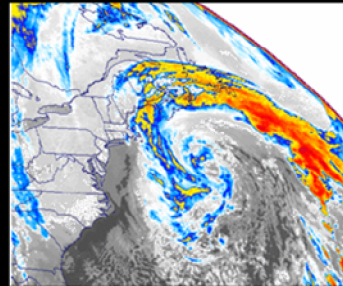


Perform in the Storm *While Riding the Wave*

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GOES Satellite image of the Halloween Storm of 1991 -
called the Storm of the Century - NOAA



Image source unknown / Circulating via email

A Path Forward When the Perfect Storm Meets the Economic Tsunami

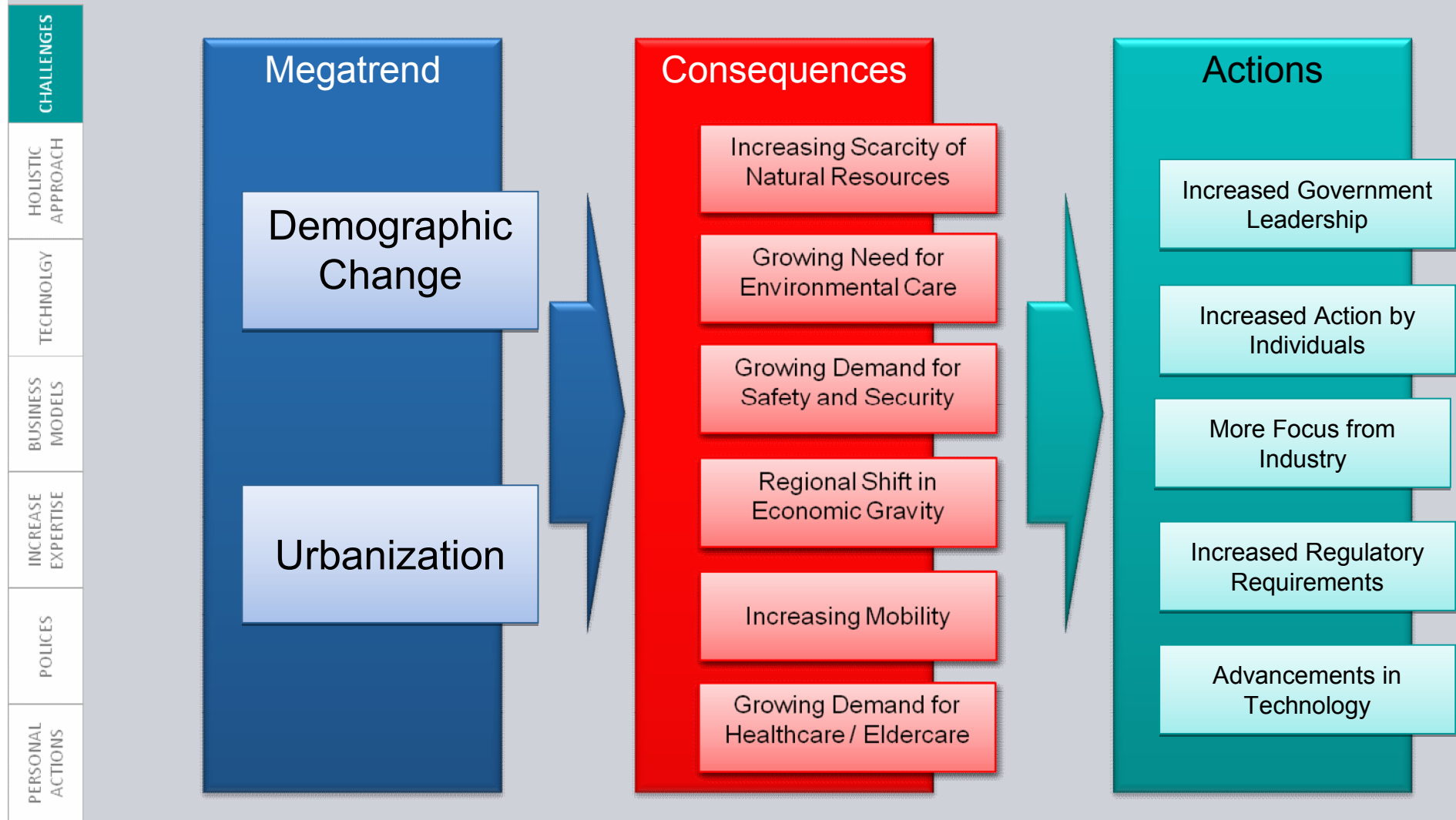
Bob Dixon

Sr. Vice President - Global Head
Efficiency and Sustainability
Building Technologies Division

