



SUSTAINABLE PACKAGING
COALITION®

A PROJECT OF  GREENBLUE

Packaging Waste Impacts and Reduction Strategies

DEQ Environmental Excellence Conference

March 12, 2014

Outline

- GreenBlue and the SPC
- What's the problem?
- Strategies
- Next Steps



GREENBLUE[®]

Shaping the business of sustainability

Shaping the **business** of sustainability

GreenBlue is a nonprofit that
provides the science and resources
to make business more sustainable

HOW

Shaping the **business** of sustainability

IDEAS

**Cultivating
Stewardship**

ACTIONS

**Mobilizing
Industry**

PRODUCTS

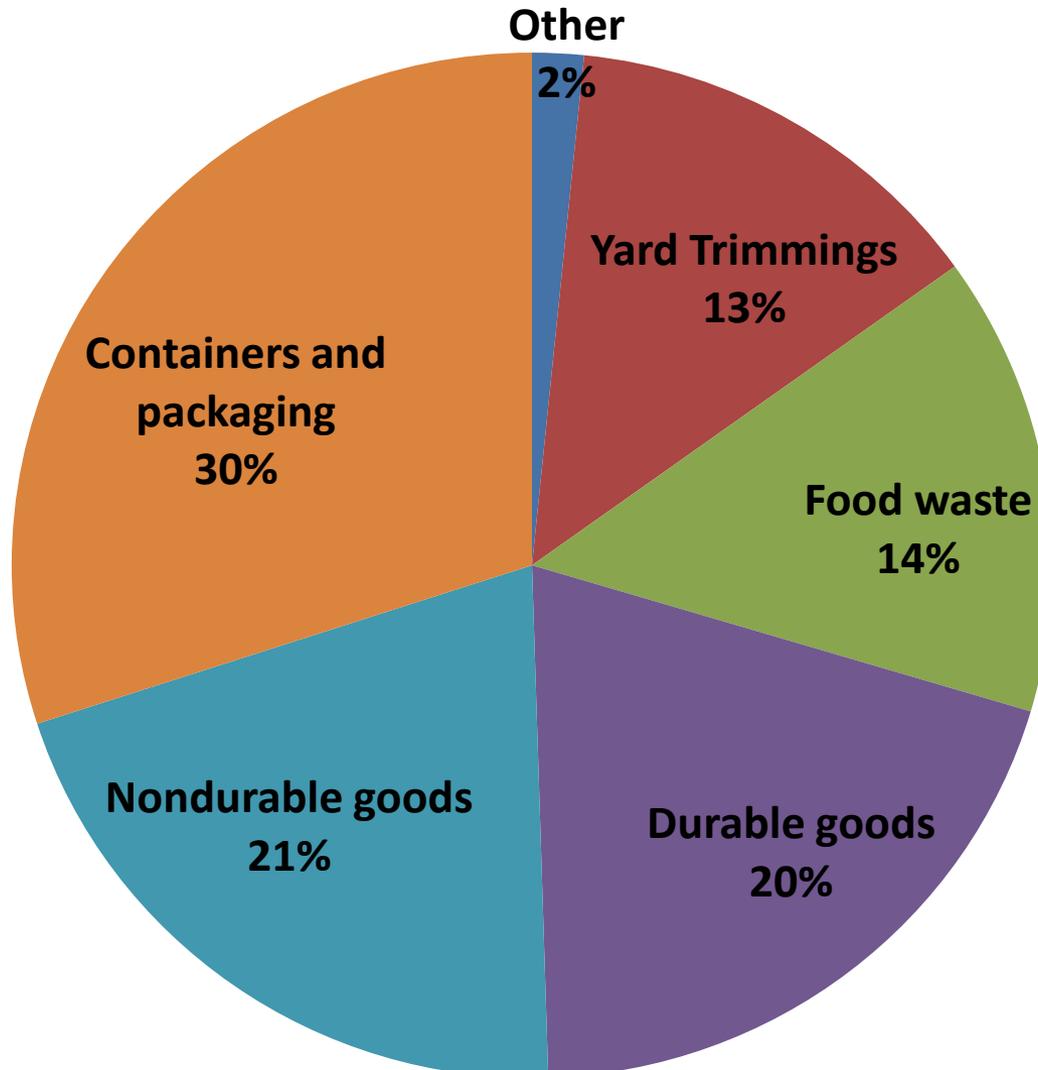
**Tools for
Transparency**

The problem



The problem cont.

