



# Bayer MaterialScience

## Product Stewardship

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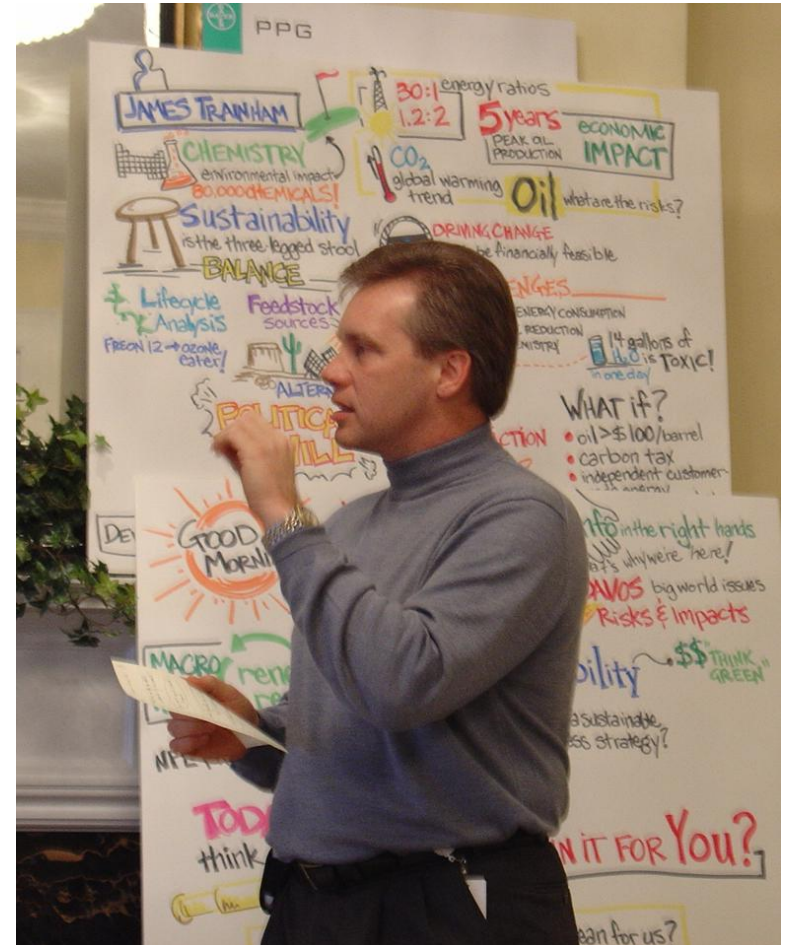
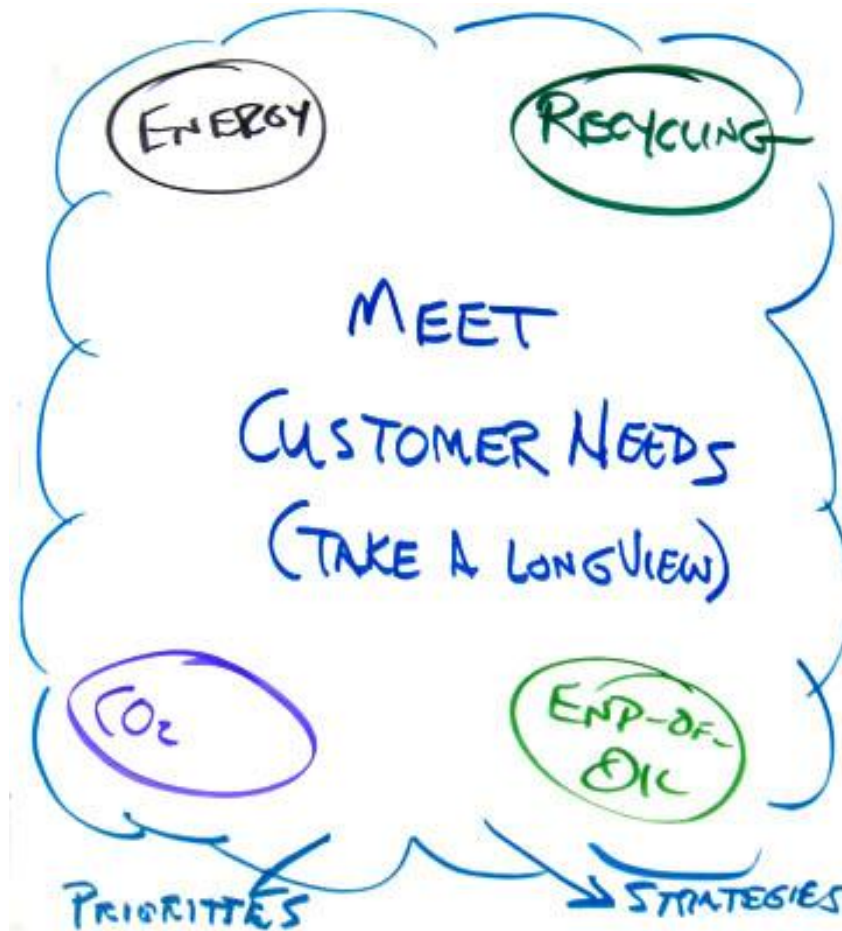
**Vice President**

