

# Forging New Links:

Enhancing Supply Chain Value through  
Environmental Excellence



**Global Environmental Management Initiative (GEMI)**



# Vision & Mission of GEMI

## Vision:

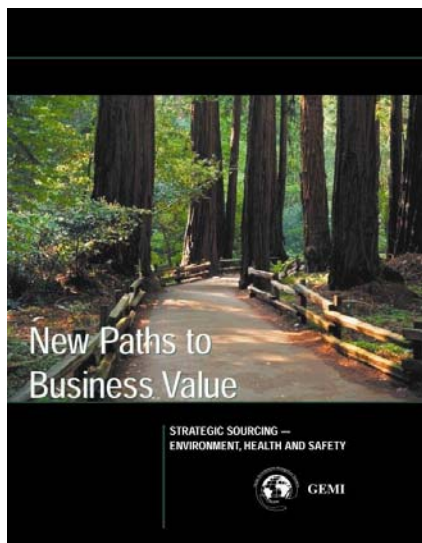
*“To be globally recognized as a leader in providing strategies for businesses to achieve EHS excellence, economic success, and corporate citizenship.”*

## Mission:

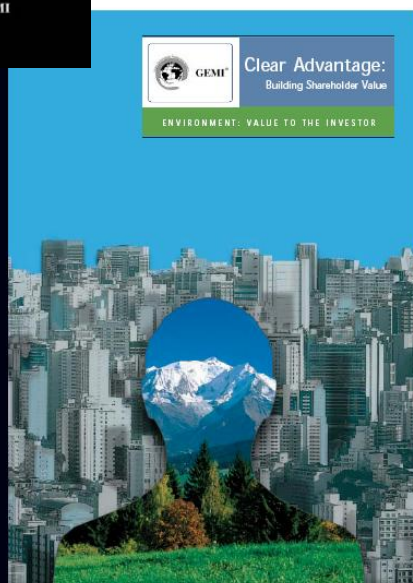
*“Business helping business improve EHS performance, shareholder value, and corporate citizenship.”*



# Heritage of the New Report



**New Paths to Business Value: Strategic Sourcing 2002**



**Clear Advantage: Building Shareholder Value 2004**





# GEMI's Supply Chain Work Group

- **History:** Work Group formed in 2000 to explore EHS issues in supplier-customer relations. Produced a 2002 report, *New Paths to Business Value: Strategic Sourcing – Environment, Health and Safety*.
- **Current Objective:** To develop a comprehensive and practical approach for identifying EHS value contribution opportunities in all aspects of supply chain management
- **GEMI Co-Chairs:** Bert Share, Anheuser-Busch Inc.  
John Harris, Eli Lilly
- **Consultant:** Joseph Fiksel, Eco-Nomics LLC
- **Collaborators:** Prof. Doug Lambert, Ohio State Univ.  
Director, Global Supply Chain Forum  
Les Artman, Partner, Accenture (retired)



# Forging New Links: Overview

- Regulatory changes, stakeholder pressures, and market forces are heightening the importance of environmental and social responsibility
- Supply chain management is evolving from a focus on logistics to a broader view of value creation
- Companies are extending their environmental, health and safety (EHS) efforts beyond compliance and risk management, and are finding ways to contribute to profitability and competitiveness.

This new GEMI report, ***Forging New Links***, provides tools for identifying, prioritizing and implementing opportunities to create business value in the supply chain through EHS excellence.



# Examples of Emerging Supply Chain Issues Relevant to EHS

- Globalization of enterprises
- Outsourcing of key functions
- Collaboration and partnering
- Corporate social responsibility
- Life cycle design of products
- Reverse logistics & take-back
- Time-sensitive order fulfillment
- Advanced information technology
- Supply chain security and continuity



