



University of  
Massachusetts  
Amherst

## **Sustainability as a Critical Driver of Profitable Growth - Green Order**

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## *Clean Energy Connections*

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University of Massachusetts Amherst

*Year 2009*

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# Sustainability as a Critical Driver of Profitable Growth - Green Order

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Inspiring Principled Performance<sup>SM</sup>

# Clean Energy Connections

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*Sustainability as a Critical Driver of Profitable Growth*

November 10, 2009

GreenOrder  
[www.greenorder.com](http://www.greenorder.com)



# Outline

- About GreenOrder
- Trends in Sustainability and Business Response
- Corporate Strategies for Profitable Growth
- Clean Energy beyond the Utility

# About GreenOrder

*A strategy and management consulting firm that has made environmental leadership a catalyst for competitive advantage*

*We address the complex challenge of environmental sustainability from an integrated perspective to achieve...*



## **Performance:**

Align environmental initiatives with key business goals



## **Innovation:**

Work cross-functionally to accelerate innovation and improve products and services



## **Influence:**

Engage stakeholders and create sustainable leadership practices that build long-term value

*...and have partnered with senior executives at some of the world's largest corporations*



*Some of the largest US utilities*

*"Green business' go-to guys"*

FORTUNE

# GreenOrder's broad expertise

*Interdisciplinary, holistic approach to problem solving*

## Strategy

Work with senior management to develop sustainability strategies that are aligned with core business objectives

## Eco Assessment

Conduct environmental audits of products, technologies, assets, and processes and identify opportunities to reduce impacts

## Stakeholder Analysis

Identify and interview key stakeholders to gain insights and inform strategy development

## Risk Assessment

Characterize the risks and unintended consequences of particular actions and identify mitigation measures

## Green Building

Develop green building strategies, marketing plans, and financial analyses

## Marketing & Comms

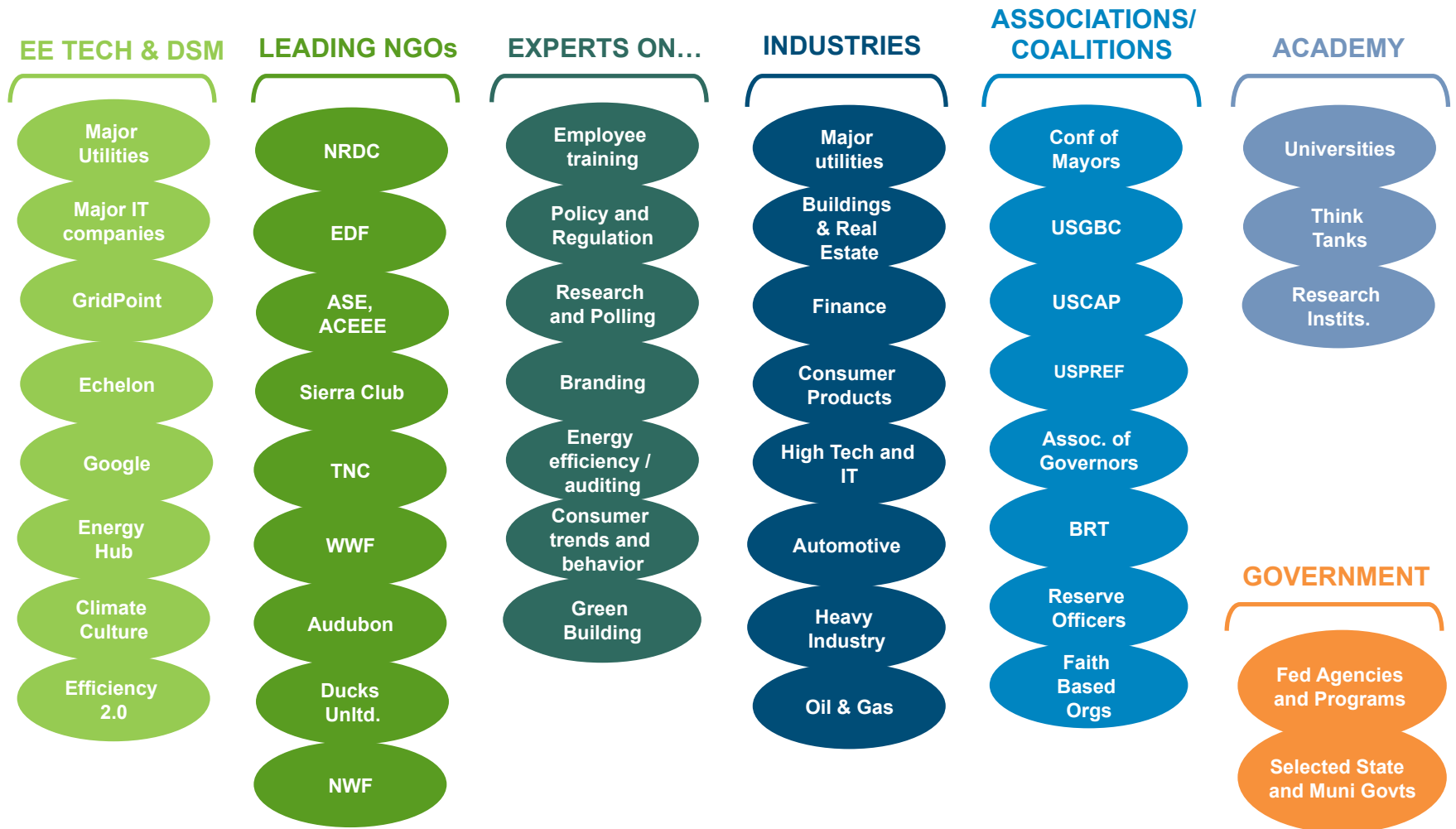
Advise on brand strategy, alignment, and valuation; develop credible, authentic green marketing strategies