**Product Safety and Regulatory Affairs  
& Management Systems**



Bayer MaterialScience

# Sustainability Trends Summit: Strategy





# New Paradigm: EcoCommercial Building



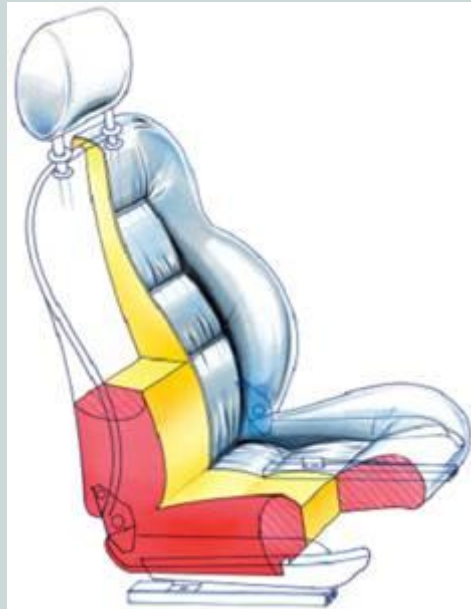
**Project Goal:  
Zero-emission office building**

## Innovative materials and solutions

- Rigid polyurethane foam for heat and low-temperature insulation
- Lightweight, stable and transparent polycarbonate sheets
- Components for durable, efficient photovoltaics
- Raw materials for low-VOC and VOC-free paints, coatings and adhesives

# Customer & consumer efficiency

## Polyurethane seating in transport



### BaySystems® (Bayfit®)

- Increases fuel economy through reduced weight as compared with alternatives
- Climate and ozone friendly foaming agents
- High tech comfort and ergonomics

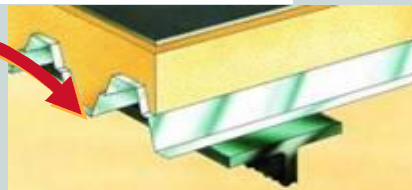
1 kg polyurethane saves 6 to 12 kg CO<sub>2</sub>e emissions\*

\* Replacing spring/fabric with polyurethane. Saving over entire product life-cycle of 150,000 km, including production and end-of-life stages

CO<sub>2</sub>e: Greenhouse gases (GHG) according to Kyoto Protocol, expressed in CO<sub>2</sub> equivalents

# Customer & consumer efficiency

## Natural Oil Polyols for Rigid & Flexible Foam



### Multranol<sup>®</sup>, Desmophen<sup>®</sup>

- Reduced dependence on oil
- Green marketing in the furniture and automotive industries
- BMS technology offers high performance, value added product
- Broad range of products possible for flexible systems:
  - 20 % renewable content polyol for slabstock
  - Renewable polyols for viscoelastic mattresses
  - Renewable polyols for automotive seating