**Complexity**

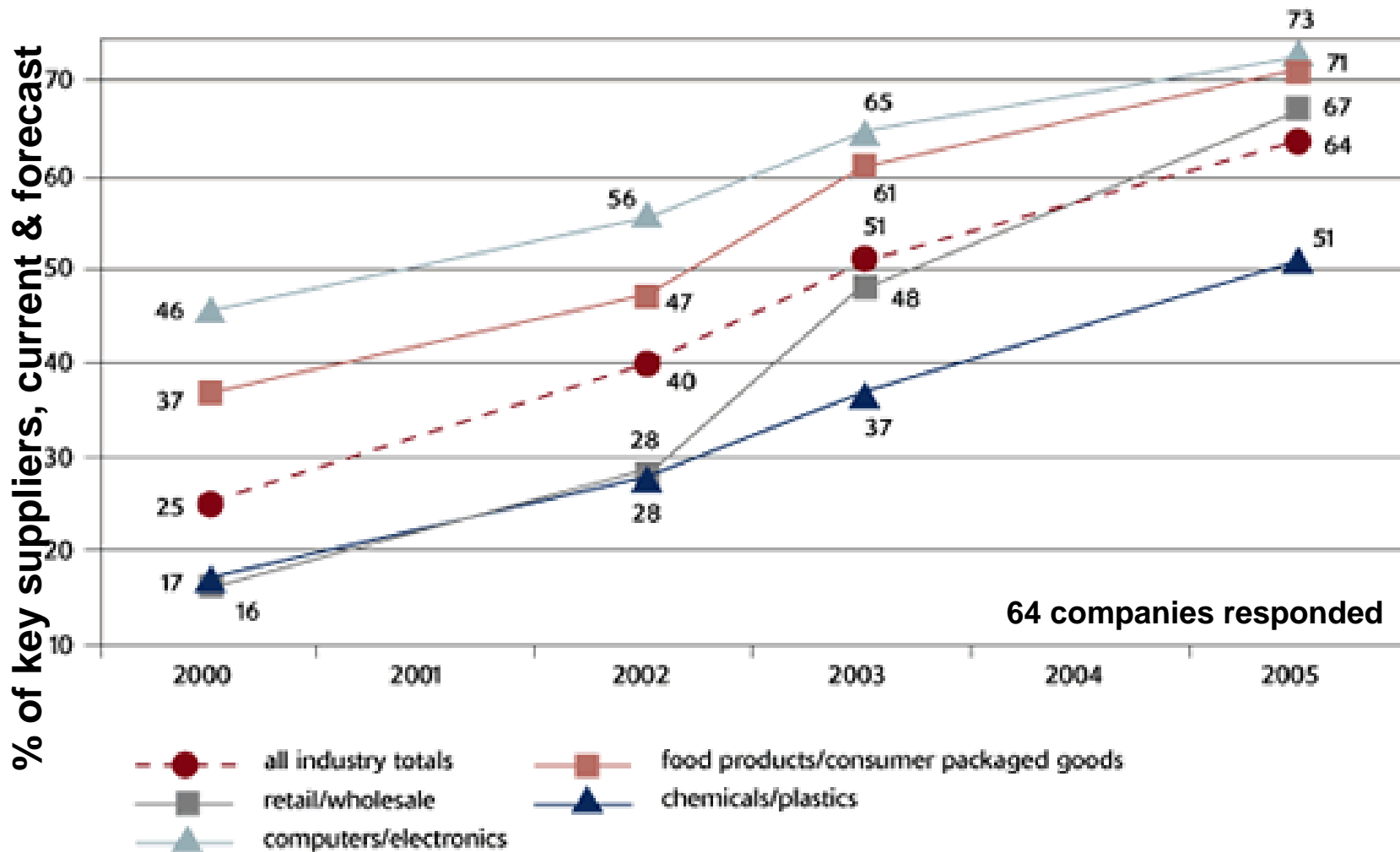
**Accountability**

**Opportunity**

**Vulnerability**



# Estimated Growth in Strategic Partnerships with Key Suppliers

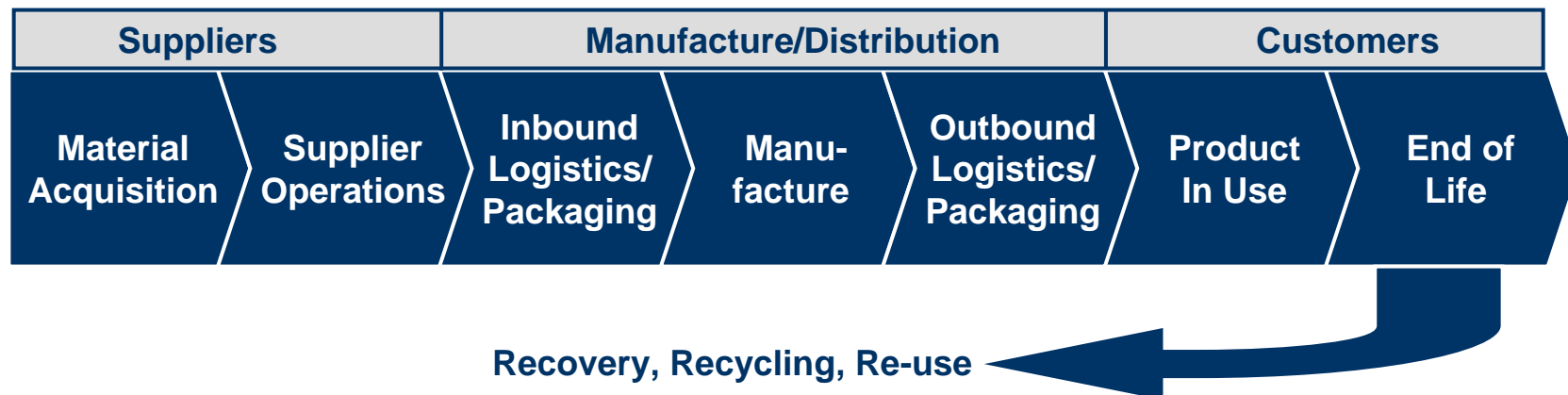




# Contemporary Definition of Supply Chain