

*Johnson & Johnson*



**Corporate Sustainability:  
J&J Greening Strategy**

# Agenda

- Drivers
- Greening Journey
- Greener Examples



Presidential GC Challenge Awards



# Our Products: Save & Improve Lives



- '09 Sales \$63.7 Billion
- 120,000 Employees

- Operate in 60 Countries
- 3 Major Sectors

GREENPEACE



### Internal

- Credo
- Our Vision: Healthy Planet, Healthy People and Healthy Business
- Our New Greener Direction: Earthwards

# Drivers



### External

- Consumers
- Customers
- NGO's
- Competitors
- Legislations



### Our Credo

We believe our first responsibility is to the doctors, nurses and patients, to mothers and fathers and all others who use our products and services. In meeting their needs, everything we do must be of high quality. We must constantly strive to reduce our costs in order to maintain reasonable prices. Customers' orders must be serviced promptly and accurately. Our suppliers and distributors must have an opportunity to make a fair profit.

We are responsible to our employees, the men and women who work with us throughout the world. Everyone must be considered as an individual. We must respect their dignity and recognize their merit. They must have a sense of security in their jobs. Compensation must be fair and adequate, and working conditions clean, orderly and safe. We must be mindful of ways to help our employees fulfill their family responsibilities. Employees must feel free to make suggestions and complaints. There must be equal opportunity for employment, development and advancement for those qualified. We must provide competent management and their actions must be just and ethical.

We are responsible to the communities in which we live and work and to the world community as well. We must be good citizens - support good works and charities and bear our fair share of taxes. We must encourage civic improvements and better health and education. We must maintain in good order the property we are privileged to use, protecting the environment and natural resources.

Our first responsibility is to our stockholders. Business must make a sound profit. We must experiment with new ideas. Research must be carried on, innovative programs developed and mistakes paid for. New equipment must be purchased, new facilities provided and new products launched. Research must be credited to provide for advance times. When we disagree according to these principles, the stockholders should receive a fair return.

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# THE BUSINESS CASE IS EVOLVING

Leading companies are using sustainability to win as they integrate sustainability into their core business strategy





**A PICTURE IS WORTH A  
THOUSAND WORDS**

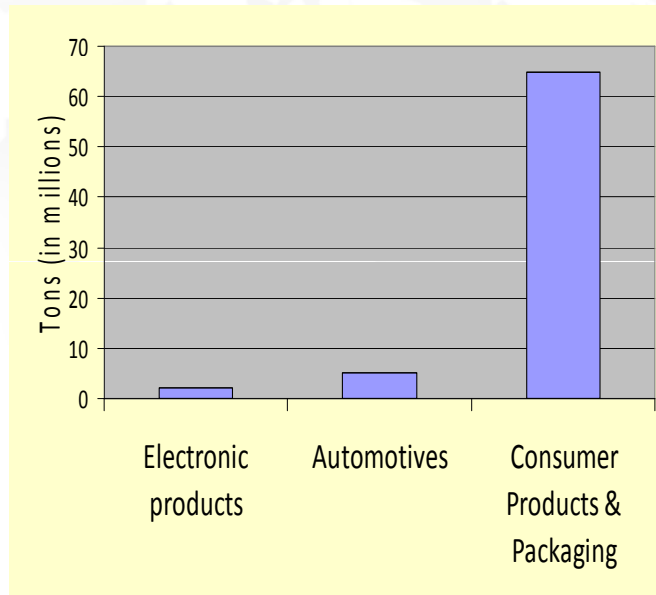
## The Perils of Plastic



A host of modern ills that have been rising unchecked for a generation — obesity, diabetes, autism, attention-deficit/hyperactivity disorder — could have chemical connections. "We don't give environmental exposure the attention it deserves," says Dr. Philip Landrigan, director of the Children's Environmental Health Center at New York City's Mount Sinai Medical Center. "But there's an emerging understanding that kids are uniquely susceptible to environmental hazards."

# “Products will be a key part of our sustainability journey”

Municipal Solid Waste In The United States: 2007 Facts And Figures, USEPA., November, 2008



## HP dv6929 Entertainment Notebook and Accessories

Customers who purchase the new HP dv6929 Entertainment Notebook from Walmart or Sam's Clubs leave the store with the computer and its accessories cushioned safely in just the HP Protect Messenger Bag, made of 100 percent recycled fabrics.



Sam's Club Case-less milk jugs

- **Packaging Waste makes up 30% of solid waste in the US.**
- Only 14% of Plastic Water bottles are recycled; they take up to 1000 years to decompose in a landfill.
- **In Europe regulations are forcing manufacturers to bear the cost of disposal.**

## Europe leads effort to push for design of “green” drugs

**Before Dr. Lars Lööf writes a prescription for his patients, he checks a new database...he wants to know whether the medication might harm the environment. In some cases, he even can find a more environmentally friendly drug, all with the click of his mouse.**

