



# **SCIENCE FOR A SUSTAINABLE WORLD SCIENCE FOR SUSTAINABLE BUSINESS**

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VP, SUSTAINABILITY & EH&S**



## ABOUT DOW



A science and technology leader  
with annual sales of \$60 billion

Founded in 1897 by Herbert H.  
Dow in Midland, Michigan

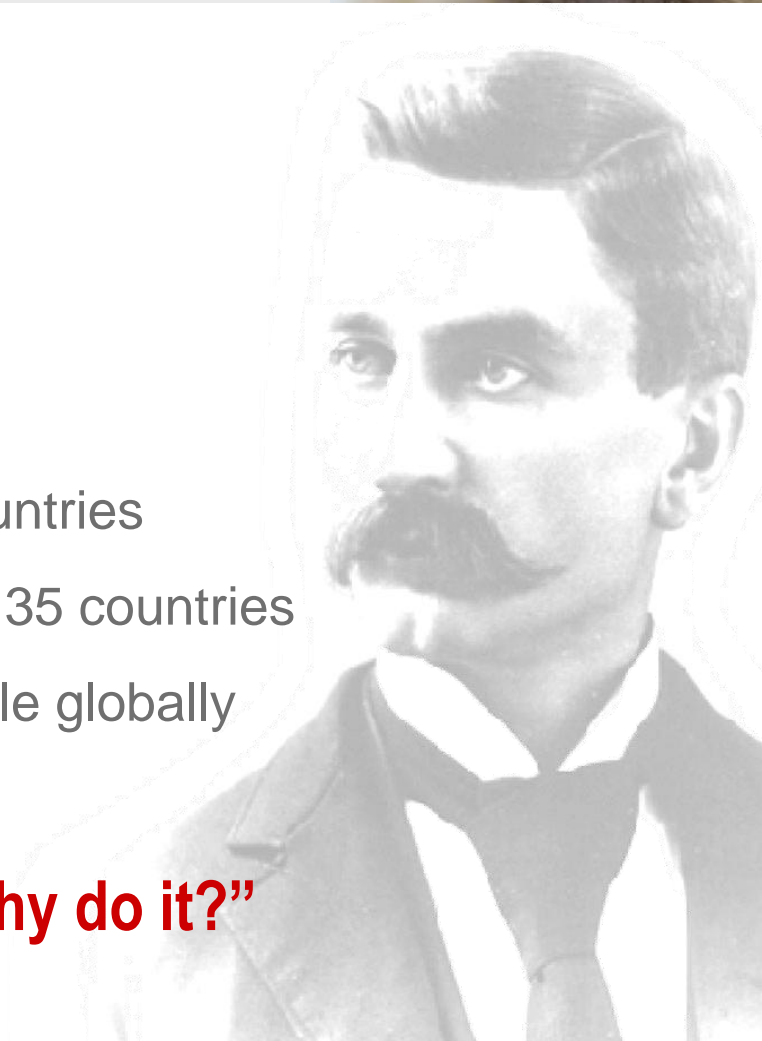
Supplies plastics and chemical  
products to customers in 160 countries

From 188 manufacturing sites in 35 countries

Employs more than 50,000 people globally

**“If you can’t do it better, why do it?”**

**-- Herbert H. Dow**



# THE CHEMICAL INDUSTRY

## Turning Feedstocks into Essential Products



### Energy



Salt



Gas



Oil



Coal



Biomass



Recycle



Building & Construction



Electronics



Agriculture



Wire & Cable



Coatings



Automotive





# INTEGRATING SUSTAINABILITY INTO OUR **CORPORATE STRATEGY**



Strategic  
Themes:

Financial Discipline  
Strategic Growth

**Sustainability**  
Performance Culture

# DRIVING THE NEXT GENERATION OF CHANGE

## DOW'S 2015 SUSTAINABILITY GOALS



**Maintain all absolute greenhouse gas emissions below 2006 levels**

**Achieve at least three breakthroughs that will significantly help solve world challenges**

**Achieve on average a 75% improvement of key indicators for EH&S operating excellence from 2005 baseline**



**Reduce our energy intensity 25%**

**Publish product safety assessments for all products**

**Achieve individual community acceptance ratings for 100% of Dow sites where we have a major presence**

**Increase the percentage of sales to 10% for products that are highly advantaged by sustainable chemistry**

# SOLVING SUSTAINABILITY CHALLENGES



Dow people include some of the **world's best scientists and engineers** dedicated to solving global challenges. We focus our **innovation engine** on delivering new technologies that are **good for business and good for the world**.



**Energy**



**Climate  
Change**



**Water**



**Health  
&  
Nutrition**



**Transportation  
&  
Infrastructure**



## R&D – OUR **INNOVATION** ENGINE



Sustainability gives Dow's world-class scientists and engineers a target for innovation.

- \$1.6 billion in R&D spending annually – more than the combined budget of all U.S. university chemistry departments (\$1.4 billion)
- Over 500 research projects in our innovation pipeline
- Over 6,000 R&D professionals with specialized skills
- Deep expertise in:
  - Material science
  - Polymer science
  - Separation science
  - Analytical science
  - Biotechnology
  - Ceramics
  - Catalysis

Research	Application Development	Technical Service
Invent new molecules, materials, products and processes	Create new product and solution offerings	Service customer requests and requirements