Vice Chair
Alliance To Save Energy

The World is Constantly Changing

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The Consequences of Our Past Actions

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CHALLENGES

HOLISTIC
APPROACH

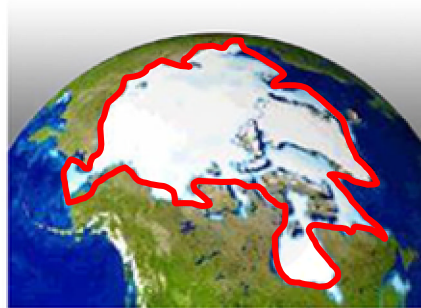
TECHNOLOGY

BUSINESS
MODELS

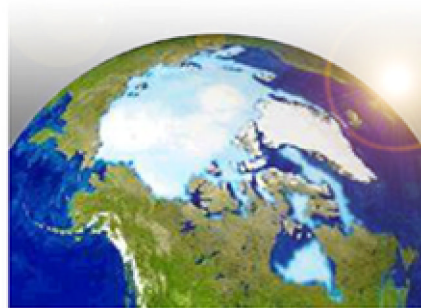
INCREASE
EXPERTISE

POLICES

PERSONAL
ACTIONS

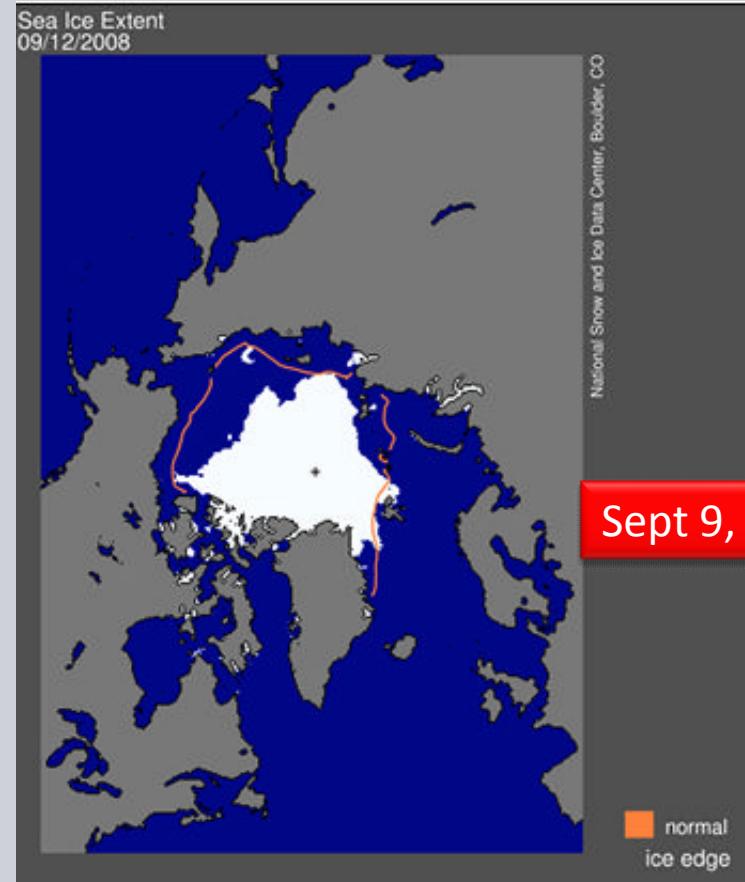


Arctic sea ice, January 1, 1990



Arctic sea ice, January 1, 1999

Source: Nasa



Sept 9, 2008

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Economic Tsunami

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CHALLENGES

HOLISTIC
APPROACH

TECHNOLOGY

BUSINESS
MODELS

INCREASE
EXPERTISE

POLICES

PERSONAL
ACTIONS



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Nov. 2009 / R. Dixon

The Perfect Storm

Siemens Industry, Inc.

The Perfect Storm

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CHALLENGES

HOLISTIC
APPROACH

TECHNOLOGY

BUSINESS
MODELS

INCREASE
EXPERTISE

POLICES

PERSONAL
ACTIONS

Increasing Scarcity of
Natural Resources

Growing Need for
Environmental Care

Growing Demand for
Safety and Security

Regional Shift in
Economic Gravity

Increasing Mobility



Government
Leadership

Increased Action by
Individuals

More Focus from
Industry

Increased Regulatory
Requirements

Advancements in
Technology

There is no silver bullet. If there was we would have already used it.

