

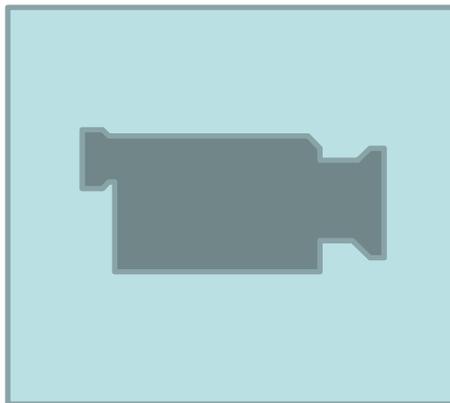
Today's Trash is Tomorrow's Raw Material

Manufacture America

October 20, 2010



Going Green because it's required by law?



Today's Objectives

- Help you understand how waste materials can add value to your business.
- Help you identify potential business opportunities through waste matches.

- Focus on manufacturing and improving competitiveness
- Staff with real world experience
 - variety of industries
 - variety of job experiences
- Serve Illinois

Notable Client Base



IMEC Project Results

- Since establishment in 1996:
 - Assistance to more than 2,000 companies
 - 3,600 contracted projects (over \$30 Million)
 - 65% of projects performed by IMEC specialists. 35% subcontracted to qualified organizations with IMEC serving in project-management role
 - Over \$1 Billion in client-documented benefits
 - Client satisfaction ratings consistently > 98%

Sustainability

- The quality of a state or process that allows it to be maintained indefinitely; the principles of sustainability integrate three closely interlinked elements—the ***environment***, the ***economy***, and the ***social system*** — into a system that can be maintained in a healthy state indefinitely.

Scope of Sustainable Development as defined by the United Nations

Agriculture	Consumption & Production Patterns	Finance	Industry	Land Management	Sanitation	Trade and Environment
Atmosphere	Demographics	Forests	Information for Decision Making & Participation	Major Groups	Science	Transport
Biodiversity	Desertification and Drought	Fresh Water	Integrated Decision Making	Mountains	Small Islands	Waste (Hazardous)
Biotech	Disaster Reduction & Management	Health	International Law	National Sustainable Development Strategies	Sustainable Tourism	Waste (Radioactive)
Capacity-Building	Education and Awareness	Human Settlements	International Cooperation for Enabling Environment	Oceans and Seas	Technology	Waste (Solid)
Climate Change	Energy	Indicators	Institutional Arrangements	Poverty	Toxic Chemicals	Water

What makes some organizations
More sustainable than others?

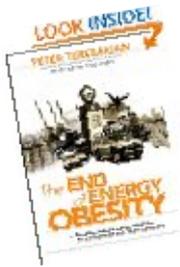
**More Sustainable
Organizations are Less
Wasteful!!!!**

Three Books



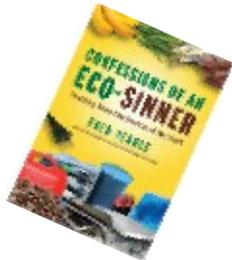
Hot, Flat and Crowded by Thomas Friedman

The geopolitical implications of the environmental damage being created by our desire for more stuff. The opportunity we have to lead a green revolution to create business opportunities and make the world a better place.



The End of Energy Obesity by Peter Tertzakian

How our never ending demands for energy need to be curtailed. Addressing energy demands will ultimately help us address climate change.



Confessions of an Eco-Sinner by Fred Pearce

A journalist traces some of his stuff back to the source of manufacture. Interesting insight into which products we use might be “greener” than others.