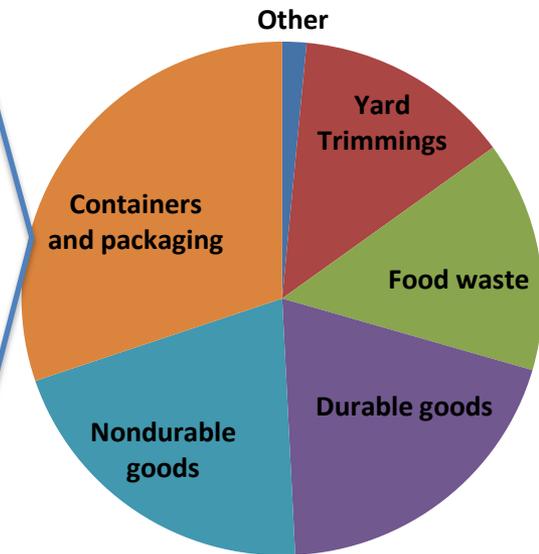
Total MSW Generation (2012) 251 Million Tons before recycling



The problem cont.

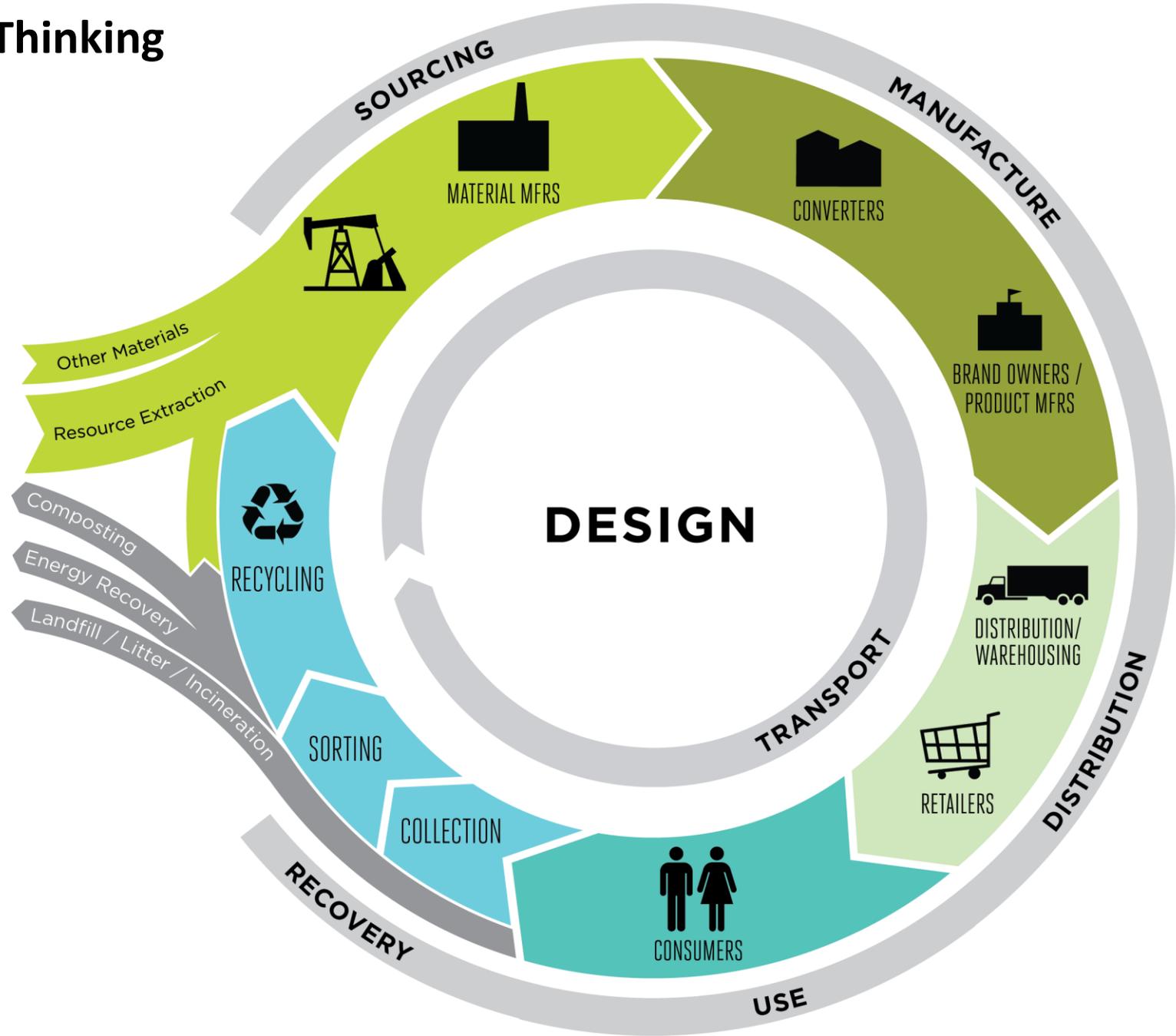
	Packaging Waste Gen (000's tons)	Packaging Rec (000's tons)
Glass	9,380	3,200 (34%)
Steel	2,230	1,610 (72%)
Al	1,870	710 (38%)
Paper and Paperboard	38,010	28,920 (76%)
Plastic	13,780	1,900 (14%)
Wood	9,610	2,410 (27%)
Other	350	-

