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Elemental Impact

HOLLY ELMORE, ELEMENTAL IMPACT

STEVE DAVIES, NATUREWORKS

BIOPOLYMERS CONFERENCE
BIOPOLYMERS ROLE IN ZERO WASTE PROGRAMS
SAN ANTONIO, TX
OCTOBER 17, 2012



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Sustainability in ACTION

Work with industry leaders to create best operating practices where the entire value-chain benefits, including corporate bottom lines and the environment. Through education and collaboration, establish the best practices as standard practices.



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A CATALYST

Ei: Creates Corporate | Community Initiatives

- ⊙ What could be done
- ⊙ That is not being done
- ⊙ Ei gets it done

Bring the Possible out of Impossible



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FOCUS AREAS

Initiative Foundations:

- ◎ Product Stewardship
- ◎ Toxin-Free Environments
- ◎ Zero Waste Initiatives



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ZERO WASTE

ZERO WASTE INITIATIVES

- ◎ Recycling Integrity
- ◎ Sustainable Food Court Initiative
- ◎ Zero Waste Zones





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RECYCLING INTEGRITY

*Maintaining maximum Material Value
With Minimal Energy Expended*

Contamination: *an expensive trip to the
landfill*



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ZERO WASTE ZONES

Acquired by the
National Restaurant Association
September, 2012





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Sustainable Food Court Initiative

An Integrated Approach to Sustainability





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Mission:

To bring zero waste initiatives to food courts and develop industry, sustainable best practices for Back-of-the-House and Front-of-the-House operations



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Food Court Challenges:

- ❖ Common property waste & recycling contracts
- ❖ Landlord | Tenant Relationships
- ❖ Franchisee | Franchisor Relationships
- ❖ Consumer Disposal of FOH Packaging
- ❖ Third Party Items Brought to Food Court
- ❖ Multiple Packaging Products Used



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Hartsfield-Jackson Atlanta International Airport

All food vendors must use compostable food serviceware and consumer-facing packaging and source-separate organics for composting collection.

Provision in new airport concessions RFP



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2011 Going Green Airports Award:

*Sustainable Food Court Initiative
Atlanta Airport Pilot*



Michael Cheyne accepted award on October 31



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Additional Pilots:

- ❖ Shopping Mall - Concord Mills (Charlotte)
- ❖ Event Venue - Georgia Dome (Atlanta)
- ❖ Office Complex
- ❖ Government Center
- ❖ College | University

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NEW HORIZONS

Expanded Foodservice Opportunities:

- ◎ **Manufacturing**
- ◎ **Corporate Campuses**

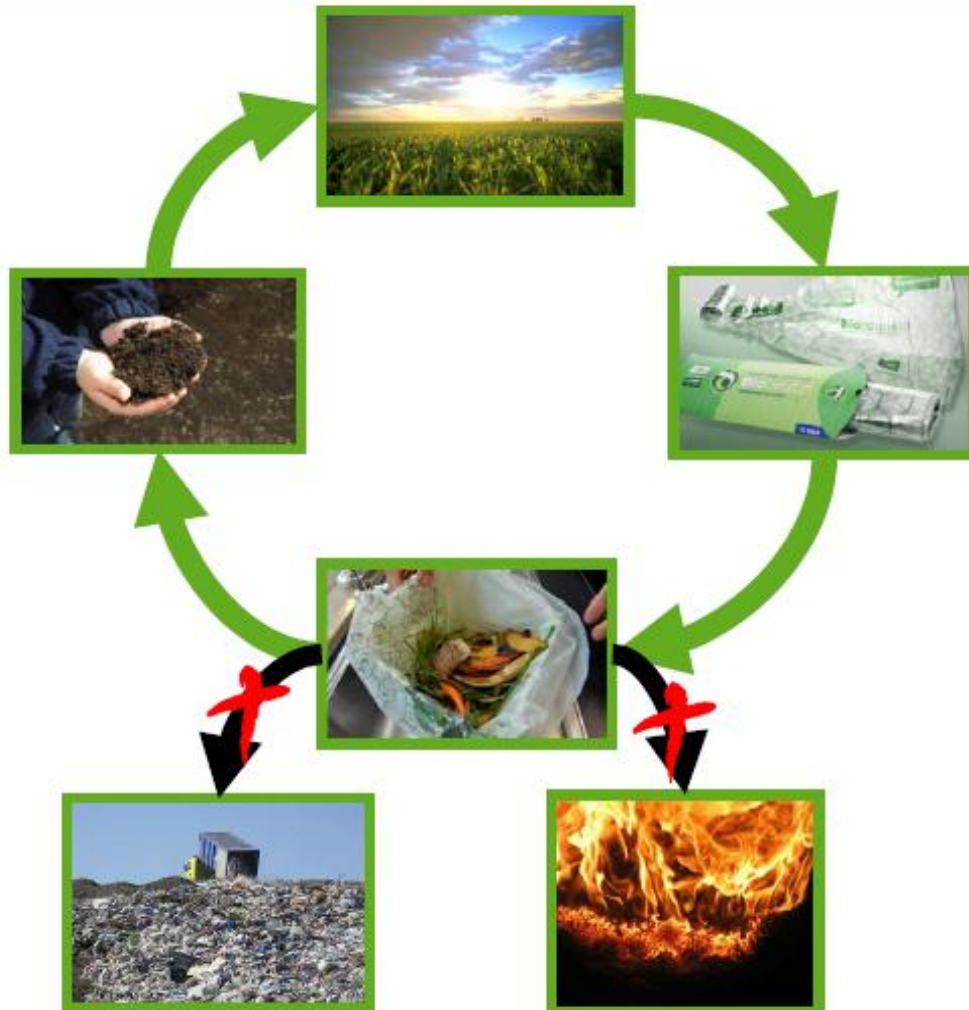


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COMPOSTABLE PACKAGINGROLE

A Vital Enabler:



- ◎ Landfill diversion
- ◎ Enables single “organics” stream
- ◎ Compostable plastic “harmonization” within food serviceware packaging

From

multiple
plastics
mixed in
recyclable
waste
stream

To

portfolio of
compostable
plastics/paper &
organic residuals
co-diverted from
landfill



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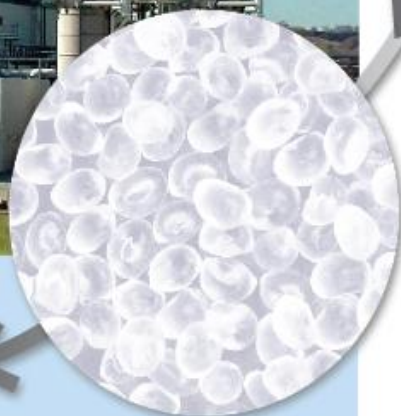
WHO IS NATUREWORKS



- 50/50 Jointly owned by Cargill and Thailand's PTT Global Chemicals



- Blair Expansion – to 150,000 ton/year



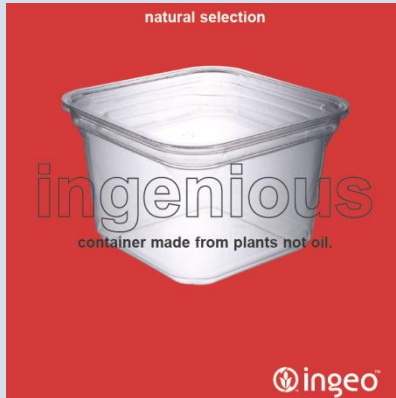
- BioAmber Joint Venture intro's new green building blocks in Ingeo resins portfolio



ingeo™



Rigids



Food Serviceware



Films



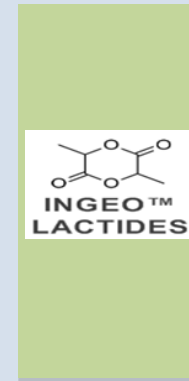
Nonwovens / Fibers



Durables



Lactides



Bus. Dev.

Incubator

EI'S FOOD SERVICEWARE PARTNERS





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WHY NATUREWORKS AND OTHERS HAVE PARTNERED WITH ELEMENTAL IMPACT?

- ◎ It's all about assisting/influencing change and sharing best practices of closed venues, colleges/universities and retailers/brandowners
 - ◎ **Closed venue:** e.g. Portland Trail Blazers, Seattle Mariners, Philadelphia Flyers, Pittsburg Pirates ...
 - ◎ **Colleges/Universities:** e.g. University of Washington, University of Wisconsin-Oshkosh
 - ◎ **Retailer/Brandowner:** e.g. Walmart, Danone, PepsiCo, Coca-Cola, Green Mountain Coffee

**All are critical proof points for
Ei's current and future SFCI partners**



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ATLANTA AIRPORT FOOD VENDORS

(AN EXAMPLE OF OUTCOMES FROM
EI PARTNERS WORKING COLLABORATIVELY)

- ◎ Beginning in 2012, food vendors are required to use compostable service ware to support Atlanta Airport's goal:
 - ◎ divert 50% of its waste from landfill by 2015
- ◎ Atlanta Airport defines 'compostable products' as those that are approved by 3rd parties:
 - ◎ The Biodegradable Products Institute (BPI); or
 - ◎ Cedar Grove Composting.



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ATLANTA HARTSFIELD AIRPORT COMPOSTABLE FOOD SERVICEWARE

- ◎ Types of Compostable Foodservice Ware Products Covered by Contract Restrictions
 - ◎ Cutlery
 - both individually wrapped and bulk utensils
 - ◎ Plates, bowls and cups
 - for both hot and cold applications
 - ◎ Take-out packaging
 - E.g. clamshells, boxes, deli containers, deli/bakery bags, containers with separate lids
 - ◎ Ancillary items such as lids, straws, trays, and coffee stirrers.