Management

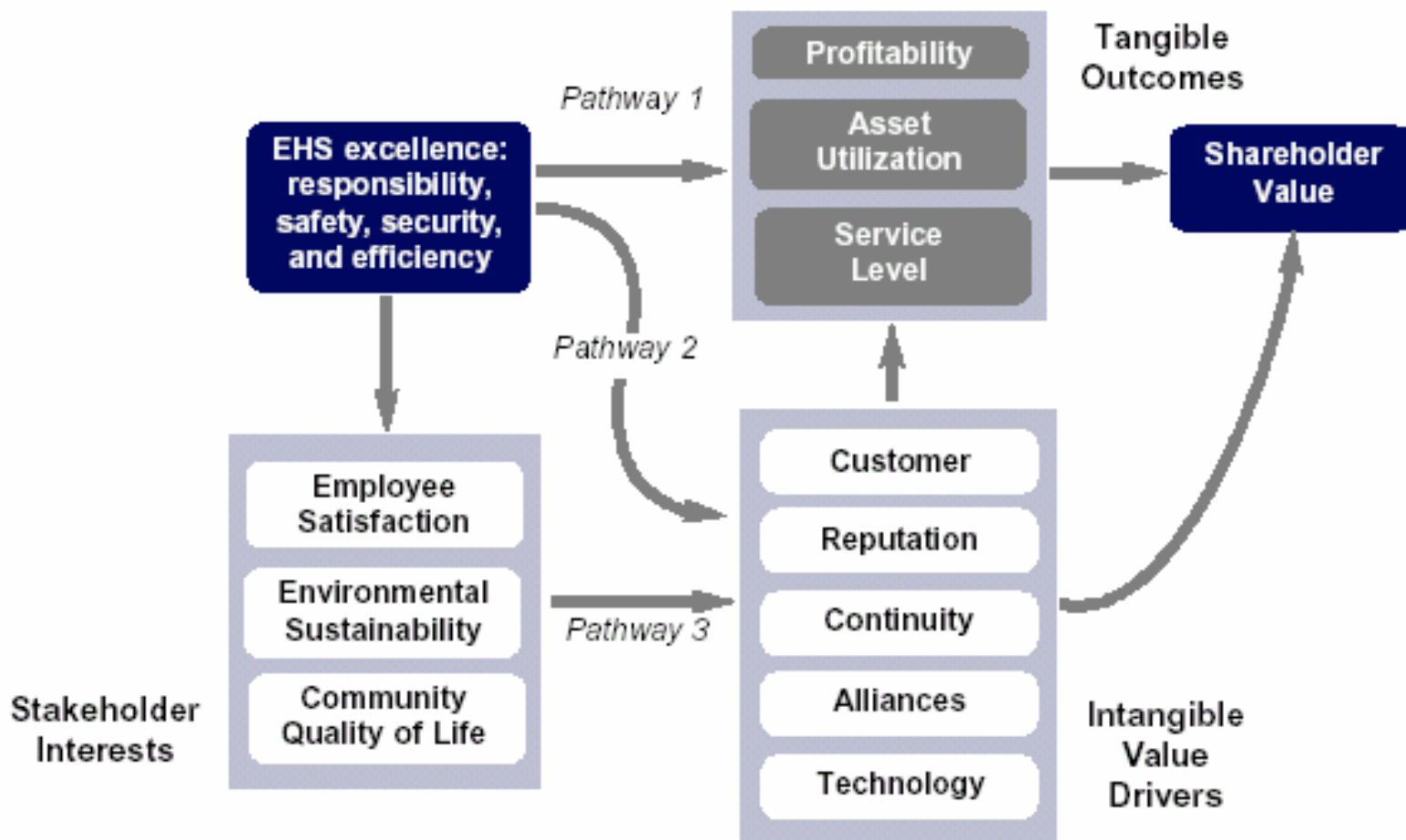
“Supply chain management is the integration of key **business processes** from end user through original suppliers, providing products, services, and information that add value for customers and other stakeholders.”