Total MSW Generation



In 2012, 52% of packaging generated was recovered for recycling. Packaging comprise 22.2% of MSW discards

Lifecycle Thinking



Strategies

1. Responsibly Sourced Materials
2. Efficient Material Usage
3. Recovery

Strategies: Responsible Sourcing



oil and gas extraction



silica mining



timber harvest



ore mining

Strategies: Responsible Sourcing

- Material Selection
 - Unique set of properties to deliver embedded value
- Material Extraction and Refinement BP
 - Certified content, third party labels, etc.
- Recycled and Renewable Content
 - Optimizing use



Environmental Paper Assessment Tool



Raw Materials

Recovered content
Water use
Energy use



Manufacturing

Air quality
Water quality
Climate stability
Minimum impact mill efforts
Solid waste
Environmental management system
Mercury



Minimization of Waste

Recyclability and
Compostability



Natural Systems

Known source
Certified forest management
Sensitive forest fiber



Community & Human Well-being

Labor and human rights
Human health and safety
Stakeholder impacts

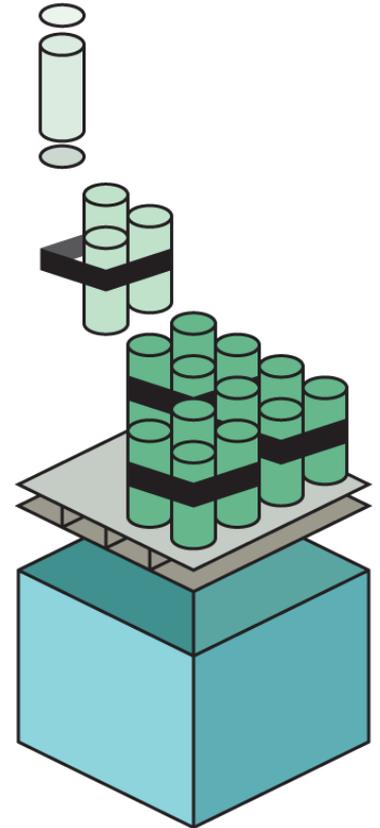


Credible Verification & Reporting

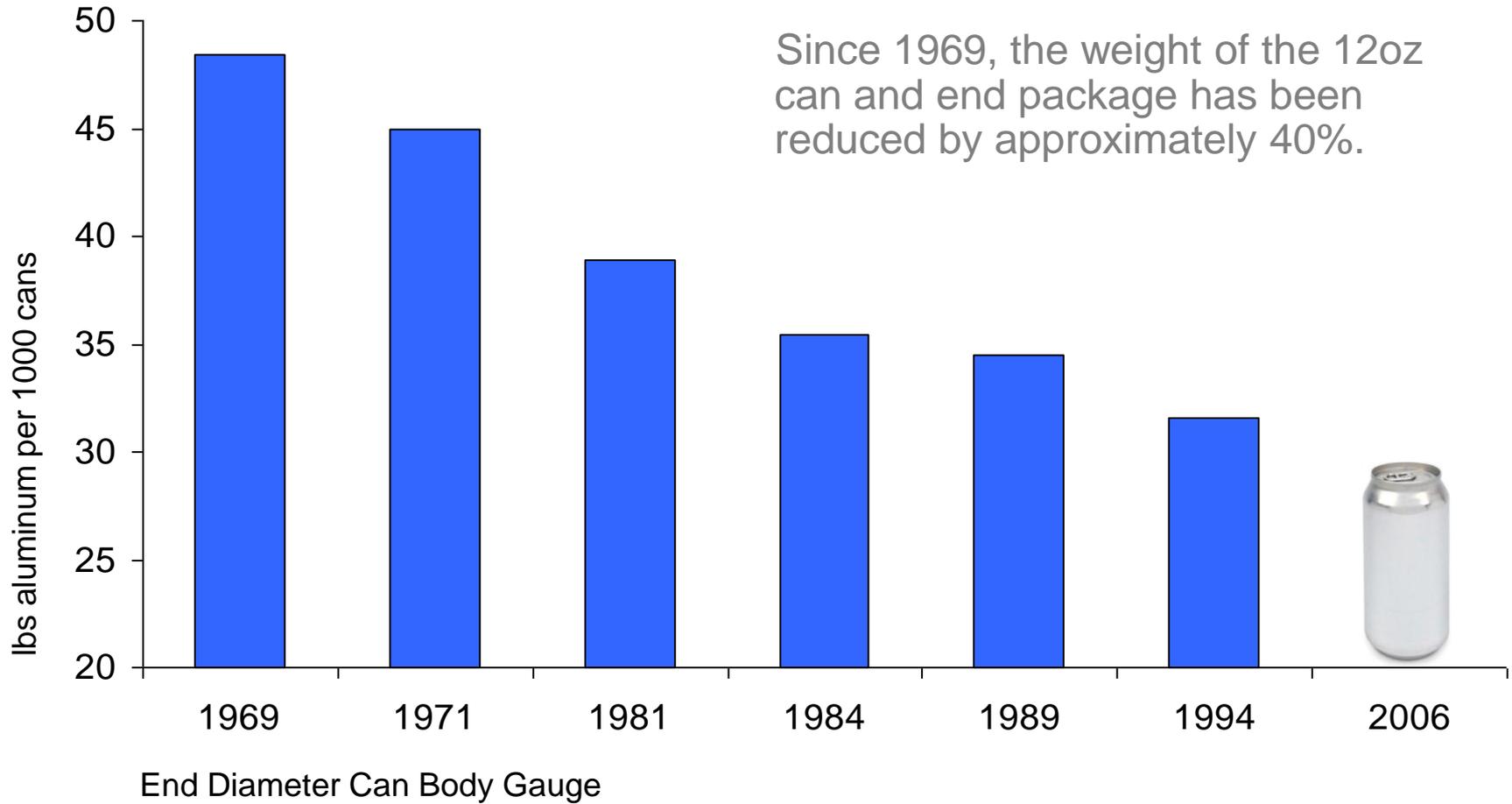
Public reporting
Third-party verification

Strategies: Material Usage

- Material Reductions
 - Optimize format, substitutions
- Constituents and components
 - Simplification?
- Cube and Transport Efficiencies
 - Looking beyond primary



