Integrated Energy Efficiency Management

Driving results through integrated systems & cultural change

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DuPont Sustainable Solutions
SUSTAINABLE OPERATIONS

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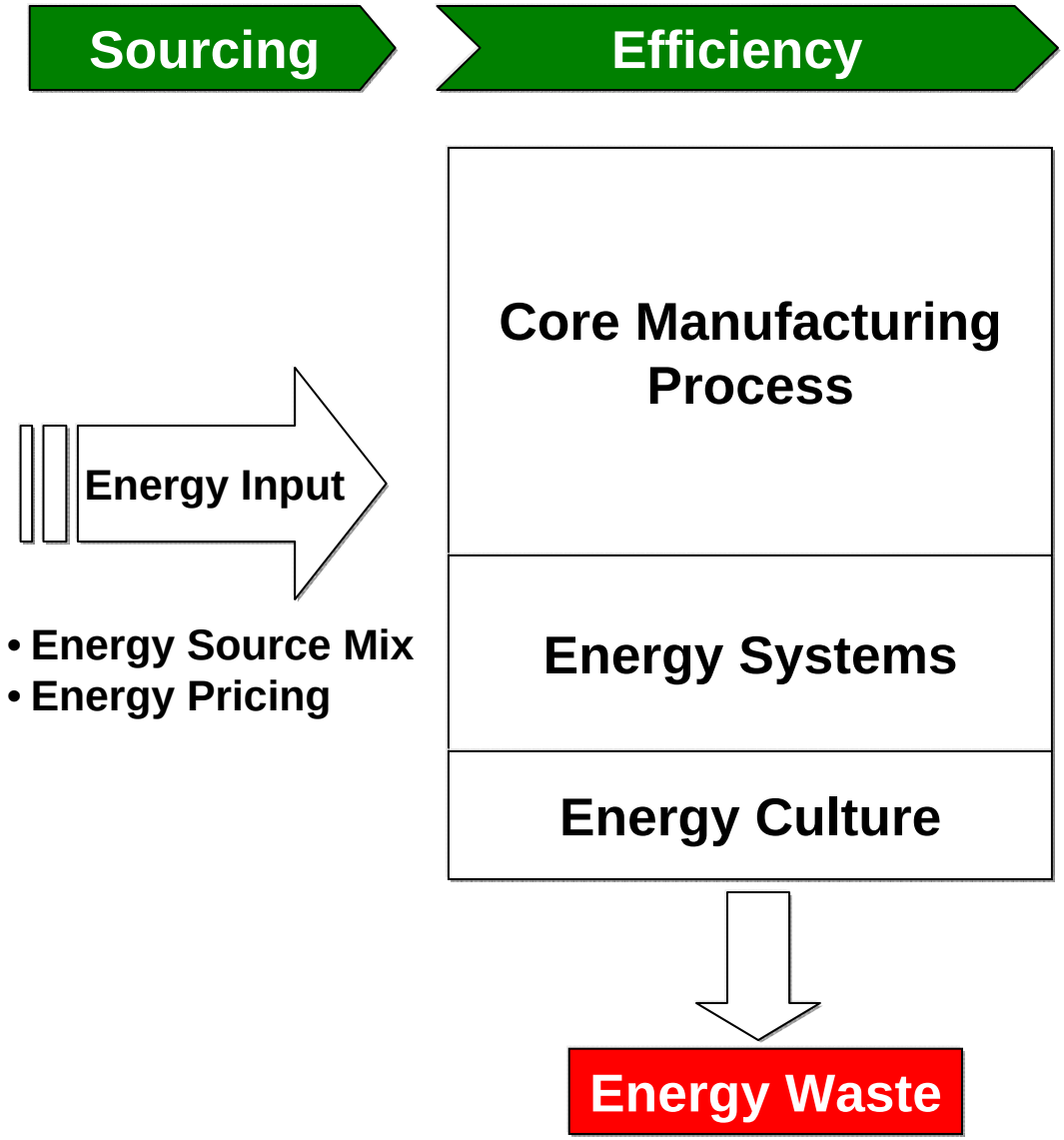
Topics