## Policy Analysis

Evaluate and advise on critical business and policy-facing strategies related to major legislative proposals

# The GreenOrder network

*Longstanding ties and partnerships with leading thinkers, entrepreneurs, policy makers, topical experts, and other influencers*



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# The business view is evolving

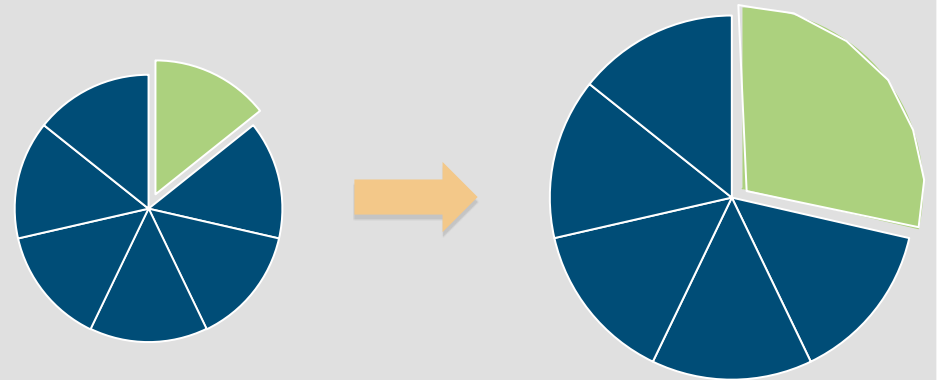
*Leading companies are using green to win as they integrate sustainability into their core business strategy*