Example: Optimizing a Format



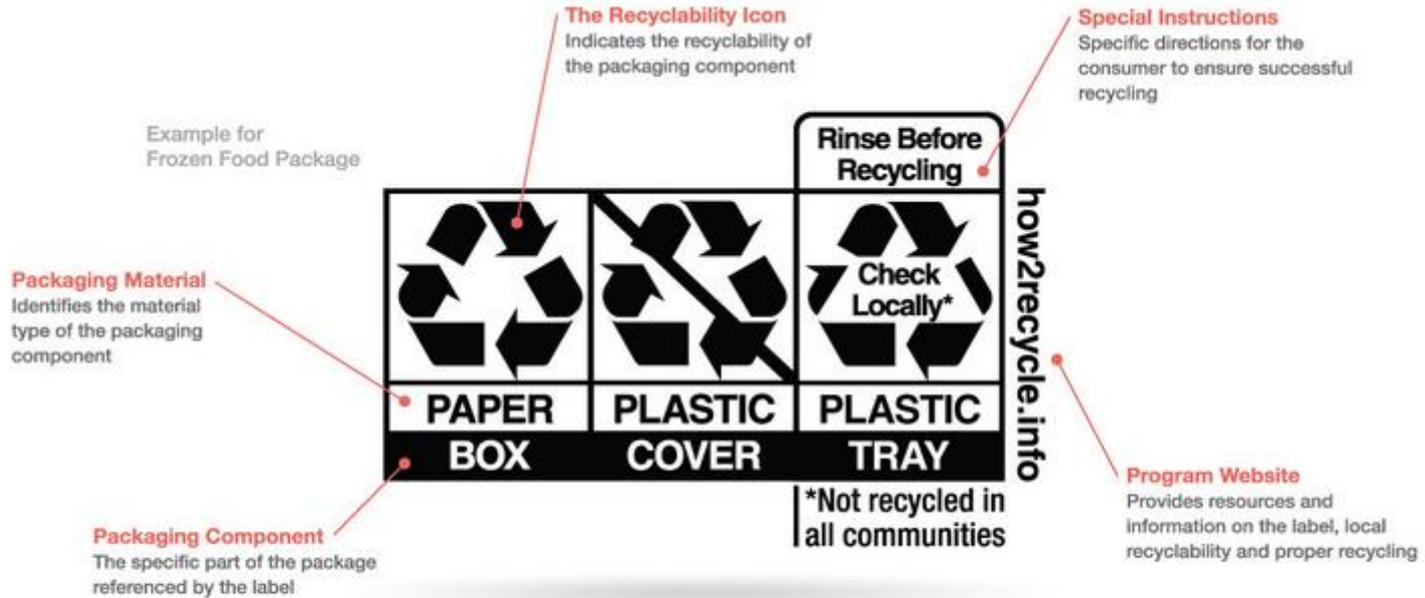
Courtesy of Ball Corporation

Strategies: Recovery

- Reuse:
 - Tradeoffs, repurposing
- Recycling:
 - Collected, sorted, conditioned, processed
 - Shape, size, format, application, ancillary applications
- Compost:
 - Access, contaminants, communication



How2Recycle Label



Store Drop-Off

We created a special version of the label for plastic bags and films that are accepted primarily at retail stores with plastic bags. For more information, see plasticbagrecycling.org.



AMPAC.
innovation in action

 **cei**
Converting Ideas Into Innovation

Endust

**BEST
BUY**

**ESTÉE
LAUDER
COMPANIES**

 **Sealed Air**

ecologic
packaging the earth can live with


CCF BRANDS

Microsoft

**Minute
Maid.**


PAC
WORLDWIDE

**ConAgra
Foods**
Food you love

Wegmans


.....
GENERAL MILLS

Kellogg's


TARGET.


REI


CLOROX


seventh
GENERATION

Ziploc
BRAND

Next Steps

- **Prioritize and set goals**
 - Max: protection, shelf-life, brand
 - Min: resource consumption, emissions
- **Benchmark**
 - Define the starting point
- **Innovate**
 - Sourcing, efficiency and recovery
- **Assess**

Life Cycle Metrics

Functional Unit of Comparison:
1 ITEM COUNT
 Production Volume:
1

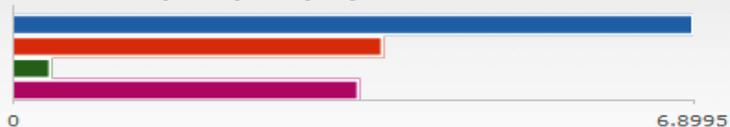
- 1 unit(s) of All PS CD jewel case
- 1 unit(s) of Four-fold paperboard and PS CD case
- 1 unit(s) of Paperboard sleeve
- 1 unit(s) of Tri-fold paperboard and PS CD case

- Manufacture
- Conversion
- Distribution
Not all scenarios have distribution legs.
- End of life

[UPDATE LIFE CYCLE CHARTS](#)

LIFE CYCLE METRICS CHARTS ?