- Energy Efficiency Approach
- Key Sustainability & Energy Efficiency "Drivers"
- Proven Energy Efficiency Methods & Approaches
- Energy Efficiency Results

Corporate Approach to Strategic Issues

- Recognize strategic value & drive from the top
- Line accountability
- Appropriate support resources
- Integrated Management System
- Consistent implementation approach across entire operations portfolio
- Rigorous performance management
- Prioritize no-capital & low-capital improvement

Simplified Energy Cost Flow



- Energy cost is a function of pricing, consumption, GHG credits/options, and incentives
- Pricing is driven by market dynamics, but is negotiable
- Efficiency efforts are focused on minimizing waste
- Improvements to efficiency:
  - Core Technology, capital-driven
  - Energy System improvements, low capital/cost
  - Changing behaviors – minimal investment

External Drivers are pressuring companies to improve Energy Efficiency

External drivers	
1. Volatility of resource costs	▪ Volatility, magnitude and escalation of energy costs are increasing the urgency to drive improvements in energy efficiency.
2. Public policy	▪ Governments and global institutions are introducing new energy management regulations and policies, pressuring companies & societies to re-think energy consumption.
3. Access to capital	▪ The Investment community is increasing the weight of a company's energy efficiency commitments and capabilities when making investment choices.
4. Public accountability	▪ Companies are expected to publish energy improvement goals and are being held accountable for delivering results.
5. Competition	▪ Energy efficiency is being used as a powerful strategy to lower the cost of goods and attract customers at every level.

The DuPont Energy Challenges

DuPont has addressed similar energy challenges on a continuous basis since 1989

Our motivations:

- Recognized energy cost is a significant part of our total operating cost
- Experienced supply disruptions and cost was increasing rapidly
- Energy efficiency would provide the greatest cost savings among global warming initiatives
- Saw this as a way to outperform competitors