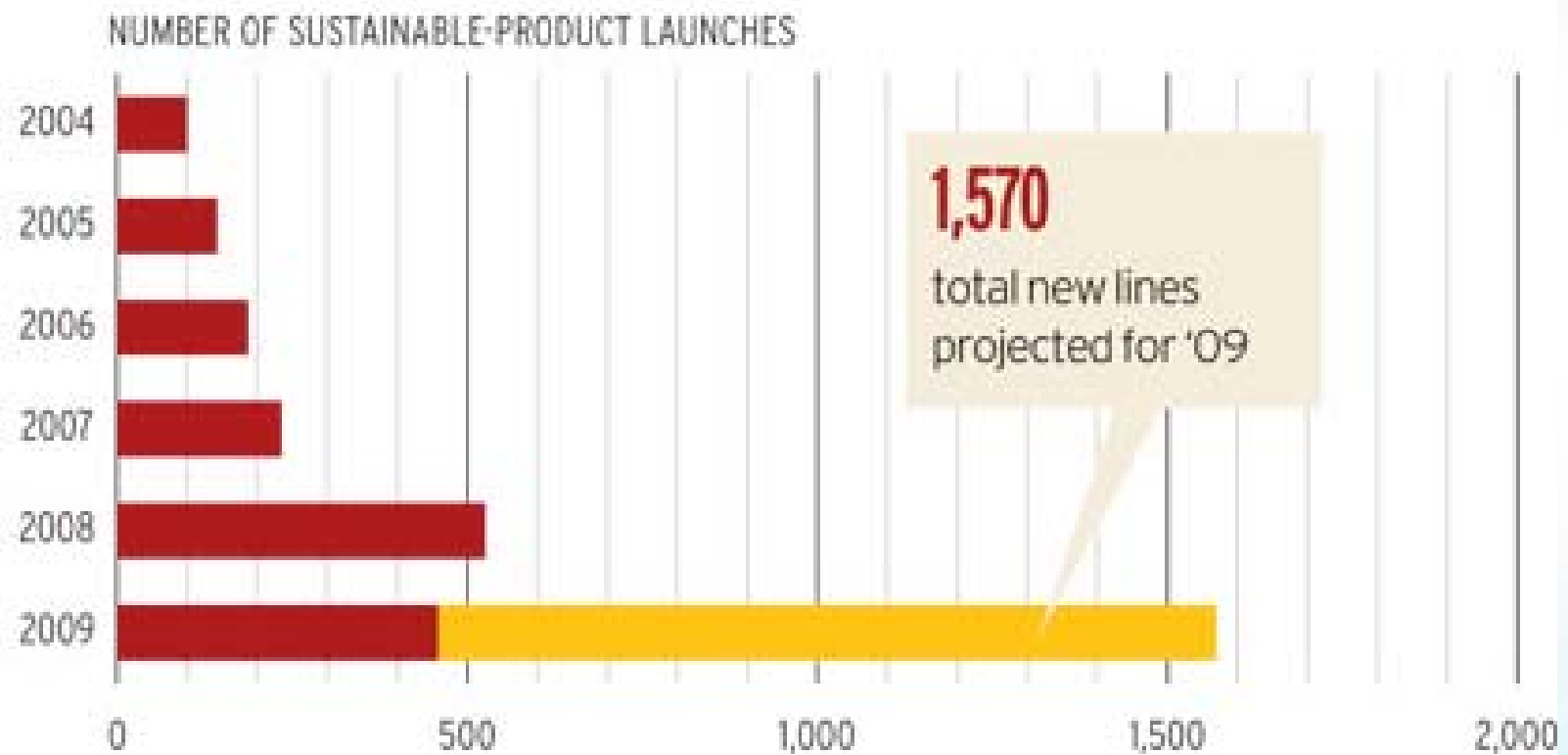
Environmental Health News – Jessica A. Knoblauch



# Proliferation of “green” products

## GREEN LIGHT FOR GREEN PRODUCTS

Recession or no, the pace of sustainable-product launches is heating up



# Internal

- Our Credo
- Our Vision: Healthy People, Healthy Planet and Healthy Business



Robert Wood Johnson, former chairman from 1932 to 1963 and a member of the Company's founding family, crafted Our Credo himself in 1943, just before Johnson & Johnson became a publicly traded company.

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We must experiment with new ideas.

Research must be carried on, innovative programs developed and mistakes paid for.

New equipment must be purchased, new facilities provided and new products launched.

Reserves must be created to provide for adverse times.

When we operate according to these principles, the stockholders should realize a fair return.

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# DEVELOPING A SUSTAINABLE CULTURE



1990 Pollution Prevention Goals

2000 Next Generation Goals

2005 Healthy Planet Goals

Working on Healthy Future 2015 Goals

- **COMPLIANCE**  
Zero releases, violations, permit exceedances
- **ENVIRONMENTAL LITERACY**  
Increased employee environmental literacy
- **BIODIVERSITY**  
Enhanced biodiversity conservation
- **TRANSPARENCY**  
Share facility specific sustainability information publicly
- **PRODUCT STEWARDSHIP**  
Improved environmental profile of products; take-back programs for electronic equipment
- **WATER USE**  
10 percent absolute reduction over 2005 levels

- **PAPER AND PACKAGING**  
Increased sourcing of paper and packaging from certified forests or increased recycled content; franchise goals for eliminating polyvinyl chloride (PVC)
- **CARBON DIOXIDE REDUCTION**  
7 percent absolute reduction over 1990 levels for stationary sources; 30 percent reduction in emissions per kilometer for fleet vehicles compared to 2003 levels
- **WASTE REDUCTION**  
10 percent absolute reduction over 2005 levels for both nonhazardous and hazardous waste
- **EXTERNAL MANUFACTURING**  
New operating standards deployed and conformance measured



# J&J's Green Successes



- #1 Largest Corporate Fleet of Hybrid Vehicles in U.S.  
*Automotive Fleet Magazine 10/07*



- #2 Largest Corporate User of On-Site Solar energy  
*World Resources Institute*



- EPA "Green Power Leadership Award" - 6<sup>th</sup> consecutive years
- EPA's Smartway<sup>®</sup> Excellence Award to J&J's SLC for efficient product transport



- 83% of Paper Packaging is "Certified Sustainable" or has recycled fiber (30% PCR)
- All legacy CPC Packaging is "PVC-free"
- Reduced J&J water use by 6%
- Reduced J&J waste by 4% & hazardous waste by 10%

**“THE ENVIRONMENT IS THE ULTIMATE HUMAN HEALTH ISSUE”**

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**HEALTHY PLANET 2010**

**THE ENVIRONMENT IS THE ULTIMATE HEALTH & SAFETY ISSUE.**

Johnson & Johnson continues its commitment to the health and well-being of the Earth with its new Healthy Planet 2010 Goals.

