MSU School of Packaging
Packaging Executives Forum 2008

Sustainability
will define the
Packaging Value Chain

Dr. Claire Koelsch Sand
Packaging Technology and Research

Overview

- Sustainable packaging has emerged as a major goal in package design for TBL
- Value Chain can improve efficacy of sustainability efforts
- Using the Value chain to drive sustainability is powerful
- How we can use the value chain to meet sustainability needs

World's Resources are Finite

- Water, air, and land resources are naturally recycled on Earth
- Measurement technology tells us:
  - Natural systems are overloaded
  - Lessen our impact
  - Natural systems can regain strength

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Packaging Environmentalism comes in waves
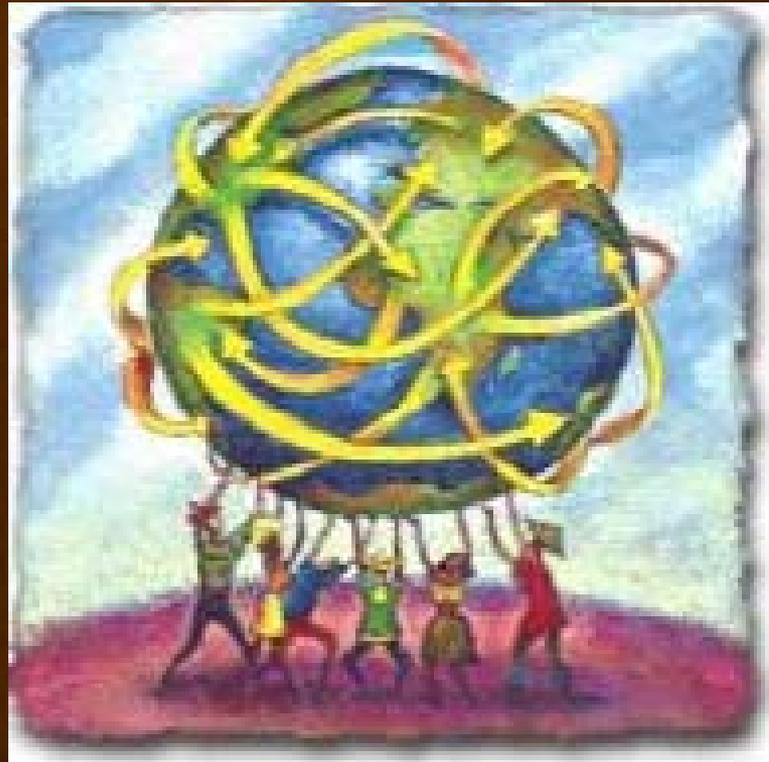
In past 50 years

- Environmentalism has matured with global awareness and technology

- Silent Spring & DDT - 1960s
- EPA established - 1970s
- Earth Day become Earth wide - 1990
- EU directives -1990s
- Impact of packaging is a global dilemma

Now

- Realization we can create meaningful change to regain natural systems
  - Powerful and actionable
- Success stories abound
  - Mattel's reduced impact of shipping
  - Transparency of J&J Healthy Planet 2010

Sustainable packaging is here to stay

- Consumers need it
  - 28% of US consumers are LOHAS
  - Most of 6 billion Global consumers are from developing countries where materials are sourced

- Retailers fuel it
  - UK
  - Global

TBL has emerged

- Companies drive sustainability for their Triple Bottom Line
  - People
  - Profit
  - Planet
- CRS is expected
- **What's next?**

Sustainability

has emerged a major goal in package design

What's needed is a framework in which to consider sustainability...

to
effectively pursue sustainability

The packaging Value Chain
is the framework
to improve the efficacy of
sustainability efforts

Just as with sustainability, there have been waves of supply chain management

Supply chains have evolved

- JIT as an expectation -1990s
  - Expert tracking systems
  - Logistical handling
  - Global harmonization
- Package proliferation
  - 20+ different packages for Coke
- Consumer specific packaging
  - Kids design Legos <u>and</u> package
  - Pepsi's 35 package graphics alternatives in 2007

Value Chain has emerged as the dominant vehicle to achieve consumer desired and market competitive packaging

Extends from raw material to post disposal

Matches sustainability step by step

Use sustainability to define the value of Value Chain linkages

Use sustainability to define the value of Value Chain linkages

- Innovate within value chain
- Use packaging logistical technology
- Demand more sustainable suppliers
- Fund research on sustainability
  - Consortiums
  - Universities
  - Global enterprises

Innovate within Value Chain

- MAYA - "Most Advanced Yet Acceptable."
(Loewy's)
  - Foster Masdar City like concepts
- Zig vs. Zag
  - Sourcing
    - Use indigenous materials for mass market
  - Manufacturing
    - Foster information sharing (EU's APEAL)
  - End of life
    - Refillable vs "degrade"
    - 90 % glass reused in Scandinavia, Germany
    - Czech deposit law & reverse vending machines