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EXCLUSIONS & EXEMPTIONS

- ◎ Currently Excluded: Branded packaging used for food and beverage items manufactured by brand name food companies
- ◎ These excluded items relate solely to pre-packaging
 - ◎ e.g., beverage cans and bottles; snack food packaging such as nut, candy, and chip bags; and pre-packaged condiments).
 - ◎ All other foodservice ware packaging/items must comply with this Compostable Foodservice Ware Packet.
- ◎ Exemptions - issued by the City of Atlanta's Department of Aviation may be granted, revoked, modified or suspended by DOA from time to time in their entirety or case-by-case basis.

Leveraging Proof Points for the Sustainable Food Court Initiative



ingenious materials from plants not oil

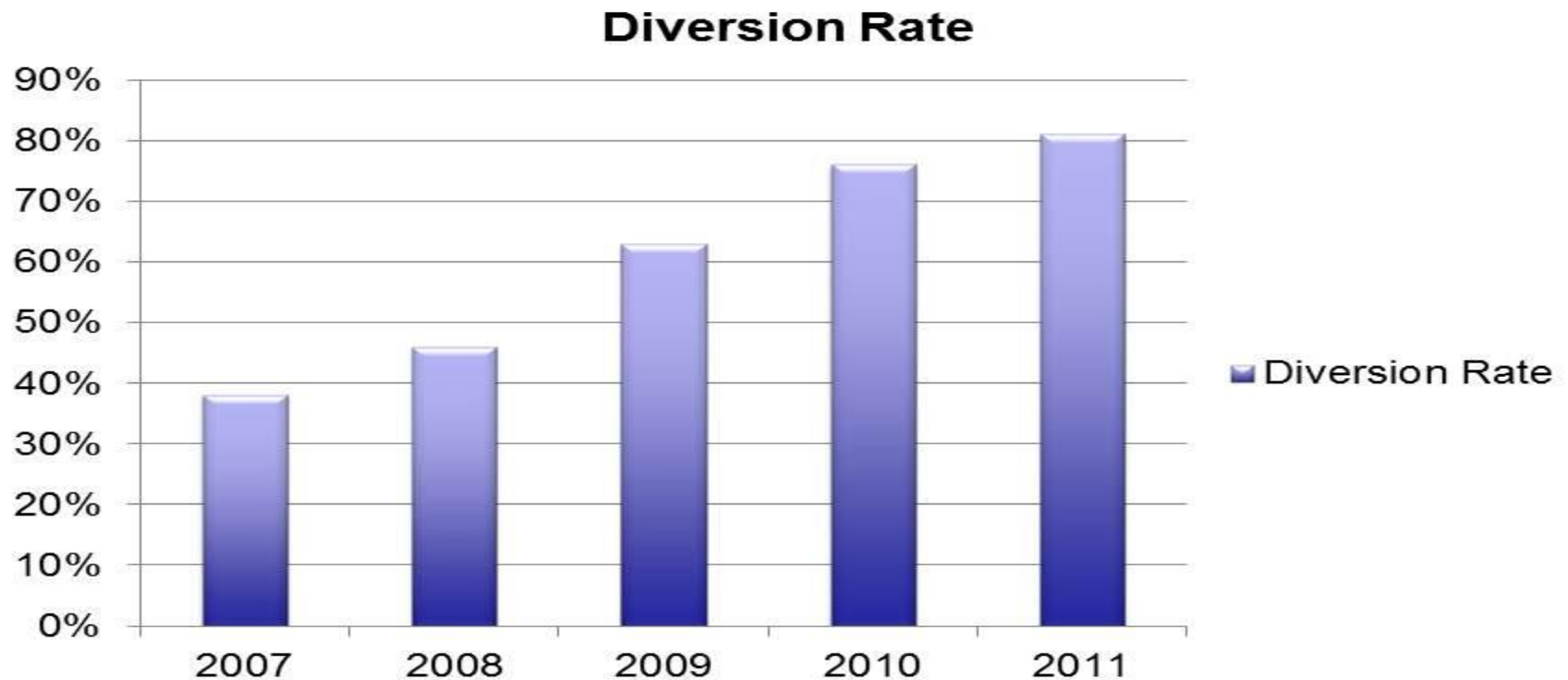


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Key Focus – Waste Diversion

This Includes Food and Compostable Food Serviceware Waste Diversion



The Portland Trail Blazers Outcomes

business case

Baseline 2008

Energy Savings = \$411,000 (3.5m kWh's / 110,000 therms)

Water Savings = \$165,000 (over 13,000 CCF's)

Waste Diversion Savings: \$260,000

Total Savings = \$836,000
(Cost = \$560,000)



Portland Trail Blazers Benefits Extend Beyond the Environment

Enhancing the guest/fan experience



QUESTIONS ?



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