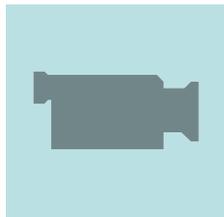
ADVANCED

GROUND CARE PRODUCTS

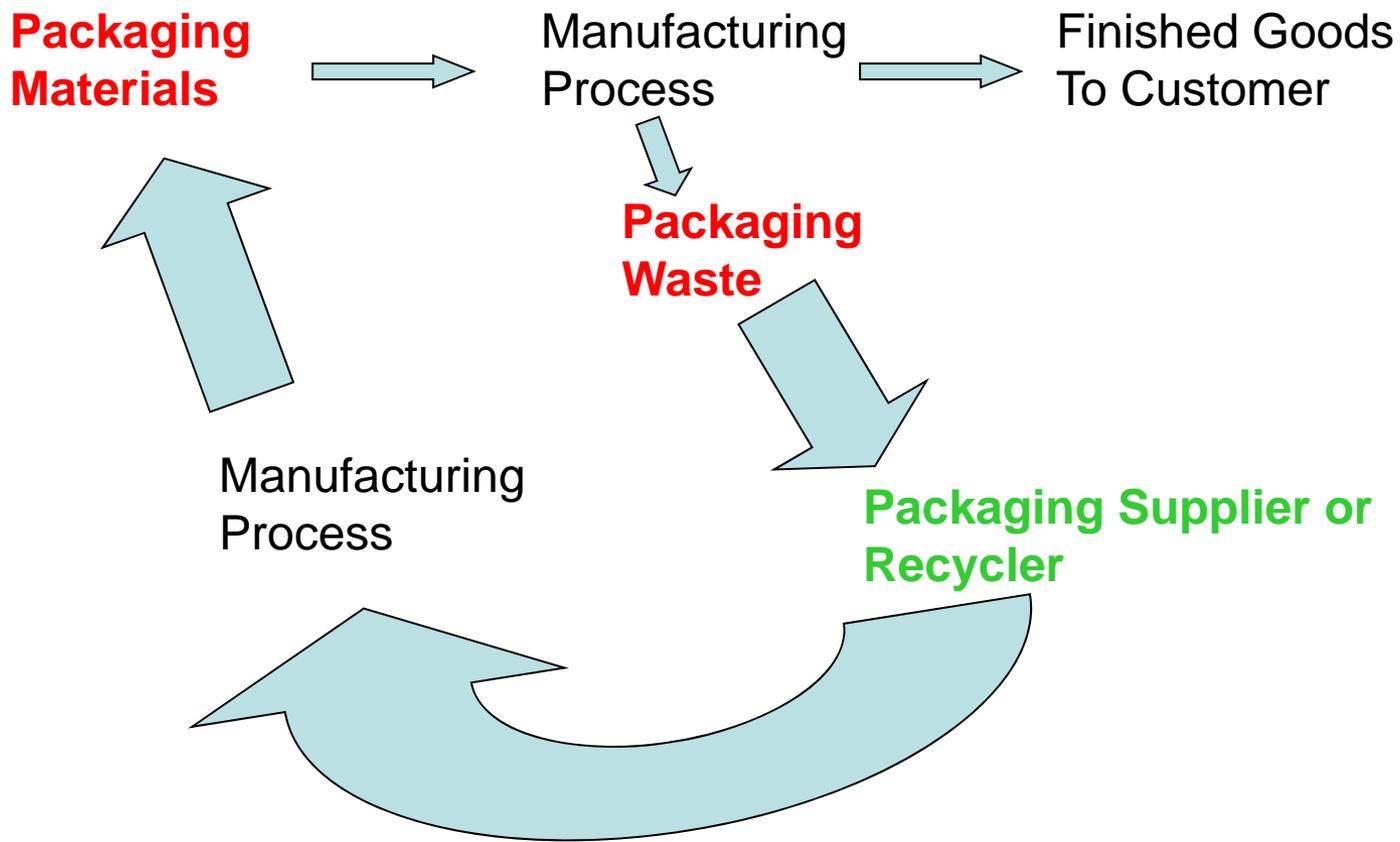
Other Ground Covers Can't Compete



It's The Right Choice



Continuously Renewable Approach to Sustainability



By-Product Synergy

Improve the financial and environmental health of our region by transforming outputs (wastes) to industrial inputs (profits)