[www.HealthyPlanet2010.com](http://www.HealthyPlanet2010.com)

One company can make a difference.

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# Our New Greener Direction...



MOVING TOWARDS AN ECO-HEALTHY FUTURE

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## How does Earthwards™ apply to Johnson & Johnson products?

The Earthwards™ Product Scorecard is a user-friendly tool that utilizes a step-by-step process to analyze five key product areas with the potential for the greatest environmental impacts:



MATERIALS



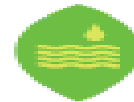
PACKAGING



ENERGY



WASTE



WATER



The Earthwards™ Product Scorecard is designed to capture and measure product changes that result in improvements in materials, packaging, energy, waste and water use. After taking a product through the scorecard, teams will be able to decide which areas are most relevant to their product, customer and market.

*\*Innovation counts! Products can also gain points for making improvements that may be outside of the five key areas above.*



### Earthwards™ Product Scorecard

#### pre-requisites






achieved

Know materials, ingredients in your product	<input type="checkbox"/>
Identify and plan to address J&J Watch List materials	<input type="checkbox"/>
Know where product and packaging end up after use	<input type="checkbox"/>
Know whether agricultural or mined ingredients come from culturally or environmentally sensitive regions	<input type="checkbox"/>

#### complete life cycle screen

To identify priority goals for the product (see separate screening questions)	<input type="checkbox"/>
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#### goals

 Materials	1 Meet consumer need with less material or	<input type="checkbox"/>
	2 Use more environmentally preferred material (see list) or	<input type="checkbox"/>
 Packaging	3 Meet consumer need with less packaging or	<input type="checkbox"/>
	4 Use more environmentally preferred packaging material (see list) or	<input type="checkbox"/>
 Energy	5 Make product more energy efficient in use or	<input type="checkbox"/>
	6 Make manufacturing or distribution more energy efficient or	<input type="checkbox"/>
 Waste	7 Make product with less waste during manufacturing or	<input type="checkbox"/>
	8 Recover more product, after use, for reuse or recycling or	<input type="checkbox"/>
 Water	9 Make product more water efficient in use or	<input type="checkbox"/>
	10 Make manufacturing more water efficient	<input type="checkbox"/>

#### results

Achieved all pre-requisites + three other goals	<input type="checkbox"/>
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# Optimize earthwards

MOVING TOWARDS AN ECO-HEALTHY FUTURE

- External Review:

- Scot Case – Terrachoice
- Clive Davies – EPA
- Matthias Finkbeiner – Univ. of Berlin
- Dan Goleman – Ecological Intelligence
- Dara O'Rourke – GoodGuide
- Jim Fava – Five Winds International

- Internal Focus Groups:

- Sales, R&D, Supply Chain
- Recognized Brands
- Hospital Customers

## EARTHWARDS™ Scorecard Goals



Energy



Materials /  
Chemicals



Waste



Water



Packaging





Earthwards Website:  
Tools, Guides, Checklists,  
Protocols, Goals, Best  
Practices, *Case Studies*

  
earthwards  
MOVING TOWARDS AN ECO-HEALTHY FUTURE



External Supply Chain  
Green Marketing  
Paper & Packaging  
Earthwards  
Transparency  
Envision 2015



## Introduction

The Earthwards (EW)<sup>TM</sup> website is a place to find EW enablers including guides, best practices, examples and tools. These enablers are organized into three distinct steps following the EW process including: (1) Compliance and Life Cycle Thinking; (2) Greener Improvement (EW Goal Areas); and (3) the EW Scorecard and Recognition.

## Step 1: Compliance and Life Cycle thinking

**Compliance:** Click on the highlighted words in blue to open the designated enabler

Web-based [Chemical Look up](#): User name: dfeuser Password: Benzene12!



Web-based [Product and Packaging Compliance](#) Guides and Protocol

Web-based Regulatory Database: [C2P \(Compliance to Product\)](#) For temporary trial use- User Name: aleej Password: Johnson2010

[Link to Earthwards <sup>TM</sup>](#)

# Product Life Cycle – procurement impacts

(direct + indirect)



All of these processes have sustainability opportunities

# Sustainability

Active Pharmaceutical Ingredients  
Construction, Capital and Facilities Services  
Chemicals  
Consulting, Temp Labor and Professional Services  
External Manufacturing  
Fleet, Travel, Meeting and Relocation Services  
Information Technology Strategic Sourcing  
Logistics  
Marketing  
Media & Advertising  
Metals & Plastics  
Packaging  
RD & CRO

## Dialogue

+

## Partner

with our strategic suppliers  
(<50/category)



# POSITIVE POTENTIAL™



## FOR THE FUTURE

### Introduction

Companies today are facing difficult questions about the waste they generate, by using positive sustainability, firms can effectively balance the generation of packaging waste. This method can be utilized as a planning tool to guide the changes to the variables that influence sustainability while helping to identify the efforts necessary to

A "holistic" approach that allows brand managers to establish goals for waste reduction, positive sustainability, and reduction of net impact annually. This approach also helps companies establish sustainability hurdle rates that can be incorporated into day-to-day process along with simple messages about sustainability the



POSITIVE POTENTIAL™ is an aggressive, systematic method that can be used to calculate the sustainable potential of brands, connecting sustainability initiatives to economic pathways.

