconductor Fabricators**
  - Intel, SGS Thomson
- **OEMs with Low Vertical Integration**
  - Apple, Sun Microsystems, (DEC)
- **Disk Drive Manufacturers**
  - Quantum, Seagate, Western Digital
Various emphases

- Simple improvements
- Environmental management systems
- Design for environment
  - Importance of partnering, relational contracting

IMPACT

- ESCM can be a powerful market incentive for suppliers
  - MORE IMPORTANT THAN REGULATION IN DEVELOPING WORLD IN SOME INDUSTRIES
  - And in USA?
MARKET DRIVERS

A. Hoffman, Competitive Environmental Strategy (2000). 17

B2B: INSURANCE

POTENTIAL MARKET DRIVER

• UNEP – Statement of Environmental Commitment
  • Underwriting practices serve as consulting recommendations
  • Premiums go up if fail to adopt
BANKING

➢ Due diligence (remediation)

➢ POTENTIAL DRIVER:
  • Other lending practices could also be used to incent businesses to adopt EMS, ESCM, DfE etc
    • Equate poorer env. performance with higher financial risks

PERSPECTIVE?

➢ What are the most important market drivers of env innovation?

➢ How can market case be made?
  • Complexities?

➢ What is needed to strengthen market drivers?