It is not an event. It took a long time to develop, it will take a long time to fix.

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Focus on Buildings!

Leveraging Energy Efficiency for Sustainability

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CHALLENGES

HOLISTIC
APPROACH

TECHNOLOGY

BUSINESS
MODELS

INCREASE
EXPERTISE

POLICES

PERSONAL
ACTIONS



A Path Forward When the Perfect Storm Meets the Economic Tsunami

1. Holistic approach to energy efficiency and sustainability
2. Leverage existing and develop new technologies
3. Utilize innovative business models
4. Increase energy efficiency expertise
5. Progressive policies and enabling legislation
6. Personal commitment



Why Buildings?

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CHALLENGES

HOLISTIC
APPROACH

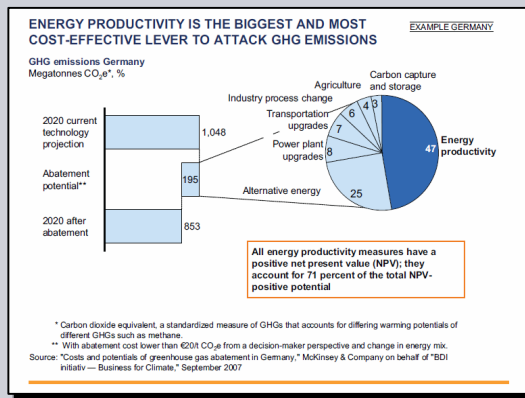
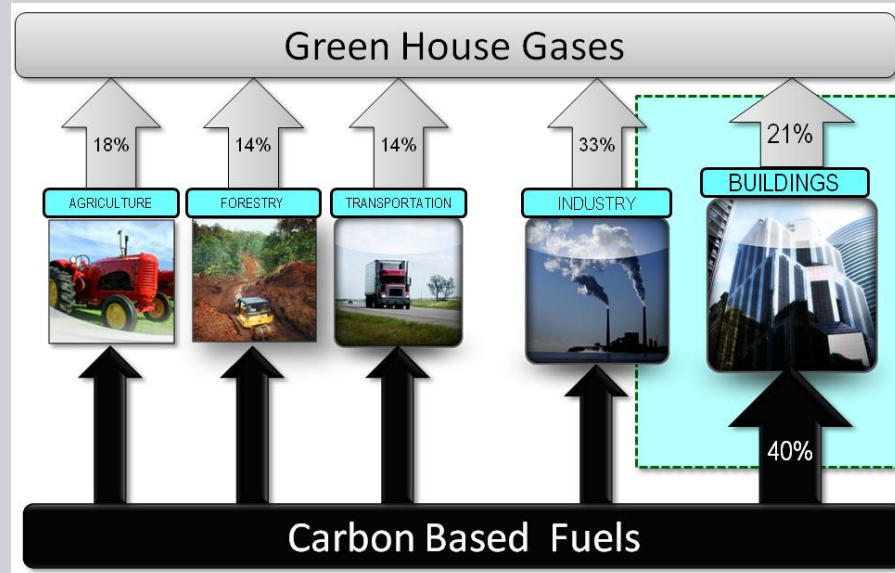
TECHNOLOGY

BUSINESS
MODELS

INCREASE
EXPERTISE

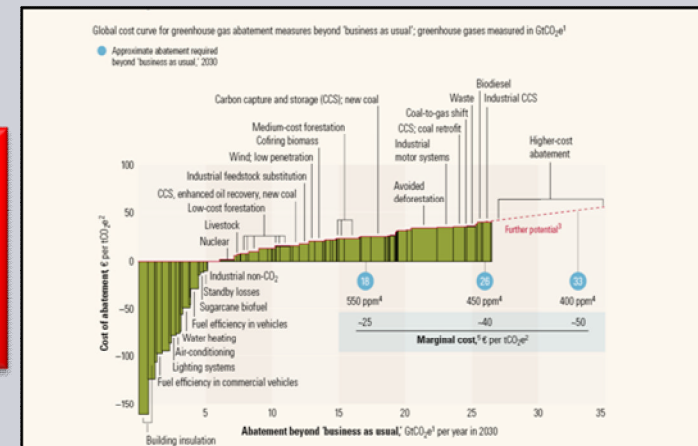
POLICES

PERSONAL
ACTIONS



According to McKinsey:

Building technologies related investments are 4 of the 5 top opportunities.