POSITIVE POTENTIAL™ is a strategy designed for dealing with packaging waste. It helps consider sustainability in terms of an equation that can be used to balance (and measure) net negative impact versus net positive impact of sustainability.

$$(X - W) - Z_{(z1 + z2)} \leq Y$$

- X = Total Packaging Waste
- W = Average Packaging Waste Recovered
- Z = Waste Reduction (z<sub>1</sub>=optimization, z<sub>2</sub>=innovation)
- Y = Positive Sustainability Initiatives

The following is a tool to help you apply this method for your own products and packaging. The Projection and Calculation worksheets will guide you through each variable in the above equation for multiple years so you can apply it at a regional level or product level and project

For more information on this model, please consult the supplemental document posted on the WVEHS website. [\[add link & hyperlink\]](#)

Continue to Projection

# J&J Sustainable Packaging Strategy: Doing less bad and more good....

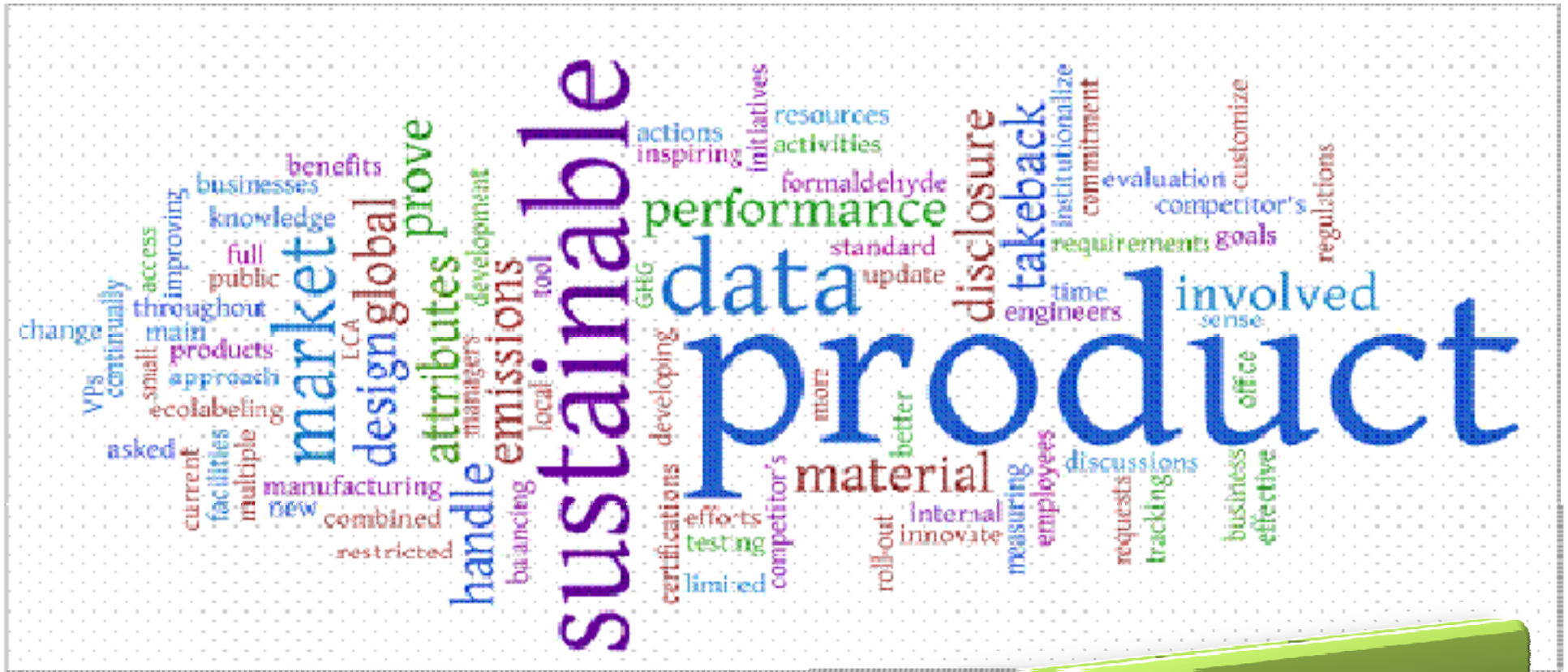
## CONTINUOUS PACKAGING IMPROVEMENTS



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# GAIA SCORING SYSTEM – USER GUIDE SNAPSHOT

Polyols	Glycerin	●	100
	Propylene Glycol	●	95
	Butylene Glycol	●	89
Preservative	Phenoxyethanol	●	100
	Sodium Benzoate	●	99
	Salicylic Acid	●	97
	Methylparaben	●	84
	DMDM Hydantoin	▲	79
	Quaternium-15	▲	75
	Cetrimonium Chloride	▲	75
	Benzyl Alcohol	▲	74
	Zinc Pyrithione	◆	10
	Reducing	Dihydroxyacetone	●
Refatting	Stearic Acid	▲	70
		▲	40