# Our Innovations Are Aligned With Global Sustainability Megatrends

## ENERGY



**Photovoltaics**

**Wind Power  
Systems**

**Energy  
Storage**

## TRANSPORTATION & INFRASTRUCTURE



**Building  
Systems**

**Architectural  
Coatings**

**Clean Water**

## CONSUMERISM



**Electronics**

**Packaging**

**Home &  
Personal Care**

## HEALTH & NUTRITION



**Healthier  
Diets**

**Rice**

**Incipients**



# ENERGY EFFICIENCY – THE NET ZERO HOME

POWERHOUSE™ Solar Shingles



WEATHERMATE™ SILL SEAL



Silicon Solar Array



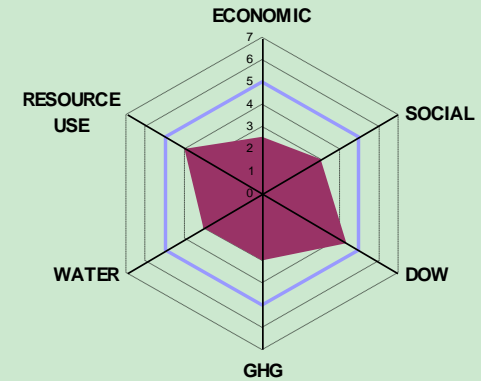
STYROFOAM™ Spr



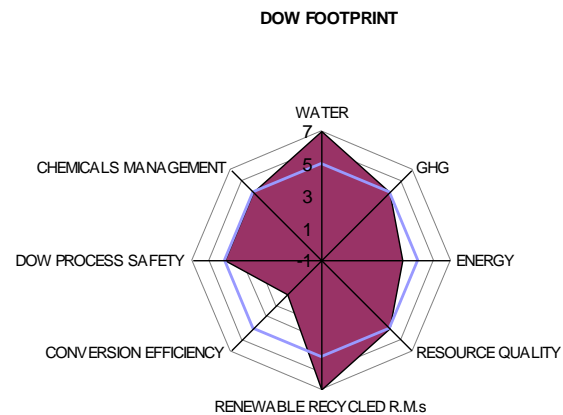
GREAT STUFF™



# Maximizing the Value of Dow's Innovation Pipeline



**Holistic  
Design**



# BROAD RANGE OF COLLABORATION

## Academic



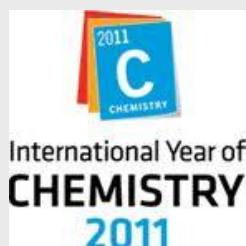
## Industry




## NGOs



## Government





An aerial photograph of a lush green forest. A winding river or stream flows through the landscape. In the lower right portion of the image, a large dollar sign (\$) has been cut out of the forest canopy, revealing the ground beneath. The text of the quote is overlaid on a dark, semi-transparent rectangular area in the lower left.

“We use nature  
because it’s valuable,  
but we lose nature  
because it is free.”

– Pavan Sukhdev

Yale University Fellow and Study Leader for the TEEB  
and Green Economy Report to UNEP



## WHY A **COLLABORATION** WITH THE NATURE CONSERVANCY?



Two leading global  
companies cutting new  
ground

Founded on the shared  
belief that business has a  
key role in preserving nature  
while growing its business

Science and economics  
approach – developing new  
private sector methods

Rooted in mutual respect

Five years to deliver  
breakthrough – transparent  
process and published  
results



# VALUING NATURE — A STRATEGIC FIT FOR DOW



Access to ecosystem services

Product alignment to fit growing need

Project planning and stakeholder buy-in

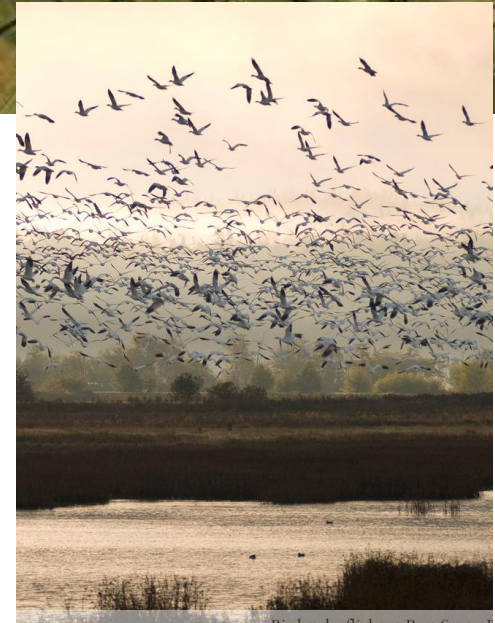
Expansion/Permitting Process

Green Infrastructure

Remediation

Conservation Activities

Recognition of offsets or payments from ecosystem services on lands Dow owns





## Pilot Site #1: Freeport, TX

June, 2011 Kickoff,  
identified priority  
ecosystem services with  
40 experts from Dow  
Texas, TNC Texas and  
Corporate leaders

Currently analyzing  
ecosystem services:

- Fresh Water
- Air Quality
- Coastal Natural  
Hazard Mitigation



## Pilot Site #2: Brazil



Kicked-off February 16, 2012

External Announcement,  
ahead of Rio +20, June 2012





[www.dow.com/sustainability](http://www.dow.com/sustainability)

Partners for Change





# Dow Sustainability Fellows Program at The University of Michigan





## A UNIQUE COLLABORATION



Launched in  
March, 2012

\$10 million gift  
over six years

Cultivating nearly  
300 future  
sustainability  
leaders

## A BOLD EXPERIMENT



Graduate and  
postdoctoral scholars  
engage in inter-  
disciplinary learning

Natural/social sciences,  
engineering, business,  
law, public health, public  
policy, architecture,  
urban planning, and  
other disciplines



## RESPONSIBILITY BEGINS HERE



“**Sustainability** begins at home, but its destiny is to engage the problems of the world. We will build on our company’s rich legacy of leadership in solving the world’s most pressing problems.”

- Andrew Liveris,  
Chairman & CEO  
The Dow Chemical Company