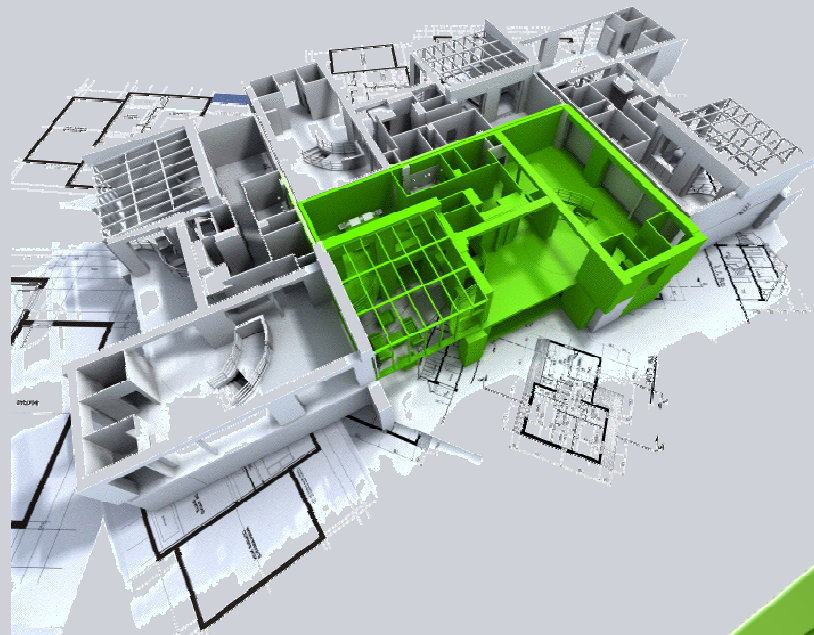


Source: "The Carbon Productivity Challenge", June 2008, McKinsey Global Institute

The March to Holistic Sustainability is Underway!

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"Sustainability is a part of everything we do"



"We balance green benefits with day-to-day realities"

Goal:
Holistic Sustainability

Goal:
Reduce Green House Gas Emissions

Goal:
Minimizing Costs & Maximizing Efficiencies

Goal:
Address Fundamental Infrastructure Needs

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Climate Change and Global Warming

Not a new topic, but now with the right attention!

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CHALLENGES

HOLISTIC
APPROACH

TECHNOLOGY

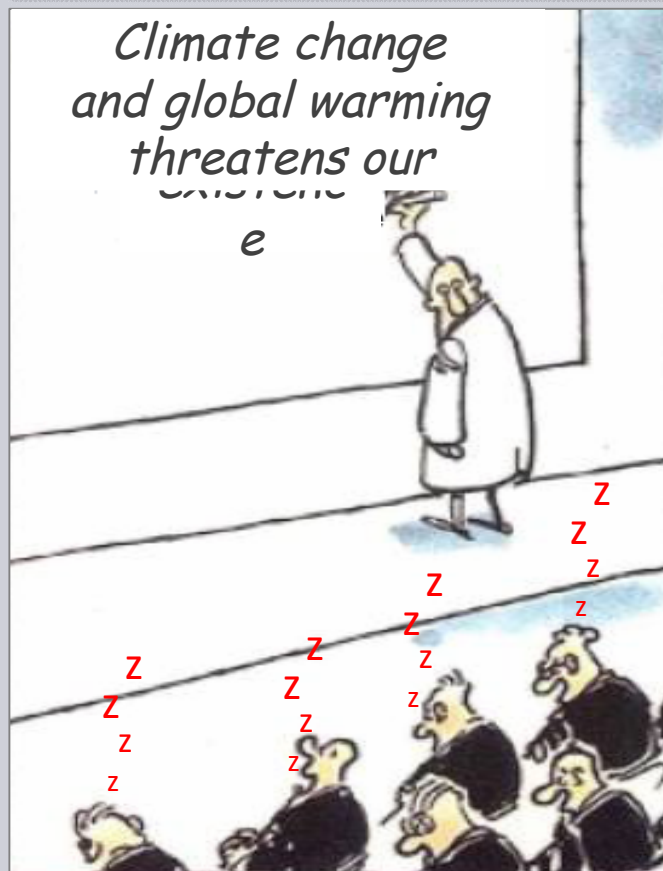
BUSINESS
MODELS

INCREASE
EXPERTISE

POLICES

PERSONAL
ACTIONS

No environmental awareness without economic interests



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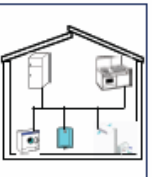