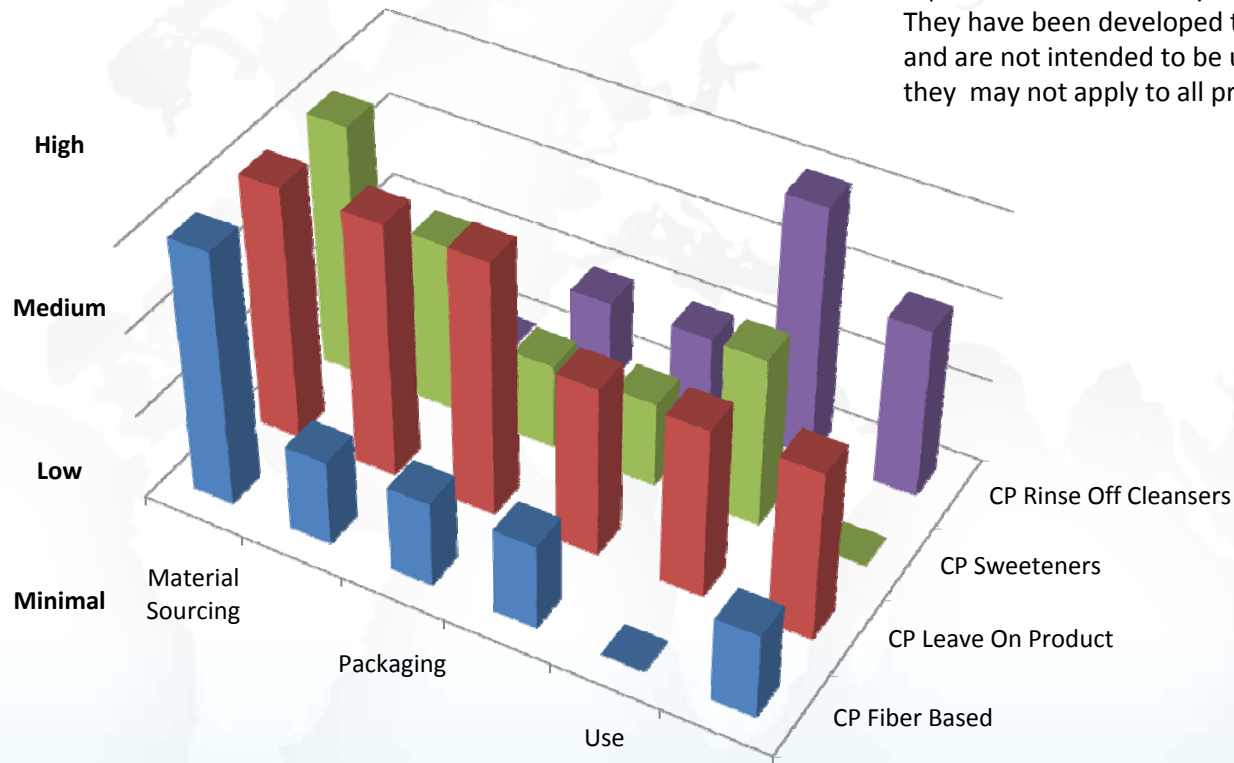


# GreenER Example

# General LCA impact areas across our Consumer Products

## Relative Qualitative Life Cycle Risks/Impacts of Consumer Product Categories

**NOTE:** These are general qualitative representations of Life Cycle Risks/Impacts. They have been developed to spur discussion and are not intended to be used "as-is". Further they may not apply to all products.





# JOHNSON'S<sup>®</sup> Baby, LISTERINE<sup>®</sup> & Neutrogena Wave<sup>™</sup> Weight Reduction

- **Johnson's Baby:** In 2009, we will convert the Johnson's Baby bottles to 30% PCR HDPE...Will save 78 tons of virgin plastic
- **LISTERINE:** In 2008, the LISTERINE package was redesigned to reduce the overall weight of the package by 30%; Saving 400 tons of PET in US
- **Wave:** 32% packaging reduction



Assumed Annual Volume  
Source Reduction  
Transportation Efficiency



GENERATION 1

GENERATION 2

500,000  
Reduced package is 32% less material  
3.9 Truckloads (62% less transportation)



Aveeno™

# Positively Nourishing Lotion

Rating: High	Environment	Economic	Social
	<ul style="list-style-type: none"> <li>•Raw materials used were carefully selected to be 100% or close to 100% plant-derived and free of petroleum-derived.</li> <li>•Recyclable packaging and contain 25% PCR</li> <li>•Partnering with manufacturing site to achieve decreased water, energy and waste</li> <li>•Lower overall carbon footprint through improved raw material transportation</li> </ul>	<ul style="list-style-type: none"> <li>•\$19MM sale expected in the first year</li> <li>•The most natural adult beauty product lines of J&amp;J</li> </ul>	<ul style="list-style-type: none"> <li>•All products contain shea butter, buriti oil from Beraca, a socially and environmentally responsible suppliers</li> <li>• All products contain non-GMO colloidal oatmeal, sourced entirely from US and Canada.</li> </ul>

# Aveeno: Reusable

REUSABLE

AVEENO BODY WASH AND HAIRCARE REFILLS AND CLUB APPROACH

- Reusable containers
- Use of PCR
- 80% less plastic used in pouch; per 1,000,000 pouches, 64,000 pounds (32 tons) of plastics saved
- Use of bio plastics
- Challenges: lot number tracking; life of pumps; micro issues