- Prof. Douglas M. Lambert,  
Fisher College of Business  
The Ohio State University





# The EHS Value Proposition

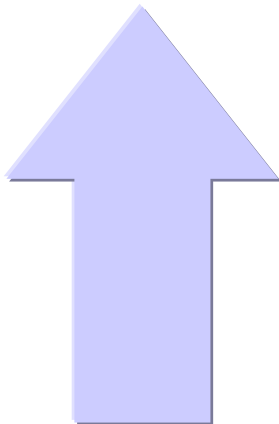


There are three main pathways to shareholder value, including indirect value creation through stakeholder satisfaction



# Eight Key EHS Contributions

**Emerging Roles:  
Value Creation**



**Traditional Roles:  
Cost Avoidance**

Raise supply chain  
**productivity**

Support supply chain  
**innovation**

Enhance external  
**relationships**

Enable enterprise  
**growth**

Maintain human  
**health** and well being

Protect the  
**environment**

Assure **compliance** with  
laws, regs & standards

Minimize supply  
chain **risks**



# GEMI Company Case Studies

## Supply Chain Process Improvement

- [Motorola – Inbound Logistics](#)
- [Anheuser-Busch – Re-engineering](#)
- [Texas Instruments – Materials Control](#)

## Supply Chain Risk Management

- [Pfizer – Contract Manufacturing](#)
- [Dow Chemical -- Behavior-Based Safety](#)
- [Abbott Laboratories – Contractor Safety](#)

## Enhanced Product Development

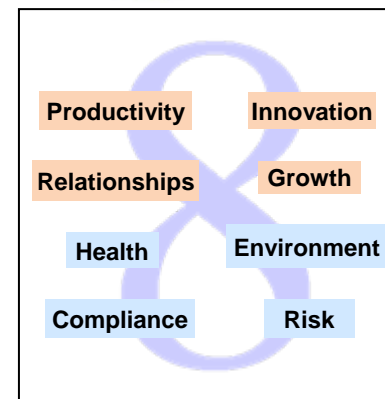
- [3M – Life Cycle Management](#)
- [Kodak – Digital Camera Design](#)

## Enhanced Packaging Technology

- [Duke Power – Reel-Less Cable](#)
- [FedEx Express – Recycled Envelope](#)
- [Intel – Micro-Chip Packaging](#)

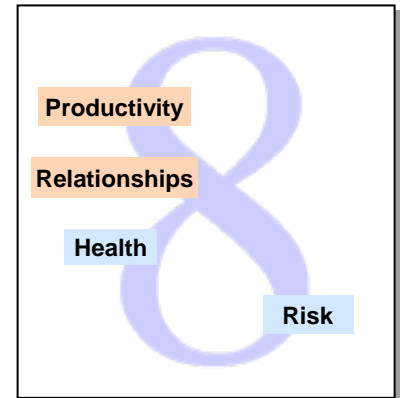
## Collaboration among Companies, Governments, and NGOs

- [Clean Cargo Group](#)
- [Automotive Suppliers Partnership](#)



**Each case study combines several types of EHS value contributions**

# Motorola – Inbound Logistics



Motorola expanded a worker safety project into a Six Sigma initiative that is reducing costs, injuries, and pallet wastes by eliminating supplier discrepancies.