Leverage Existing and Develop New Technologies

Integrated Solutions for the Energy Efficiency Value Chain

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CHALLENGES
HOLISTIC APPROACH
TECHNOLOGY
BUSINESS MODELS
INCREASE EXPERTISE
POLICES
PERSONAL ACTIONS

ENERGY EFFICIENCY CREATES SEVEN BASIC CATEGORIES OF BUSINESS OPPORTUNITIES

Building-technology products	Electrical devices	Transportation	Transparency-creating products	Customized solutions	Energy services	Financing of investments
<ul style="list-style-type: none"> • Space heating • Windows • Insulation • Elevators • Water boilers 	<ul style="list-style-type: none"> • Appliances • CF lamps • Office supplies • White goods • Consumer electronics 	<ul style="list-style-type: none"> • "Eco" cars • Locomotives • Carbon structure • Regenerative braking • Tires 	<ul style="list-style-type: none"> • Advanced metering • Smart grids • Eco Drive program • Navigation devices 	<ul style="list-style-type: none"> • HVAC* systems for buildings • City lighting • Measurement and control systems 	<ul style="list-style-type: none"> • Energy consulting • Demand monitoring and mgmt. • Heat and power from cogeneration 	<ul style="list-style-type: none"> • Earmarked loans • Leasing of equipment
						

According to International Energy Agency:

\$1 investment on energy efficiency

= \$2 investment in electricity supply

Source:

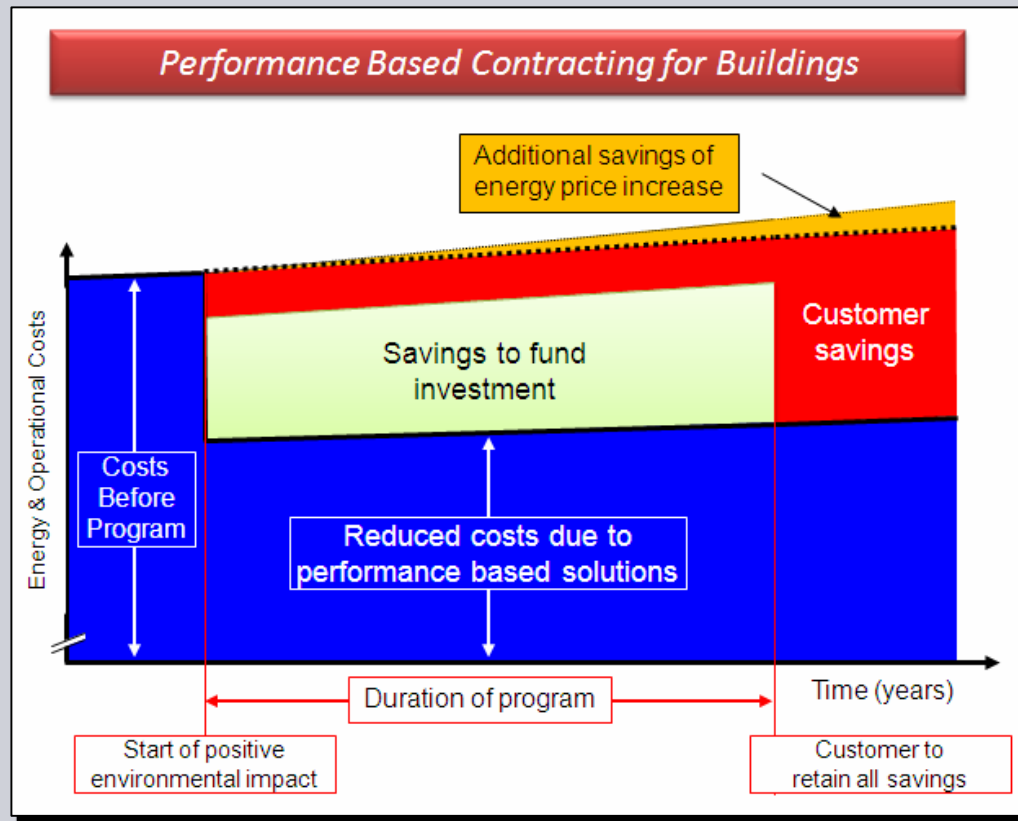
"Capturing the European energy productivity opportunity", Sep. 2008, McKinsey Global Institute

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Unique Business Models

Using Performance Contracting for Maximizing Efficiency

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Focused on Efficiency

Impactful to Sustainability!

Faster Design, Quicker to Completion

Can Create Jobs Quickly!

Leverages Capital Funds

Pays back from Savings!

Efficiency Performance is Measured and Managed

Results are Guaranteed!