INSPIRATION



# Sun Crystal Natural Sweetener

## Natural & Supports Green Energy

- No artificial or synthetic ingredient
- 100% natural ingredients
- No bio-engineered or genetically modified (GM) ingredients
- 1% of sales to NGOs that supply solar energy resources worldwide



# Blood Glucose Meters & Ultra Test Strips

Removal and replacement of materials of concern  
Paper sourced from sustainable certified sources

**Glucose Meters** - Removed the following: Cadmium ( Cd ); Chromium Cr VI; Lead ( Pb ); Mercury ( Hg ); Polybrominated Biphenyl ( PBBs ); Polybrominated Diphenylethers (PBDEs)



**Ultra Test Strips** - Removed chemical of concern on various lists including USA CA Prop 65, e.g., Antimony trioxide; strip made from paper sourced from certified sustainable forests



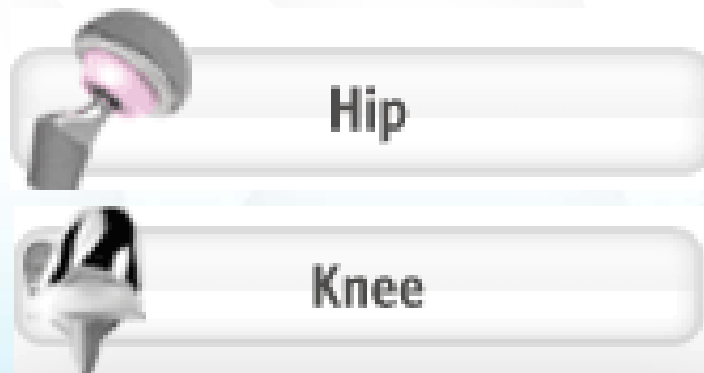
**Carrying Case** - Replaced latex with lycra; Replace PVC with Thermoplastic Polyurethane (TPU)



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# Thermoforms: Weight Reduction

- Reducing packaging from 9 components to 6
- Reducing weight by 12%; inventory & shipping costs



# Acuvue: Green Chemistry

## 2008 J&J GC Award

Process improvement: replaced isopropyl alcohol with propylene glycol in the process

- Reduced 50 tons VOC emissions/yr
- Reduced 212,000 gallons of IPA/yr
- Reduced 8MM lbs of Waste in 2008
- Cost savings of \$7.7MM/yr



# STERRAD System

## Greener Material Use

- Does not use EtO
- Uses hydrogen peroxide
- Simple to use: one plug in where as EtO-based system requires multiple plug ins.
- Higher throughputs: process 80 trays vs 6 trays using EtO-based system
- No Water required: No water or wastewater plumbing and no wastewater discharge

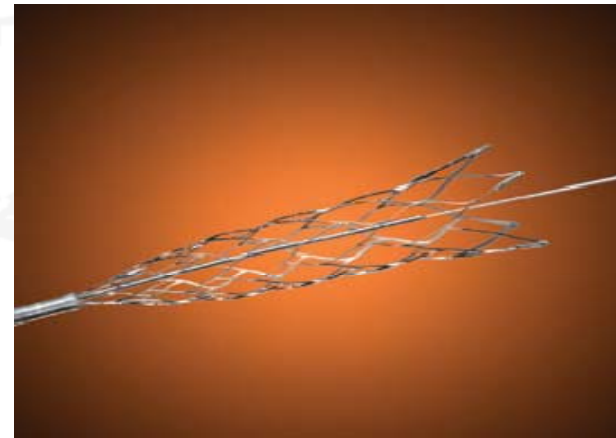


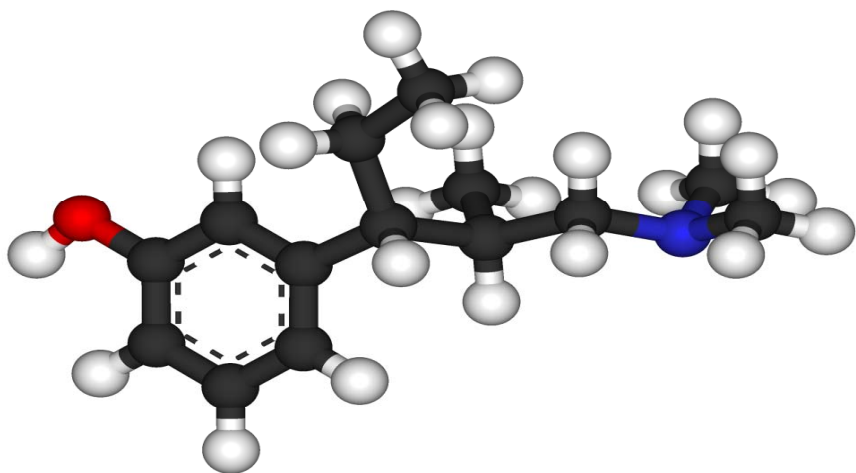


# Fractionation: Green Technology

- Fractionation process vs distillation
- Dramatically increased purity of polymer while reducing the number (toluene and methanol use eliminated) and amount of solvents used
- 45,000 liters of solvents eliminated & saved \$20,000/kg of polymer; a projected savings \$2MM/yr