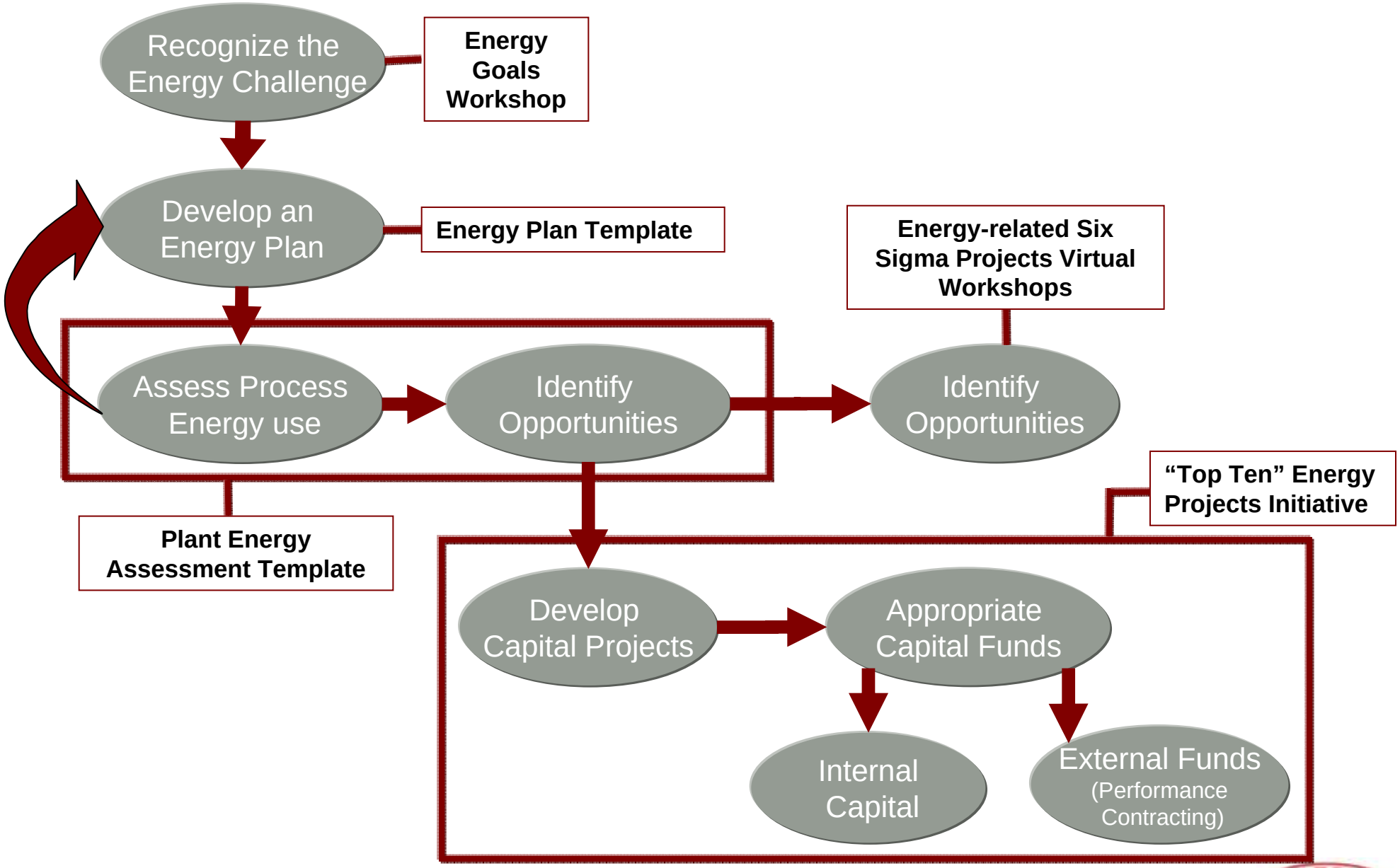
Overall, the health and welfare of the organization and its product lines would be at risk if we didn't act.

Achieving cost reductions and security of supply through efficiency and improved operating team capabilities

Energy Efficiency

- Effective energy management systems are rooted in leadership enablement, clear organizational goals, effective staffing and training, and specific processes and actions
- Integrating energy efficiency management into the strategy and execution of the ongoing business processes (capital, cost, resources, etc.)
- Designing a practical and enduring energy management process to sustain and build on achieved goals – customized at each level of the organization

Energy Planning Process



DuPont Sustainability Results

Goal

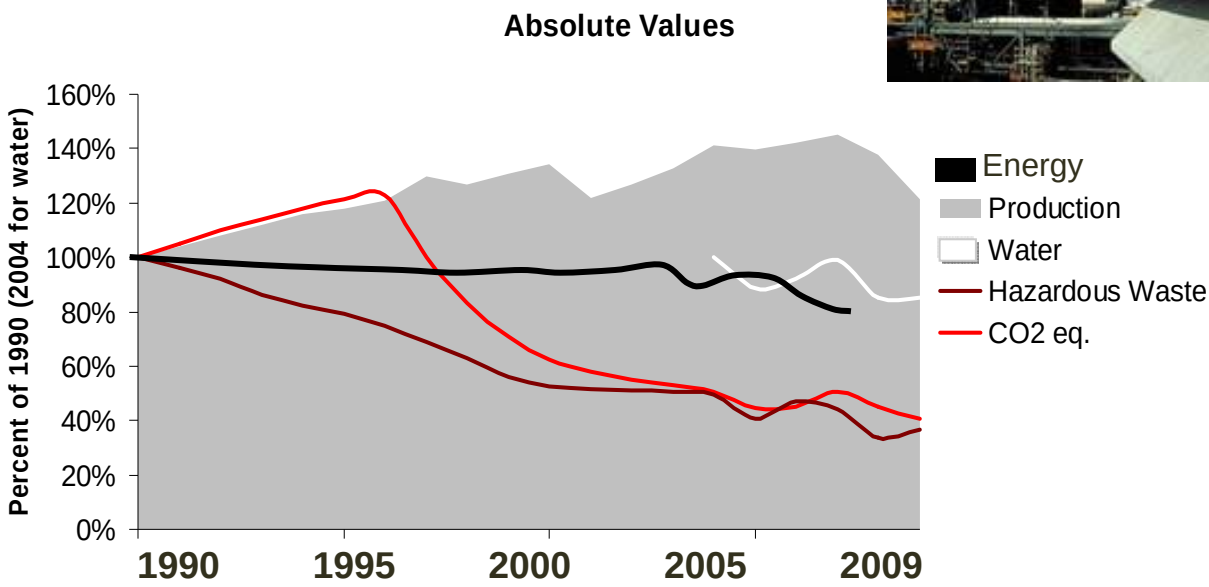
achieve 5% ($50 Million USD) annual decrease in energy use, consistent with sustainability goals