# Evolving views of the green economy

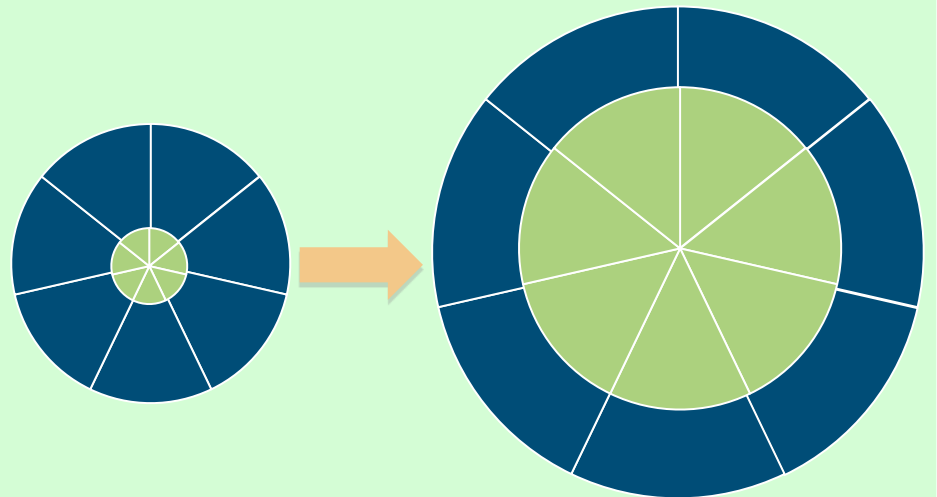
## Traditional Sector Approach

The **green niche view** sees the obviously green businesses/jobs within different industry verticals (e.g., *renewable energy, organic food*) and targets policy on just those sectors