Utilize renewable resource with high performance

## BayCare® is ...

- The BMS Product Stewardship program for customers in NAFTA
  - *Handling BMS products in a safe and environmentally sound way.*
  - *Supporting workplace health, safety and environmental aspects, storage/transfer operations & regulatory issues.*
  
- We provide comprehensive product stewardship support to external customers.
  - *Material Safety Data Sheets (MSDS)/product labels*
  - *Product safety literature*
  - *Regulatory compliance information*
  - *Worker protection (e.g., safe handling and use)*
  - *Toxicity and ecotoxicity information*

*We look at applications/use (industrial workers, general population, sensitive subpopulations) – e.g., Do-it-yourself Market (DIY)*

**We also have . . .**

## **Product Safety IH Customer Support**

- **Industrial Hygiene Surveys (at customer site)**
  - *Evaluate potential worker exposures to BMS chemicals*
  - *Air sampling/lab analysis – comparison to occupational exposure limits*
  - *Observe work practices and personal protective equipment*
  - *Evaluate local exhaust ventilation systems*
  
- **Safe use and handling presentations (at customer site)**
  - *Potential health effects*
  - *Methods to reduce exposure*
    - *Engineering controls*
    - *PPE*
  - *Medical surveillance program*
  - *First aid*
  - *Spill response*

## Distribution Safety

- *Bulk Assistance Program* – material handling evaluation, 1<sup>st</sup> delivery preparation & awareness education on material handling.
- *Equipment Consultations* – guidance on equipment for safe storage and handling of polyurethane raw materials
- *Compliance Assistance* – regulatory consultation on DOT / OSHA transportation, storage & transfer issues

... And this information is **online**



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

BayCare Online Resource Center



Bayer MaterialScience

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## With advanced chemistry comes greater responsibility ... to employees, neighbors and the environment. Bayer can help.

Advanced materials have an incredible impact on our lives ... a positive one. Innovative new materials help us live longer, in greater comfort, and with more leisure time than ever before possible.

You probably know Bayer MaterialScience as a global leader in the development and manufacture of advanced materials. What you may not know is that Bayer also demonstrates its leadership through advancement of health, environmental and safety awareness and development of best practices for transportation, storage, handling and disposal of these materials.

Bayer MaterialScience considers this continuous improvement effort progressive product stewardship. And we call that effort our **BayCare® Product Stewardship Program**.

[◀ previous](#)      [learn more ▶](#)


## Health, Environment & Safety

Bayer product safety professionals work closely with internal and external customers and the public to maintain health, safety and environmental considerations as a top priority.

[Read More ...](#) 

## Distribution Safety

The task of Bayer's Distribution Safety Department is to define, implement, and promulgate procedures and guidelines for the safe distribution of materials.

[Read More ...](#) 

## [www.baycareonline.com](http://www.baycareonline.com) 24 / 7 support includes:

- **Material Safety Data Sheets** for BMS products
- **Environmental** guidance on estimating emissions and reducing waste/recycling process materials
- **FAQ's** with answers on health, safety and environmental issues
- **BMS Contacts** for consultation and support
- **Reference Library** on safe handling, storage, use and end-of-life management of process materials
- **Regulatory** resources for maintaining compliance
- **FDA** product compliance status . . . **and**

**BayCare® E-mail Alerts!** on health, safety, environmental, plant security regulations and guidance



## Some Observations . . .

- Dialogue with the **complete value chain** is needed.
  - Easiest with direct customers
  - Distributors
  - Down, down stream
- *Members along the value chain are also responsible for identification of uses/applications*
- Communication and partnering up and down the value chain on important topics...
  - consider all stakeholder input*
- Alternatives?
- Benefits?
- Safe levels / use restrictions?