DuPont Results 1990 - 2009

- 19% decrease in energy use
- 20% increase in production
- $5B in cost savings

DuPont Reduction 1990 - 2009

Air Carcinogens	92%
U.S. TRI* "Releases"	77%
Air Toxics	75%



Energy Efficiency Initiatives Examples

- ✓ Integrated load controls
- ✓ Utilize Vented H2 in CB Boiler
- ✓ Improve Condensate Return
- ✓ Reduce Liquid Nitrogen Usage
- ✓ Steam Trap Maintenance
- ✓ Cooling Tower Water Temperatures
- ✓ Monitoring & Targeting
- ✓ Mindset and Behaviors…

** TRI = Toxic Release Inventory*
Sources: DuPont Global Reporting Initiative (GRI) report, Yahoo Finance

Example: Oil & Gas Client

Project Objectives

Goal:

- 10% Energy Reduction by 2015

Objectives:

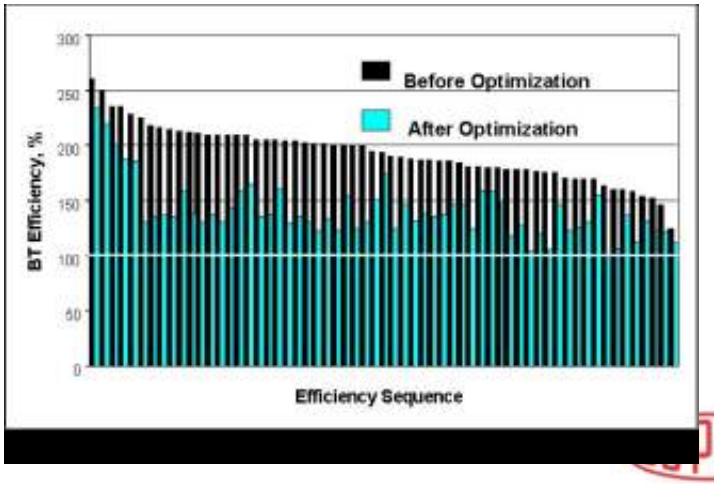
- Leadership commitment and cultural change that leads to a sustainable corporate best practice Energy Management process
- Performance management process and the metrics necessary for managing the activities and projects
- Pilot of new Energy Management System at a Refinery