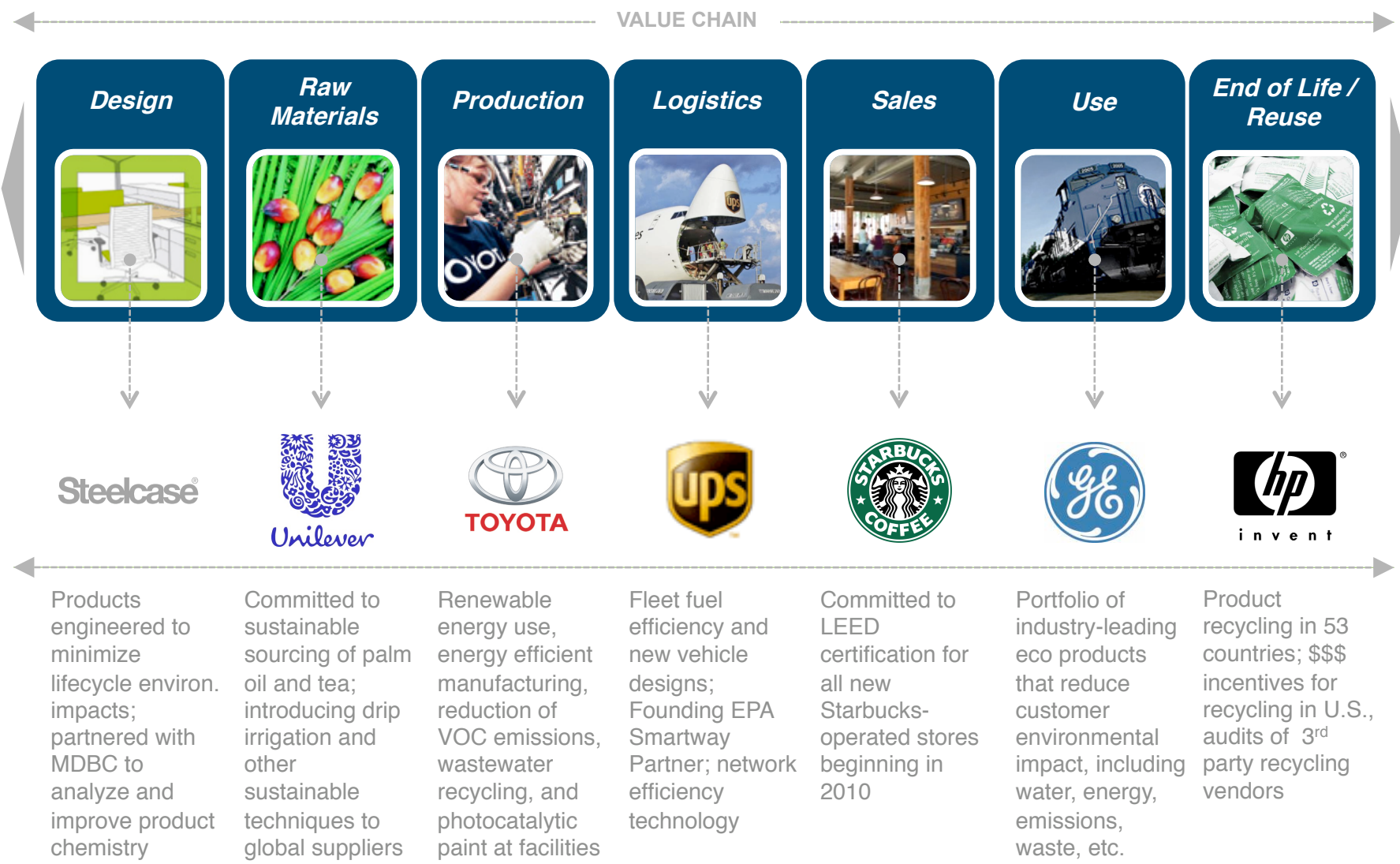


## Our Comprehensive Approach

The **Green Investment Framework** sees environmental drivers (e.g., *global warming awareness, high energy prices, food toxicity*) that touch many industries, and promotes investments which create measurable job growth throughout the economy



# Leaders look beyond their own operations to capture sustainability opportunities across the value chain



# Sustainability requires real transformation

*Companies today need a green strategy just as, a decade ago, they realized they needed a globalization strategy or a digital strategy*



1990



1994



2007

Companies need a sustainability strategy to effectively prioritize initiatives by desired business outcome

## Strategies, Tools, and Tactics



## Business Goals

Cost Savings

Mind share

Increased Sales

Brand Value

Employee Satisfaction

Customer Loyalty

*Success depends on using the right combination of strategies and tactics to credibly deliver on business goals*

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# Key emerging trends



Resource Scarcity



Information Democratization



Climate Policy Uncertainty



Frozen Financial Markets



Energy Sector Transformation



Multi-disciplinary Solutions

So...how are companies responding?

Resource Scarcity

Information Democratization

***Leading companies are thinking strategically about these macro and sustainability trends...***

Climate Policy Uncertainty

Frozen Financial Markets

***...and incorporating them into their core business practices to drive profitable growth and long-term value***

Energy Sector Transformation

Multi-disciplinary Solutions

# Our work with General Electric

*Since 2004, GreenOrder has played a key role in developing GE's groundbreaking, multi-billion dollar ecomagination initiative*

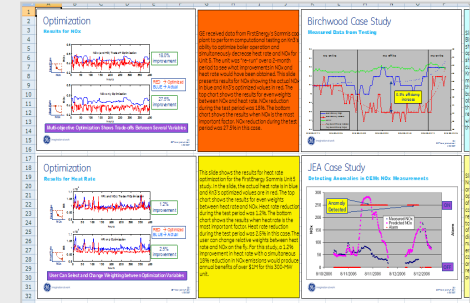
## GreenOrder's Approach:

- Helped GE develop a strategy to align its diverse set of business units and drive growth through environmental sustainability and innovation
- Established a scorecarding process for GE's diverse portfolio of products to qualify offerings, quantify benefits of ecomagination products, and establish compelling marketing claims
- Advised corporate leadership team and business units on ways environmental sustainability can continue to drive growth for GE

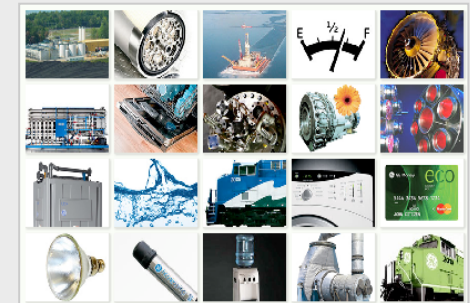
### Through our work, GE:

- » Achieved over \$17B in ecomagination revenue and \$1.4B in related R&D in 2008 across a portfolio of more than 75 products and services
- » Cut GE annual energy costs over \$100M while reducing greenhouse gas emissions and water usage
- » Enabled innovative partnerships (e.g., GE-Google on smart grid), productive government engagement, and greater collaboration across GE's businesses

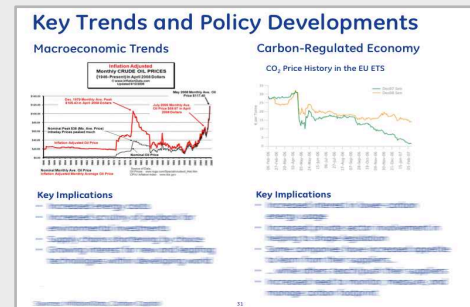
## GreenOrder Work Examples:



*Established a scorecarding process for product certification*



*Certified over 70 ecomagination products (\$17B in revenues)*



*Advised executive team on key trends and policy developments*

# Our work with General Motors

*Since 2005, GreenOrder has served as a top advisor to GM on its sustainability strategy and has provided key direction and support for the Chevy Volt program*

## GreenOrder's Approach:

- Coordinated stakeholder outreach around specific strategic initiatives
- Provided ongoing support for corporate environmental messaging and communications
- Initiated and facilitated the collaboration between GM, EPRI, and utility representatives on electric transportation infrastructure and other key issues integral to the success of the Chevy Volt program
- Advised top executives on policy and communication issues related to green jobs and federal bridge loans

### Through our work, GM:

- » Developed a critical understanding of the views and priorities of key individuals and organizations in the environmental community
- » Gained insights into green jobs in the auto industry and the potential role of GM in advancing this growth opportunity
- » Made significant progress toward plug-in vehicle roll-out
- » Engaged in CEO dialogue with heads of leading environmental NGOs

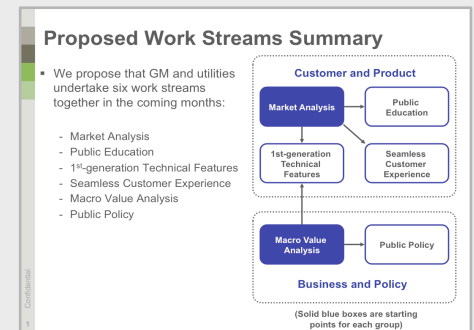
## GreenOrder Work Examples:

**GM Energy & Environmental Goals**

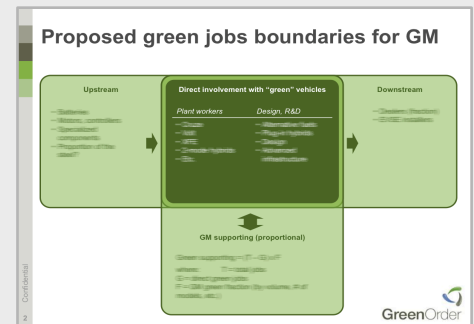
Goal	2005	2006	2007	2008	2009	2010	2011	2012	2013	Average
Reduce greenhouse gas emissions from GM facilities (excluding power plants)	3	3	3	3	3	3	3	3	3	3.0
Reduce greenhouse gas emissions from GM facilities (including power plants)	4	4	3.5	4.5	3	4	3	3	3	4.2
Reduce greenhouse gas emissions from GM facilities (including power plants) - North America only	3	3	3	3	3	3	3	3	3	3.0
Reduce greenhouse gas emissions from GM facilities (including power plants) - Europe only	4	4	3	2	3	3	3	3	3	3.5
Reduce greenhouse gas emissions from GM facilities (including power plants) - Asia only	2	NA	2	2	3	3	3	3	3	3.0
Reduce greenhouse gas emissions from GM facilities (including power plants) - South America only	2	2	2	2	3	3	3	3	3	2.8

NF: Not familiar; NA: Not asked

*Coordinated and synthesized outputs from stakeholder outreach*



*Initiated and facilitated the GM / EPRI partnership*



*Advised GM on green jobs definition and accounting*

# Insights from other case studies

## Vision for sustainability

- Long-term goals for sustainability
- Relationship of sustainability to overall vision
- Clear articulation of vision for sustainability

## Strategic communications

- Ways to leverage existing platforms
- New marketing platforms
- Potential partnerships

## Internal process & organization

- Structures, processes, and tools to enable enhanced strategic communications
- Recommendations to leverage culture and overcome cultural barriers

# Insights from other case studies (2)

*These companies are actively communicating externally about their initiatives, coordinating and scaling initiatives, and engaging with internal and external stakeholders*

## Vision for Sustainability

- **Alcan EP:** positioned products as **sustainability solutions in select, high-growth markets**
- **Applied Materials:** moved **core business (semiconductors) into renewables** market
- **IBM:** transitioned from hardware/commodities to **solutions provider & respected thought leader**

## Strategic Communications

- **GE:** customer/public marketing backed by **rigorous portfolio** of ecomagination products/services
- **Duke:** gained powerful **voice on policy** and access to key government decision-makers
- **Whirlpool:** focused external outreach on **enhancing consumer awareness and demand**