Increase Energy Efficiency Expertise

Awareness, Education, Best Practices, Leadership

SIEMENS

CHALLENGES

HOLISTIC
APPROACH

TECHNOLOGY

BUSINESS
MODELS

**INCREASE
EXPERTISE**

POLICES

PERSONAL
ACTIONS

- Education Starts at Home
 - *Parents - be a good role model*
- Start Early in Every School
 - *Learned behavior is easier than modifying old habits*
- Efficiency and Sustainability Curriculums in University and College
 - *There aren't enough qualified efficiency and sustainability professionals*
- Businesses
 - *Deliver to your customers, demand from your vendors, practice what you preach*
- Government
 - *Lead By Example*



The Alliance to Save Energy



The Green Schools Program engages students in energy-saving activities in their schools, using hands-on, real-world projects. Through basic changes in the operations, maintenance, and individual behavior, Green Schools has achieved reductions in energy use of 5 to 15 percent among participating schools. In addition, Green Schools encourages students to apply the lessons of energy-efficiency message in their homes and communities.



The Green Campus Program is leading the way towards campus sustainability by bridging the divide between students and institutional energy costs. Through Green Campus, students are working to save energy on campuses by building general campus awareness, incorporating energy conservation and efficiency into course curricula, and implementing projects targeting energy use, student purchasing decisions, and operational changes.








drive
the **smarter** challenge

New Paths to Solutions

Vision, Courage, Commitment, and Innovation; Public and Private Partnerships

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CHALLENGES	<p>Denmark: Wind Technology Leadership</p> 	<p>Germany: Solar Technology Leadership</p> 
HOLISTIC APPROACH		
TECHNOLOGY	<p>Korea: Flat Screen Leadership</p> 	<p>USA: Going to the Moon</p> 
BUSINESS MODELS		
INCREASE EXPERTISE	<p>Australia – Green Lease</p> 	
POLICES	<p>The Green Lease is a new type of leasing arrangement developed by the Australian Government for Government Agencies.</p> <p>It contains mutual obligations for tenants and owners of office buildings to achieve efficiency targets.</p> <p>This improves energy efficiency by setting a minimum ongoing operational building energy performance standard.</p>	
PERSONAL ACTIONS		

European Union - EPBD



Directive 2002/91: Energy Performance of Buildings

Directive 2006/32: Energy End-Use Efficiency and Energy Services

EU'S / National Energy Efficiency Action Plan

■ Promoting the improvement of the energy performance of buildings via:

- Framework for performance calculation
- Performance requirements and certification for buildings
- Inspection of installations (heating & cooling)