Innovate within Value Chain (cont)

- Isolate highest impact using LCIA/LCA and mindful LCAs
  - Then lead beyond legislation with suppliers
  - IBM banned use of package materials
- Be Transparent
  - J&J demands and is transparent
  - 2010 Goal: 75% of paper containing > 30% PCR content or fiber from certified forests
  - 2007 Actual: 68% of paper contains > 30% PCR or contains fiber from certified forests

Use packaging logistical technology

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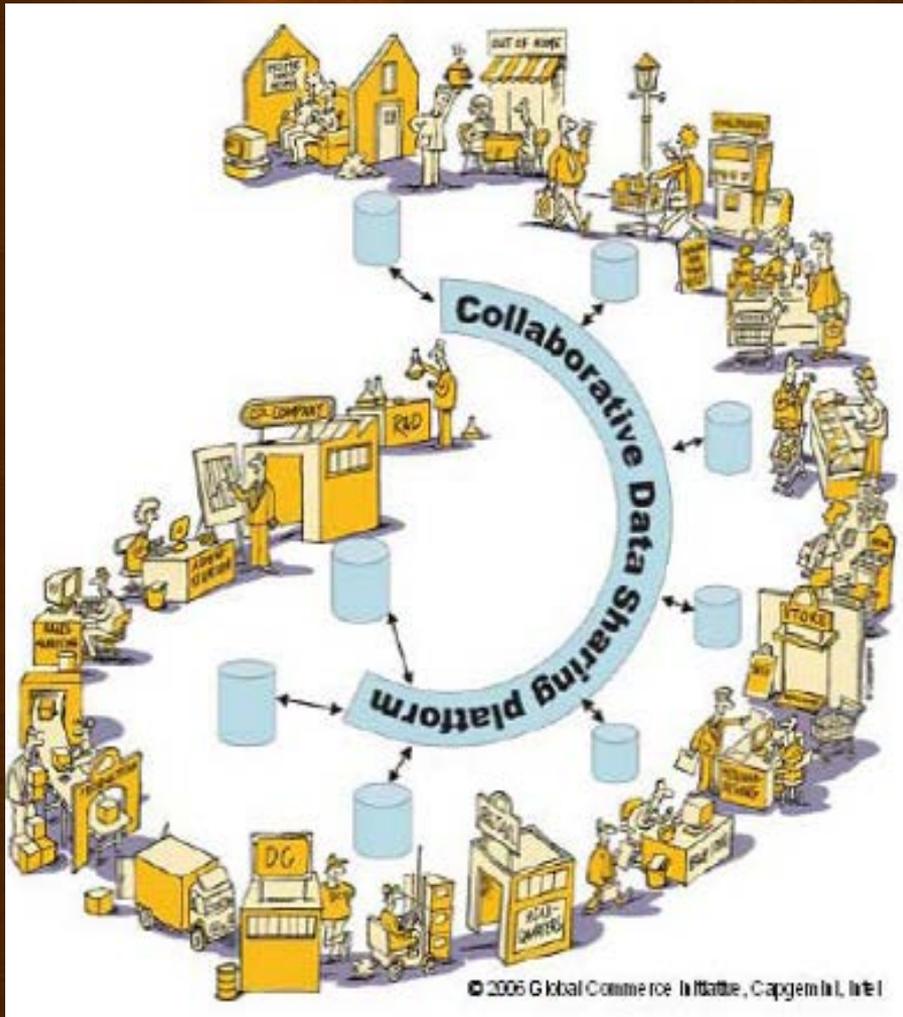
- Continuous environmental impact tracking from raw material to disposal
- EN 643 ensures the quality of recovered paper and improves traceability

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Demand more sustainable suppliers

- Sourcing is core of sustainable packaging
  - Extraction and processing consumes majority of resources
  - Find suppliers and sources that reduce impact
- Build sustainability targets into contracts
- Invest in making suppliers manufacturing more sustainable

Demand more sustainable suppliers (cont)

- Minimize impact with indigenous investment
  - Regional and local agencies
  - Global powerhouses (WWF, CERES, Forum for Future)
- Increase materials data sharing globally
  - Manufacturing impact
  - Converting impact
  - Shipping impact
  - Disposal impact

Fund Value Chain Research

- Build relationships to foster material impact assessments
  - New materials
  - Sourcing impacts
  - Manufacturing impacts
  - Distribution impacts
- Adapt or create new logistics & information flows
  - Optimization
  - Standardization
  - Sharing

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*Sustainability
will define the
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*This can be powerful
(and enjoyable!)*

Takeaways

- Packaging can alter quality of life for people, planet, and can make a profit
- Make sustainability metrics part of strategic alliances and contracts
- Ingrain sustainability information sharing platforms into strategic alliances/contracts
- Innovate in manufacturing
- Re-examine global sources and sales Indigenous resources abound

Thank you.