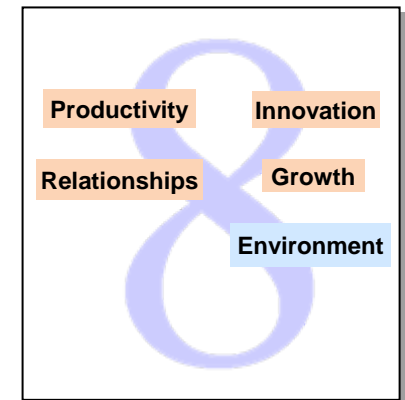
- This project has already yielded over \$1 million in cost reduction, and is expected to save over \$5 million in 2004.



# The Motorola Success Story

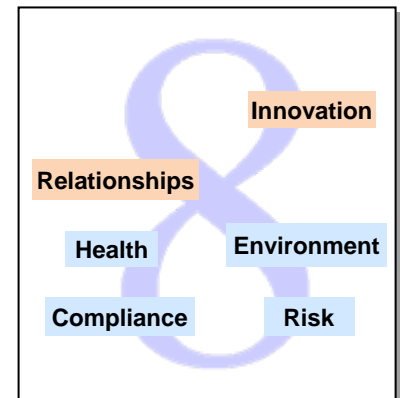
- Cross-functional team comprised of EHS, Logistics, Quality, Finance, Packaging and Sourcing representatives
- Developed Inbound Discrepancy Reporting system with real-time access to vendor, shipment, order & inventory data.
- Enables a focus on the vital few suppliers or defects with the greatest impact upon distribution center operations, and influences supplier cost and performance evaluations.
- Comprehensive approach standardizes packaging and pallets; reduces the pallets handled, stored and disposed; maximizes packaging density to reduce transportation costs; and reduces associated injury costs and occurrences.
  - 58% reduction in pallet-related injuries, saving \$400,000 in avoided Workmen's Compensation cost
  - 12% reduction in discarded pallets, saving \$120,000 in pallet costs
  - \$400,000 savings in reduced transportation expenses
  - \$100,000 savings in reduced handling and storage of pallets
  - 16% improvement in recycling rate of non-hazardous wastes
- Earned a Motorola CEO Award in 2004

# Anheuser-Busch – Re-engineering



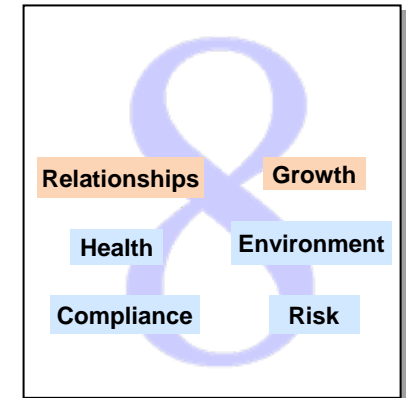
Anheuser-Busch re-engineered its supply chain systems to cope with the increasing complexity of its products, improving both operating efficiency and environmental performance.

# Texas Instruments – Materials Control



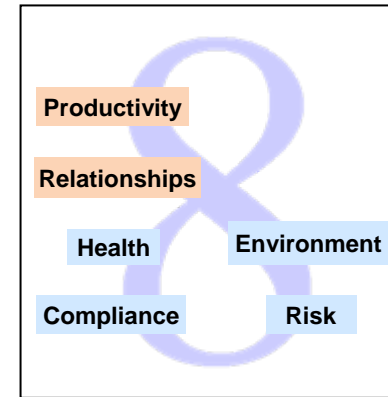
Texas Instruments responded to customer needs by developing a systematic process for assuring compliance with requirements regarding banned and restricted substances.

# Pfizer – Contract Manufacturing



Pfizer uses an internal standard for contract manufacturing and research to monitor its outsourcing providers, thus helping to assure its revenue stream, guard against liabilities, and protect its brands.

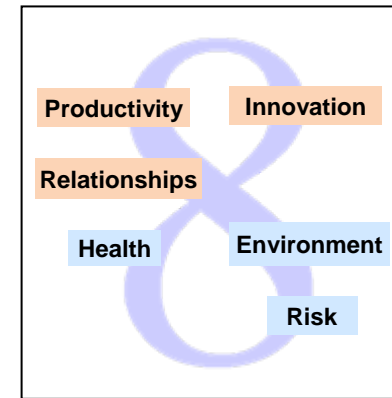
# Dow Chemical – Behavior-Based Safety



Dow Chemical and other companies have adopted a behavior-based approach to transportation safety that has been shown to reduce accident rates while decreasing fuel consumption and overall costs.