## Internal Process & Organization

- **3M:** **supports innovation** through “15% culture”
- **J&J:** supports **local stakeholders relationships** through Credo and decentralized structure
- **Masco:** defined **corporate role as facilitator for change** and resource for the business units

# Whirlpool



*Whirlpool recognized the opportunity to leverage its existing strategic focus on appliance performance and shape the market standards for energy efficiency.*

## Context and Challenges

- Became world's first appliance manufacturer to announce GHG reduction strategy
- Did not change path; approach built on core competencies and cultural aspects:
  - Continual search for increasing energy efficiencies (due to historic focus on cost/quality in low-margin industry)
  - Midwestern roots: focus on corporate citizenship
- Saw need to engage externally and push for efficiency standards that would allow the company to stay out ahead of the competition

## Actions and Results

- Has played a prominent role in crafting major appliance efficiency regulation beginning in 1970s – for example, close collaboration with EPA, DOE, and other influencers on Energy Star since before its announcement in 1992
- External outreach sharply focused on enhancing consumer awareness and demand (e.g., educate retailers and consumers on benefits/efficacy of energy-efficiency appliances)
- Pushed *Consumer Reports* magazine to publish energy efficiency rankings of appliances
- Worked closely with Sierra Club, Natural Resources Defense Council, the Alliance to Save Energy to promote manufacturer's tax credits in the Energy Policy Act of 2005
- Worked with trade association to develop rigorous techniques for measuring energy efficiency that could be uniformly applied across the industry

*Whirlpool was able to create demand for its products and maintain its dominance in the market by influencing industry standards and raising customer awareness about the benefits of energy efficiency.*

# Applied Materials



APPLIED MATERIALS®

*Applied Materials moved its core business in semiconductor technologies into the renewables business. Through acquisitions of solar PV companies, Applied Materials is strategically building capacity for high-growth solar technologies.*

## Context and Challenges

- Identified business risks including: ongoing and rapid changes in the semiconductor, flat panel display
- Launched new strategy in 2006: provide manufacturing tools, technology, and process innovations from flat panel and semiconductor industries in order to lower the overall cost per watt for solar electricity users

## Actions and Results

- Entered solar photovoltaic equipment market (2006) and the crystalline silicon (c-Si) solar PV market (2007)
- Invests approximately \$1B in R&D annually (representing almost 15% of net sales)
- Established Energy and Environmental Solution (EES) is group - responsible for growing company in new areas that build on Applied's technology and manufacturing expertise
- Utilize an intranet/CEO bog and hold quarterly green bag luncheons to engage employees in sustainability
- Developed regional employee-led Green Teams to identify and drive environmental education and projects
- Joined Electronics Industry Citizenship Coalition (EICC) and Global Supply Chain Organization (GSCO) which monitor and evaluate suppliers for compliance
- c-Si solar business generating positive returns and EES segment is on track to operating profitability in 2010

*Applied Materials leveraged its expertise in semiconductor technologies and grew through acquisitions to enter into the high-growth renewable energy sector.*

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# An integrated approach to clean energy...

*How different areas come together to maximize value*

LONG-TERM  
COMPETITIVE  
ADVANTAGE

**Systems approach to clean energy**

EXTERNAL  
LEVERS

**Technology**

Research &  
Development  
  
Products &  
Services  
  
Innovation

**Policy**

Government  
Affairs  
  
Supply Chain

**Capital**

Finance  
  
Strategy

**Behavior**

Human  
Resources  
(internal)  
  
Marketing/  
communications  
(external)

## ...Requires more than a utility

- Equipment manufacturers
- Information technology players
- Third party energy service providers
- Buildings sector value chain
- Electric and hybrid vehicle manufacturers and supply chain
- Financial partners

...And almost always requires innovative partnerships



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**MISSION:**

*To serve as an **educational resource for government leaders** as they design and implement legislation, policies and programs to **deploy large scale renewable energy projects** that will **create jobs, improve energy security, and reduce greenhouse gas emissions***

# U.S. Partnership for Renewable Energy Finance

*Members Include:*



Inspiring Principled Performance<sup>SM</sup>

# Thank You.

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