Possible Results

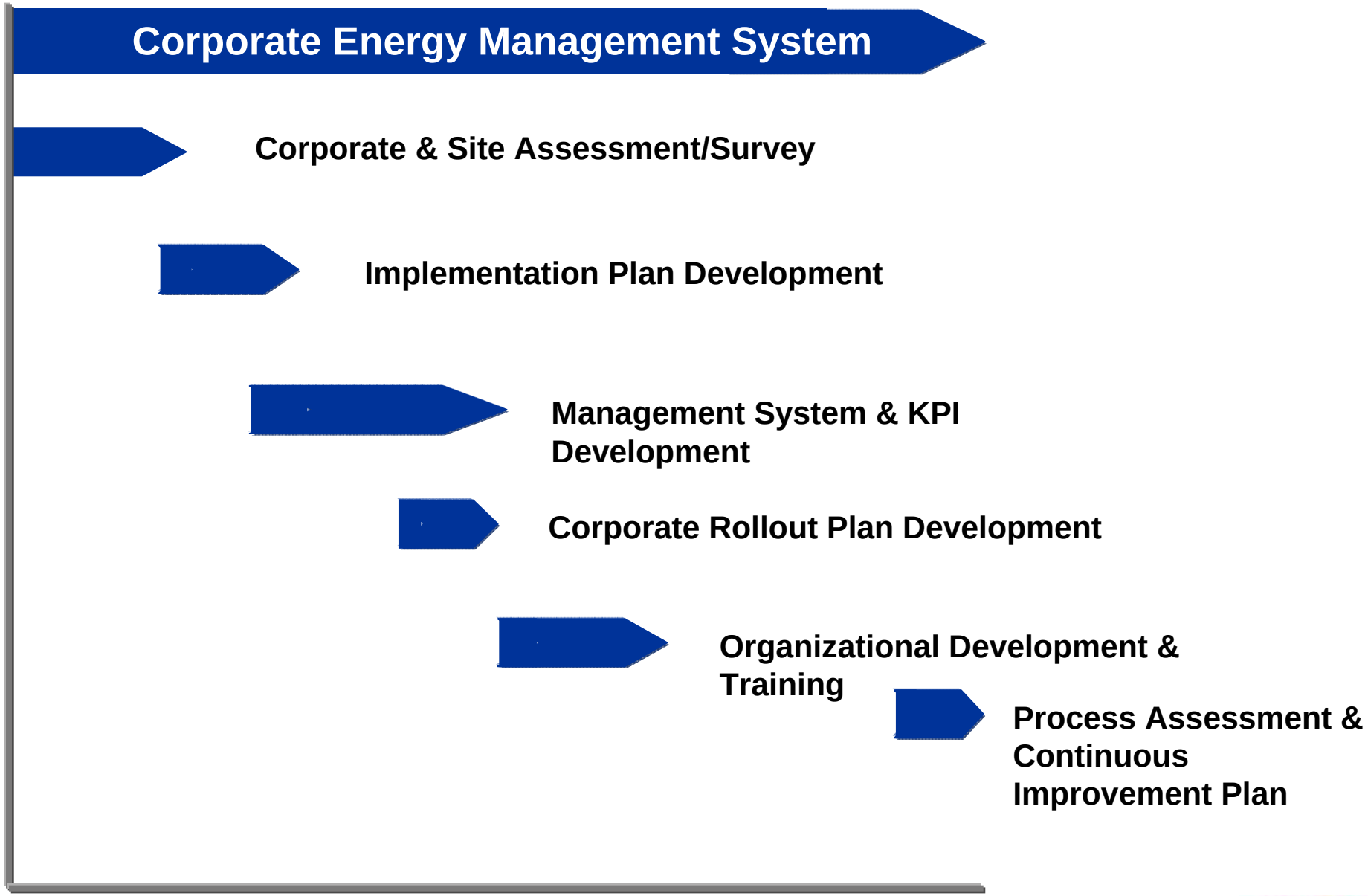
Estimated benefits from an Energy Efficiency Improvement Program

- **Without investment: 3 – 5%**
- **With Capex <1000K$ 8 – 12%**
- **With Capex >1000K$ 16 – 24%**