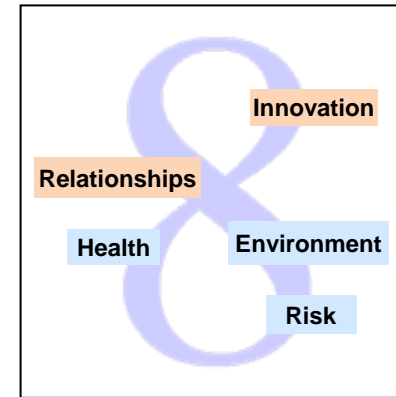


# Abbott Laboratories – Contractor Safety



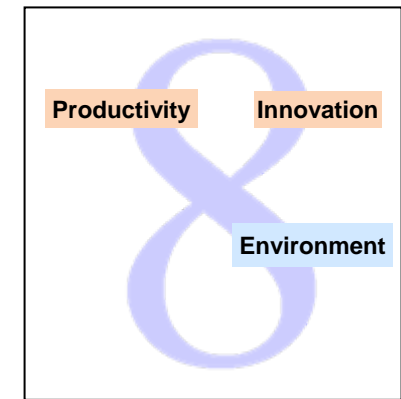
Abbott reduced contractor safety incidents to well below the industry average by integrating safety protocols into its automated contractor performance management system.

# 3M – Life Cycle Management



3M used its “Product Life Cycle Management” approach to design Novec™ 1230 Fire Protection Fluid – a next-generation fire-fighting foam with superior performance in terms of extinguishing efficiency, safety, and global warming impact.

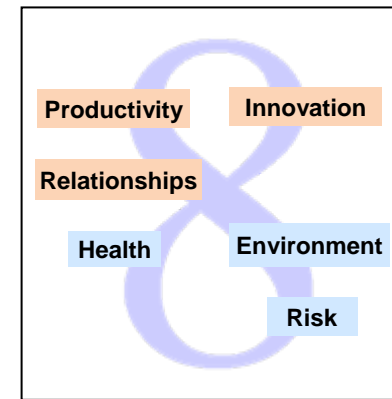
# Kodak – Camera Design



Kodak's efforts to “Design for Health, Safety, and Environment” have helped its digital cameras grow lighter and more energy-efficient, while their performance has dramatically improved

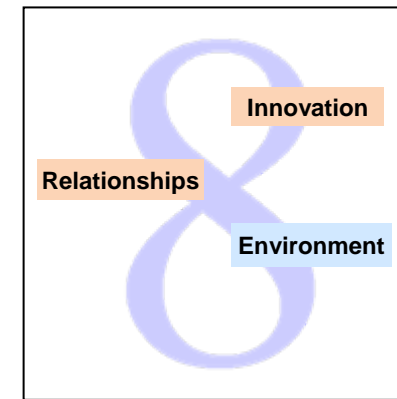
- The 2003 models are less than half the size and mass of the 1998 models, yet have as much as four times the resolution and 8 times the image capacity.