Recycle

- Chicago Green Interiors
 - Glass tiles
 - Furniture
 - Fabric

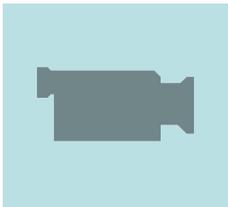
- **10 Point “Green” Classification**
 - Recycled Content
 - Local
 - Cradle to cradle
 - Certifications
 - Vintage/reclaimed
 - Community building/poverty alleviation
 - Non-Toxic
 - Sustainable/renewable resources
 - Green manufacturing process
 - Artisanal/handmade

Reuse (Upcycle)

- Terracycle

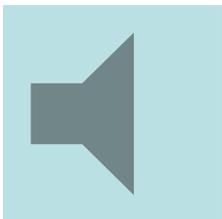


A landfill is a poorly managed warehouse
- Tom Szaky
Terracycle CEO



Reduce

- Interface Flooring
 - Cumulative avoided cost from waste elimination activities since 1995: \$37M
 - Total waste sent to landfills from carpet manufacturing facilities has decreased by 66% since 1996
 - Total energy used at carpet manufacturing facilities (per unit of product) down 45% since 1996
 - Use of renewable energy increased to 27% in 2007
 - Percent of recycled and bio-based materials used to manufacture products WW increased from 0.5% in 1996 to 25% in 2007



Waste Matching Workshop

- Purpose:
 - To enable you to identify waste matching possibilities
 - To show you the potential economic value of by-product synergy
 - Create a mindset of waste as a resource
 - To begin the journey of creating a sustainable future for the Rockford Community

How Many of You Have...

- Old computers, printers and electronics?
- Old office furniture?
- Obsolete inventory?
- Old marketing literature, stationery, obsolete paperwork?
- Off-spec or obsolete chemicals or raw materials?
- Other stuff you don't know what to do with?

Let's Get Started..

- Choose 3 Materials: They can either be byproducts that you **have** or inputs you **want**. Make sure you think about your current raw materials!
- Fill out the information for each on a corresponding post-it:
 - **Green=Byproduct**
 - **Purple=Input**
- Use one post-it for each material, please!



Waste to Profit
NETWORK

Company: ABC
Company

Wants: Plastic



Waste to Profit
NETWORK

Company: XYZ
Company

Has: Broken
Pallets

Success Story

ORGANIZATIONS INVOLVED

Strategic Materials in Chicago, IL
Company that does window restoration work

WASTE INVOLVED

Glass cullet



ACHIEVEMENTS

- ~30,000 lbs glass and wood diverted from landfill every month
- Save money on waste hauling and get paid a small amount for each load
- Potential for jobs to be created as business grows
- Closed loop life cycle for previously non-recyclable glass

Success Story



ORGANIZATIONS INVOLVED

Abbott Laboratories
ArcelorMittal Steel

WASTE INVOLVED

Sodium hypochlorite (industrial bleach)

ACHIEVEMENTS

- 20K tons of industrial bleach was diverted from the public sewer system and used to create cleaner process water for ArcelorMittal Steel
- Taxpayer savings from reduced water treatment
- Transformed a hazardous waste into a beneficial reuse byproduct
- CO₂ savings from local sourcing of raw materials
- Created greater inter-company communications and efficiencies regarding water treatment

Success Story

ORGANIZATIONS INVOLVED

Southern IL Manufacturers

WASTE INVOLVED

Used Gaylords and Pallets

ACHIEVEMENTS

- Company with the gaylords no longer has to put employee time into breaking down the gaylords and storing them
- Company taking the gaylords has reduced need to purchase containers and packaging
- Reducing impact in local landfill – wood and cardboard
- CO2 savings from reduced raw material purchases and reduced landfill waste



Capture your ideas

Material	Type of Company or Name of Company that could use it	What do we need to do next?
<u>Example</u> : Waste paint	Artist Habitat for Humanity Local School	Call the local Habitat for Humanity group
<u>Example</u> : Cardboard boxes	Recycler Another company Packaging store Local shelter	Contact local recycler to see if they will pick it up on a regular basis

This workshop is only a start...

- In order to realize benefits we must all take action
- Contact another company to implement a by-product synergy
- Start a recycling program
- Initiate metrics for sustainability

Contacts

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