■ National action plans to achieve 1% p.a. savings

■ Public sector to have an exemplary role

■ Member States to provide guidelines

■ ESPC as an public procurement measure

California – Green Leadership



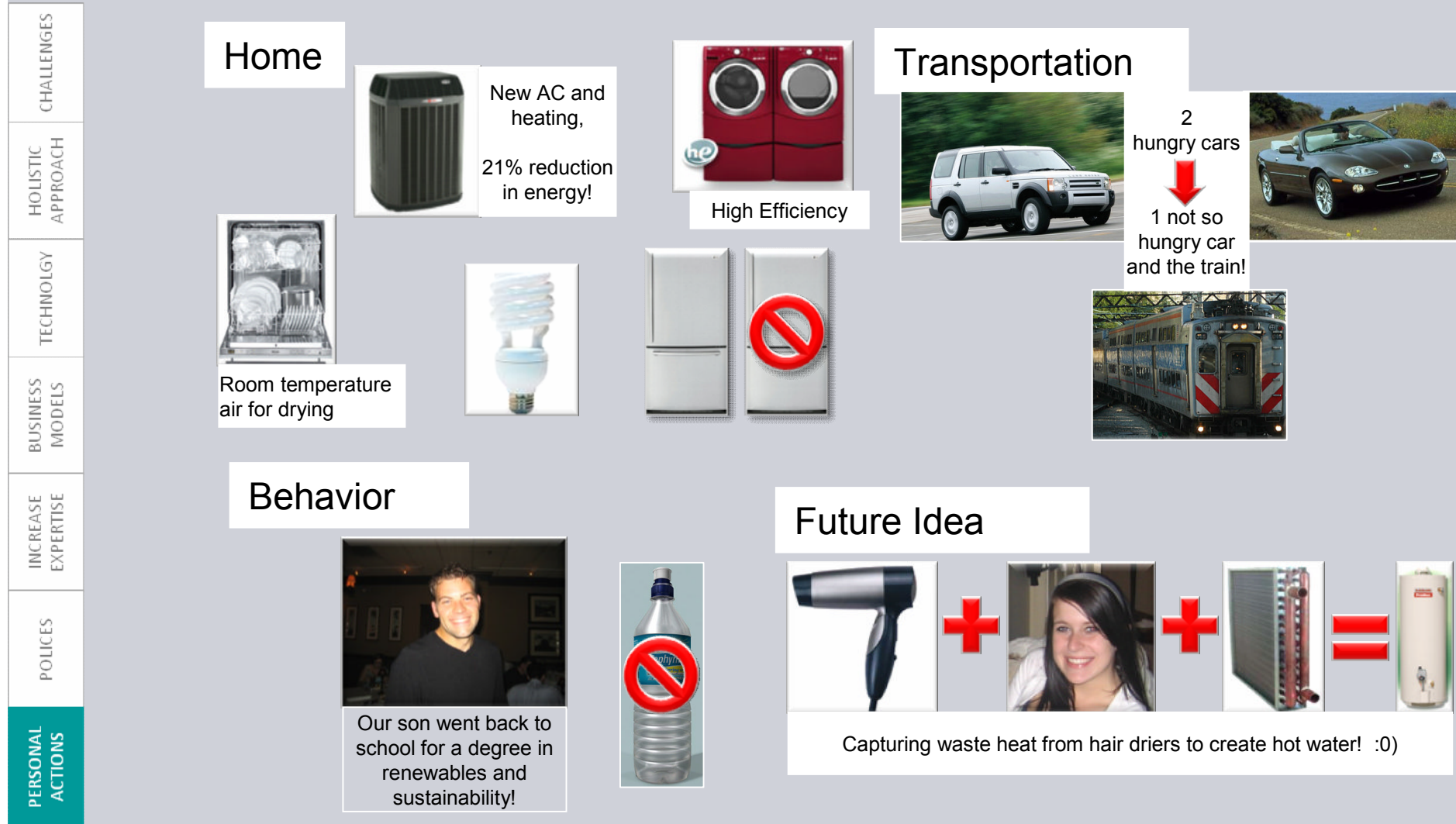
Executive Order S-20-04 established the State of California's priority for energy and resource-efficient high performance buildings. The Executive Order sets a goal of reducing energy use in state-owned buildings by 20 percent by 2015 (from a 2003 baseline) and encourages the private commercial sector to set the same goal.

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Personal Commitment

Pragmatic approach, do something!

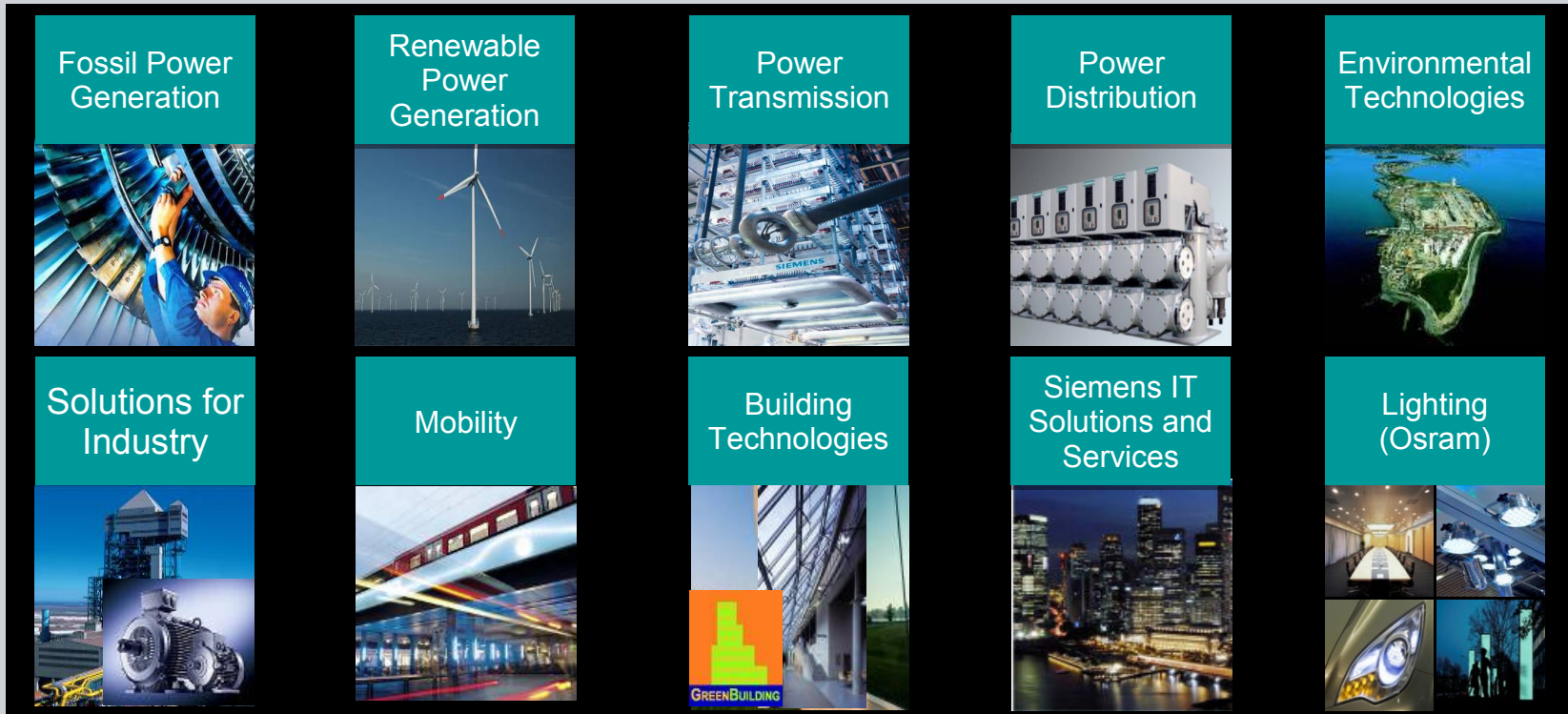
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Siemens Family of Companies