# Duke Power – Reel-Less Cable



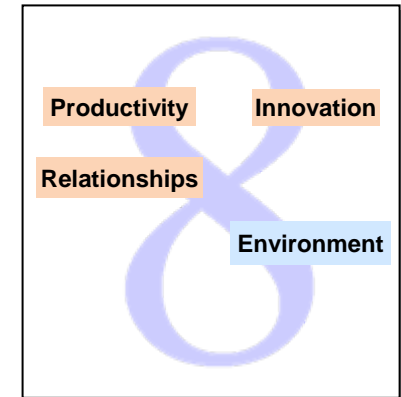
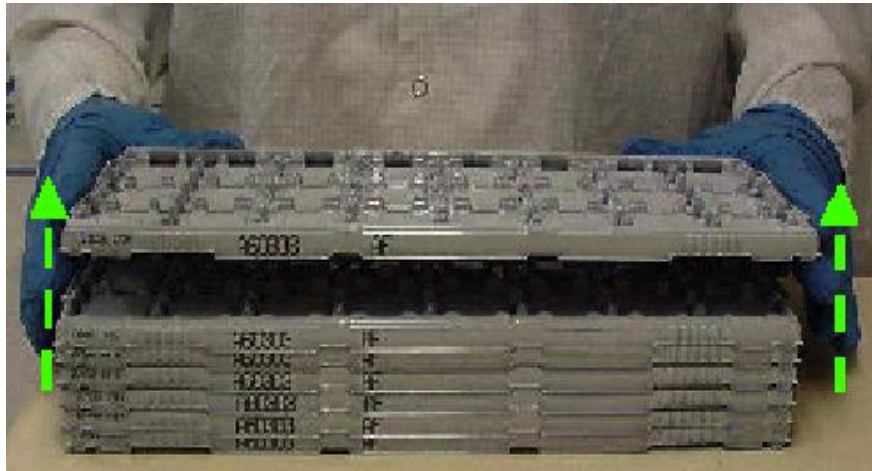
Duke Power worked with its cable supplier to devise an innovative "reel-less" cable technology that eliminates the use and disposal of wooden reels, and reduces supply chain costs by \$500,000 per year.

# FedEx Express – Recycled Packaging



FedEx Express redesigned its overnight letter packaging to utilize 100% recycled fiber, thus strengthening its environmental leadership without compromising on product performance or long-term costs.

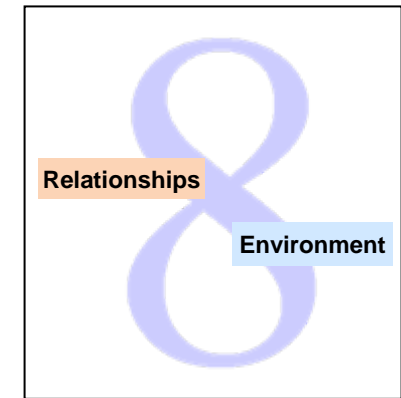
# Intel – Micro-Chip Packaging



Intel has saved millions of dollars annually by developing lighter-weight plastic trays that are used to move microprocessor units through the fabrication process and deliver them to customers.

- Intel is continuing to work on the closed-loop processes that will enable the empty trays to be collected from customers, de-contaminated, and re-used.

# Clean Cargo Group



A number of global companies are collaborating with ocean freight carriers to work toward sustainable product transportation by ocean.

- Working with Business for Social Responsibility, they developed the Environmental Performance Survey, a tool for environmental information exchange.

# Automotive Suppliers Partnership



The Suppliers Partnership for the Environment (SP), is a group of automotive manufacturers and their suppliers in partnership with EPA and NIST that are working together to improve the environment while providing value to the supply chain. GEMI members that are also members of SP include Ashland, Johnson Controls, and Motorola.