**Cordis**<sup>®</sup>  
a Johnson & Johnson company

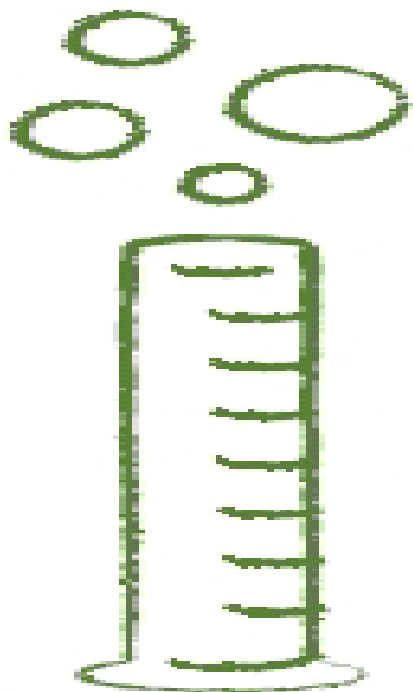


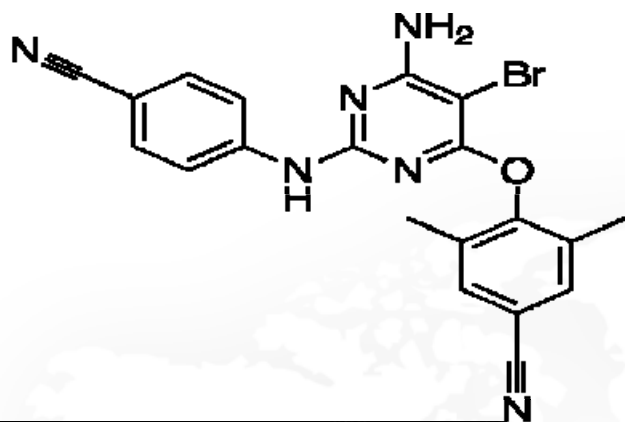


# Tapentadol

## J&J '07 Green Science Award Winner

- Novel analgesic for pain management
- 2<sup>nd</sup> Generation with unprecedented stereoselective route which tripled yield increase
- Increased yield while reducing wastes
  - Reduction of wastes by 87%; 8 million gallons/yr of solvent use reduction and 9.6 million kgs of reagent use reduction
- \$\$\$ Savings:
  - Significant business impact: expected annual savings of \$80MM/yr

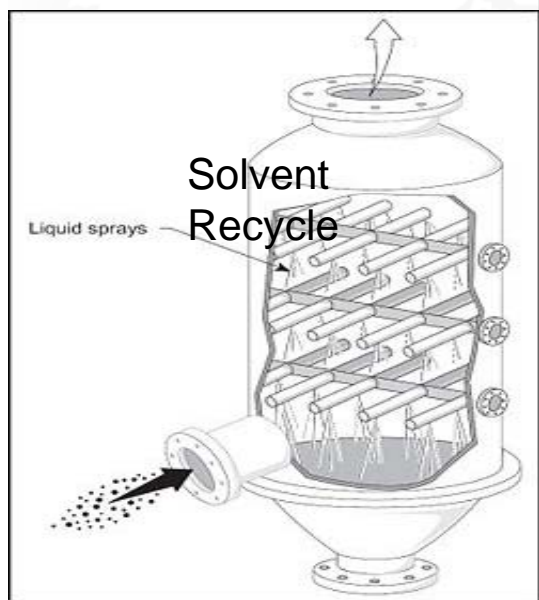




# Intelligence (etravirine, TMC 125)

## Green Chemistry

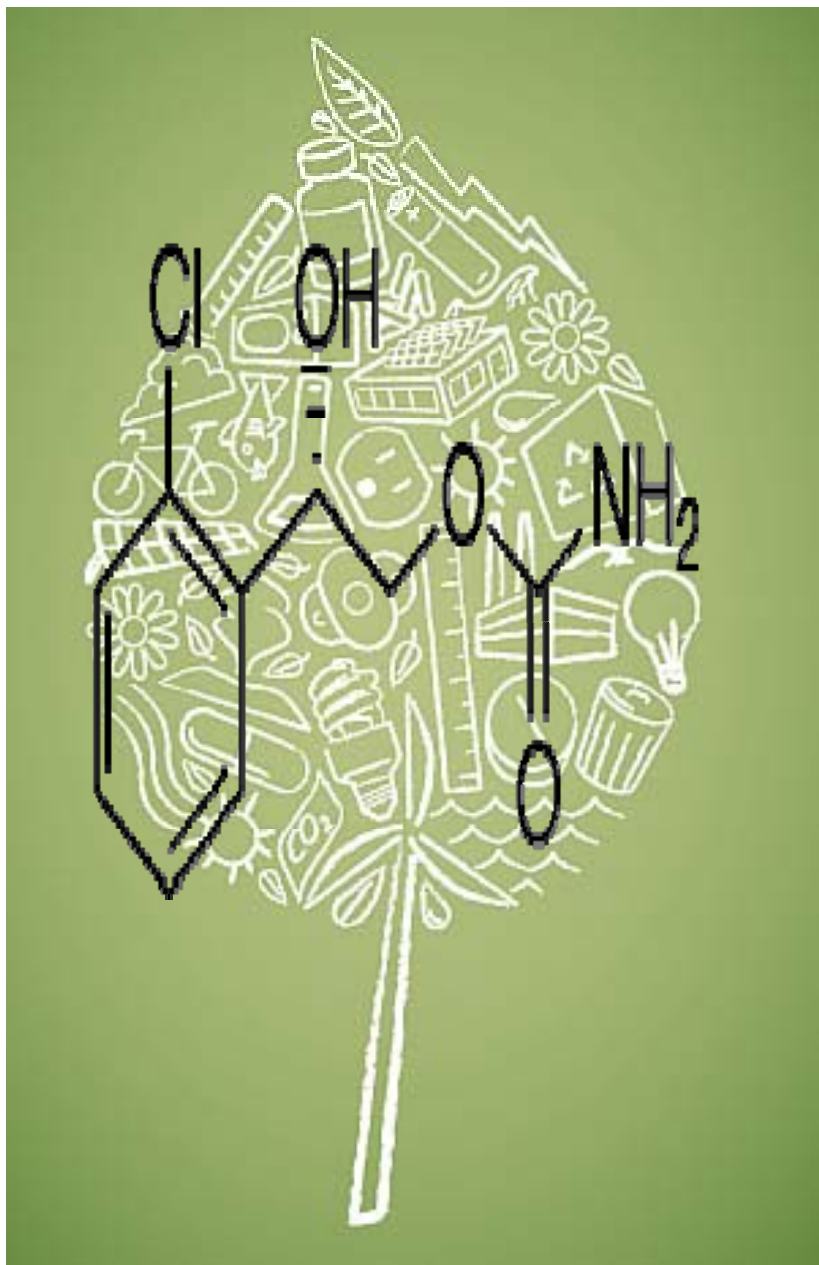
- An aids drug
- Increased yield while reducing material use and wastes
  - Reducing steps; increasing the use of water as solvents; decreasing the use of chlorinated solvents
  - Reduced the spent waste solvents; 540,000 liters/yr spent solvent elimination via:
    - 60% reduction in the use of methylene chloride in spray drying step via recycling back into the step
- \$\$\$ Savings:
  - Expected savings of \$90MM/yr