World-Class Refineries consume ~25% less than average



Example: Oil & Gas Approach



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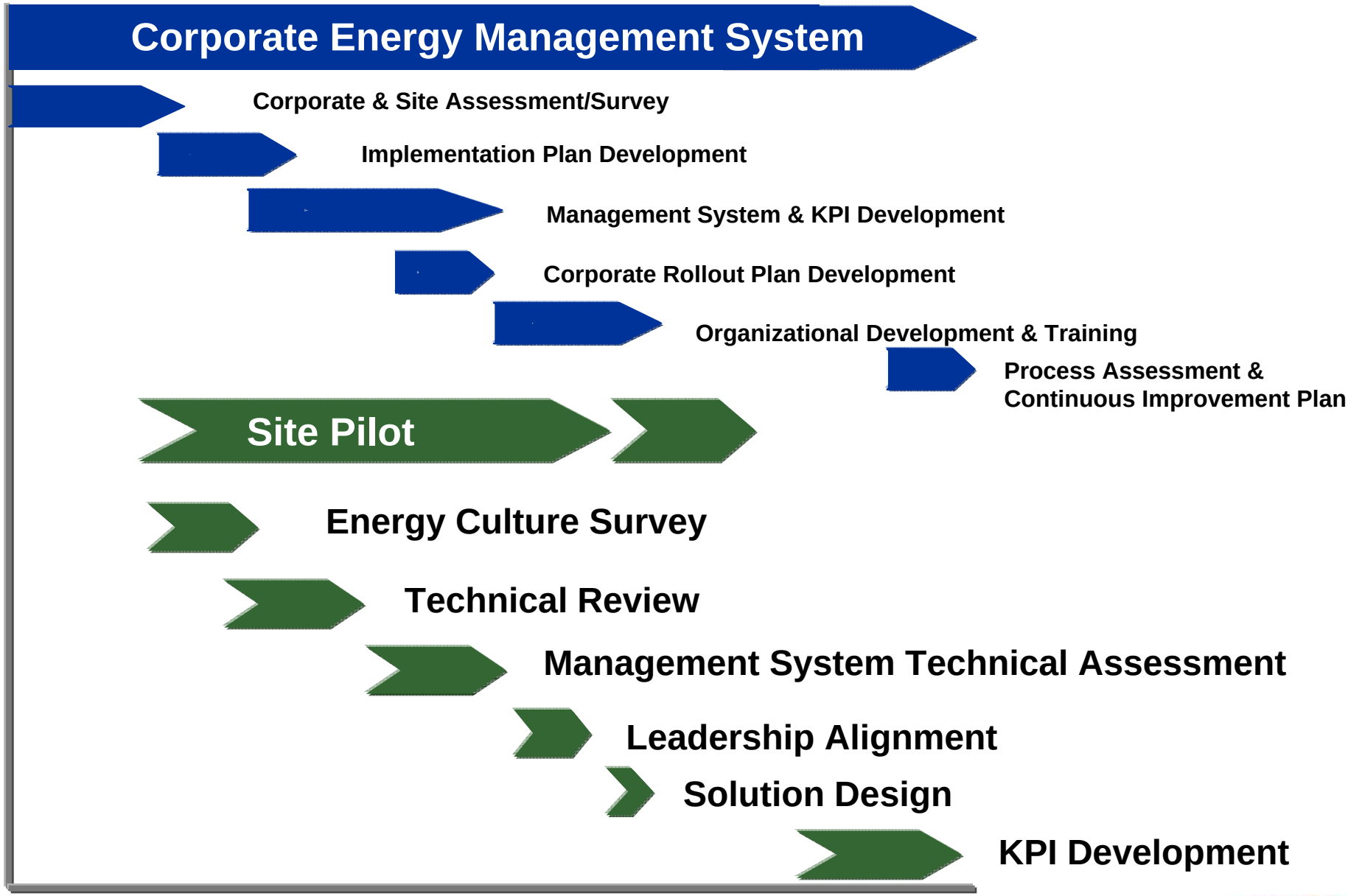

DuPont's Energy Efficiency Approach

Driving performance results through integrated energy systems & cultural change

- **Identifying and elevating energy cost as a strategic business issue**
- **Implementing a vertically integrated management approach to drive results**
- **Developing skills and capabilities of people in the organization**
- **Identifying and executing the right projects to drive highest gain results**

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