# Overcoming Barriers

## Examples of barriers to EHS value realization

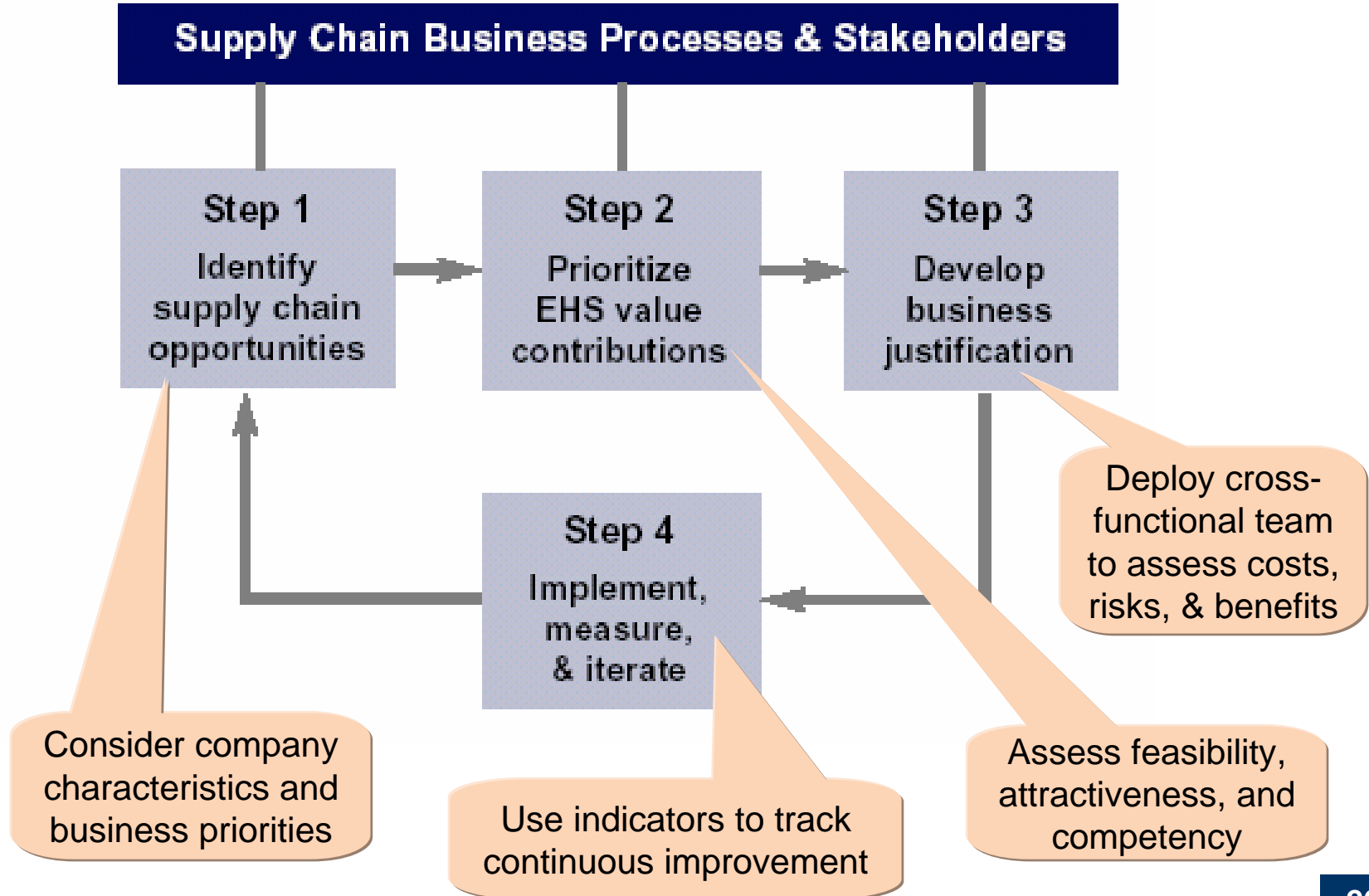
- Higher priorities elsewhere
- Resource limitations
- Doubts about business case
- Institutional inertia & conservatism
- Lack of internal coordination
- Lack of awareness or understanding
- Lack of internal champion



**Implications:** Specific opportunities for EHS value creation need to be articulated clearly, and EHS staff need become integrated into cross-functional teams



# Overview of Methodology





# The Nature of Business

“Waste reduction, business continuity, resource efficiency, and stakeholder satisfaction are intrinsic elements of modern supply chain management. Thus, environmental and social benefits such as pollution prevention can be natural outcomes of supply chain business process improvements.”

***Forging New Links***

GEMI, 2004



GEMI®



[www.gemi.org/supplychain](http://www.gemi.org/supplychain)

## Forging New Links

Enhancing Supply Chain Management  
Through Environmental Excellence

Home

SCM Basics

EHS Value

Methodology

Relationships

Resources

Case Studies

Value Wizard

### Value Wizard



 *Identifying Opportunities  
for EHS Value Creation in  
Supply Chain Management*

### Value Wizard

Welcome to the Value Wizard! This tool will help you quickly identify opportunities relevant to your company. There are four possible approaches that you can try, in any order.

#### Company Characteristics

Identify opportunities that are relevant to the basic characteristics your industry, your market, your processes, and your stakeholders.

#### Emerging EHS issues

Identify opportunities that are relevant to emerging business, regulatory or technological issues that may affect your industry.

#### Business Processes

Identify opportunities relevant to supply chain management business processes that your company has designated as priorities for improvement.

#### Value Drivers

Identify opportunities relevant to the key business value drivers that are the focus of your supply chain management efforts.

Each approach will add specific recommendations to your Opportunity Bin, which you can examine at any time.

Clear all My Previous Responses



GEMI®



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