Leaders in Energy & Environmental Care

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Our products comply with the most stringent environmental standards, from their development and manufacture to their disposal.

We have 14,000 "Green" Patents.

We have committed ourselves to a voluntary target: 20% increase in energy efficiency, 20% reduction of CO2 emissions (relative to revenue) by 2011.

We implement our most energy-efficient technologies within our company, for example equipping facilities with the latest building technologies, exchanging traditional lighting systems with energy saving lamps, and installing energy efficient drives in new and upgraded production facilities

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Building Technologies Sustainability

Sustainability Partner for the Entire Building Life-cycle

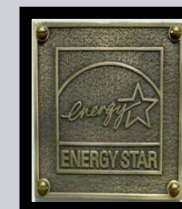
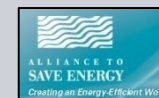
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Our Mission

Helping our customers achieve superior building life-cycle performance by delivering world-class efficiency and sustainability technologies, solutions and services.

We have...

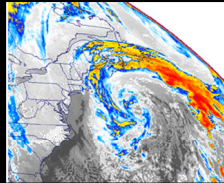
- Over 38,000 employees worldwide serving 51 countries
- Helped customers realized over \$3 billion in energy and operational savings.
- Negotiated more than \$3 billion in energy supply contracts
- Over 50,000 buildings, remotely monitored for energy consumption



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Working together, we will survive this Perfect Storm and Economic Tsunami and Emerge Stronger!

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GOES Satellite image of the Halloween Storm of 1991 - called the Storm of the Century - NOAA



Image source unknown / Circulating via email

A Path Forward When the Perfect Storm Meets the Economic Tsunami

"Opportunity is missed by most people because it is dressed in overalls and looks like work."

– **Thomas A. Edison**

"The greater danger for most of us is not that our aim is too high and we miss it, but that it is too low and we reach it."

- **Michelangelo**

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Industry

Bob Dixon

Sr. Vice President - Global Head
Efficiency and Sustainability

USA Office

Siemens Building Technologies
1000 Deerfield Parkway
Buffalo Grove, IL 60089

Primary Tel: +1 (847)941-5070

Intl Efax: +1 (908)547_6997

USA Efax: +1 (866)699-0124

Global Office

Siemens Switzerland Ltd
Building Technologies Division
International Headquarters
Gubelstrasse 22 CH-6301 Zug

Global Office Tel: +41.41.724.5520

Email: bobdixon@siemens.com

www.sbt.siemens.com

Bob Dixon

Vice Chairman - Industry



Alliance to Save Energy
1850 M Street, NW, Suite 600
Washington, DC 20036
202/331-9588

www.ase.org

Creating an Energy-Efficient World

Bob Dixon

Past Chairman



National Association of Energy Service Companies
1615 M St NW Suite 800
Washington DC 20036
PH: 202-822-0950

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