**INTELENCE**<sup>™</sup>  
(etravirine) 100 mg tablets



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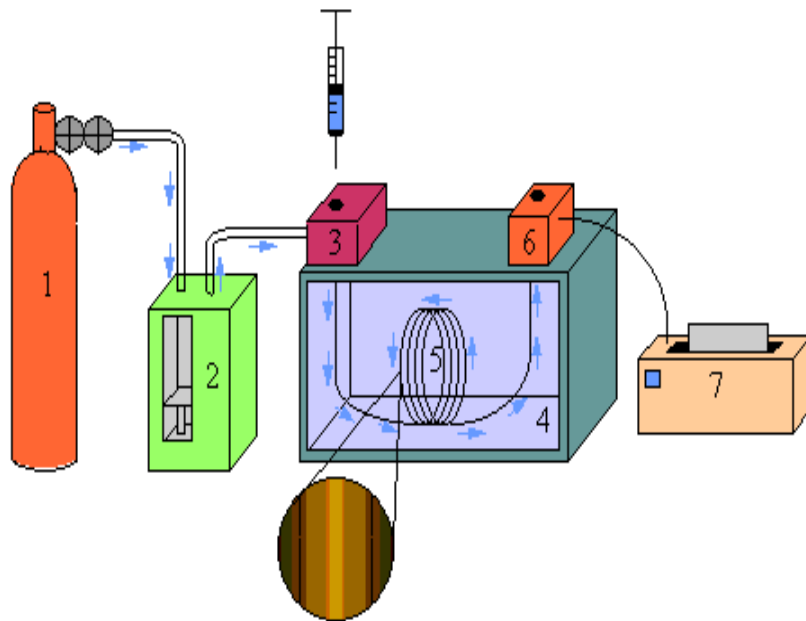
# Carisbamate

## Green Chemistry

- Treatment for epilepsy and neuropathic pain
- Increase yield while reducing wastes and material use
  - Reduced steps from 6 to 3
  - Increased yield by 4 folds (21% to 83%)
  - Eliminated MeCl<sub>2</sub>
  - 60 tons of waste avoided
- \$\$\$ Savings
  - \$ 90MM savings for JNJ

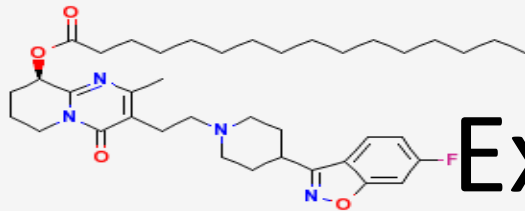
# Supercritical Fluid Chromatography

## Green Technology



- Use of liquid CO<sub>2</sub> as solvent in liquid chromatography system
- Number of chromatography experiments increased by 7 folds
- Reduced 5000 liters of solvent used per year





# Efficient API Recovery Extraction and Crystallization

Rating: High	Environment	Economic	Social
Paliperidone Palmitate: FDA approved August, 2009 (see below)	Efactor from 105 to 12 liters of solvents /1 kg of API	Savings of 1.3 M/yr in 2009; higher in 2010 and beyond	<ul style="list-style-type: none"> <li>•Non-renewable, petroleum based material use avoidance</li> </ul>
Project Orange	Efactor from 1000 to 15 liters of solvents /kg of API	Savings expected to be 0.68M/yr once it is launched	<ul style="list-style-type: none"> <li>•Positive contribution to quality of lives of patients w/schizophrenia</li> </ul>

August 5, 2009 — The US Food and Drug Administration (FDA) has approved a long-acting, once-monthly formulation of paliperidone palmitate injection (*Invega Sustenna*, Janssen, a division of Ortho-McNeil-Janssen Pharmaceuticals, Inc) for the acute and maintenance treatment of schizophrenia in adults.

# Johnson & Johnson's Green Product Journey

# *Thank you!*



**Ann Lee-Jeffs**  
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*Johnson & Johnson*