Fossil Fuel Consumption (MJ-equiv)



GHG Emission (kg CO2-Equiv)



Water Consumption (l) ?



CP: Human Impacts (Total) (DALYs)



Biotic Resource Consumption (m3)



CP: Aquatic Toxicity (CTUe)



Mineral Consumption (kg)



Eutrophication (kg P04-Equiv)



THE ESSENTIALS OF sustainable packaging

The Sustainable Packaging Coalition
a professional training program in
the key concepts of sustainability
means for packaging.



The Essentials of Sustainable Packaging Participants will learn about:



Sustainability and Balancing Tradeoffs

- An overview of the Triple Bottom Line
- Impacts associated with packaging
- Packaging as an enabler of product sustainability
- How sustainability applies to packaging



Sourcing and Recovering Materials

- Exploring the global case for sustainable materials management
- Responsible sourcing of materials
- Understanding material flows in industrial systems
- Analyzing recovery strategies



Understanding Environmental and Human Health Impacts

- An overview of Cleaner Production and material health
- Systems approach to go beyond compliance
- The role of the Precautionary Principle
- Examples of unintended consequences
- Implications of legislation



Tools for Measuring and Reporting Sustainability

- Drivers for measuring and reporting environmental performance
- Overview of Life Cycle Assessment
- Design as a leverage point for optimization



Communicating Sustainability Initiatives

- Strategies for making meaningful claims
- Proper use of certifications, logos and labels
- Compliance aspects of sustainability communications
- Communicating corporate-level sustainability

Visit

www.sustainablepackaging.org
for upcoming dates and
registration information.

Seminars

The Essentials of Sustainable Packaging seminars have been attended by hundreds of professionals in the U.S. and Canada since 2008. Beginning in 2011, it will be offered in Latin America and Asia with updated global and local perspectives on sustainability in packaging.

The seminar combines interactive lecture and discussion, relevant case studies, and group exercises. The class size is limited to offer the opportunity for attendees from diverse organizations to investigate the relationship between sustainability and packaging in a collaborative setting.

Customized Sessions

The Essentials of Sustainable Packaging is also offered as a private course for English, Spanish, and Chinese-speaking audiences. These sessions are tailored to the specific needs and objectives of your organization. This can include facilitation of goal-setting, metrics evaluation, and specific packaging analysis.

We have developed customized sessions for Alcoa Rigid Packaging, Merck, Northwest Product Stewardship Council, and Wakefern Food Corp. as well as sessions for retail-focused audiences at events held by the Food Marketing Institute and the Retail Packaging Association.

HOW

Shaping the **business** of sustainability

IDEAS

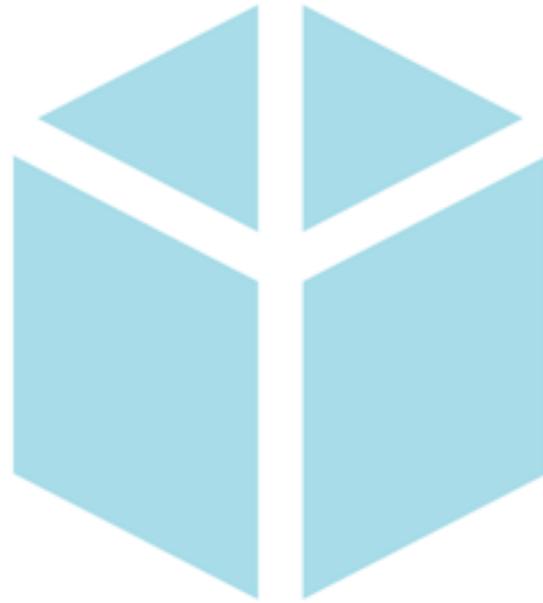
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Make **packaging** more sustainable

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