



# **Business Risk Management Through Environmental and Safety Best Practices**

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# What is Business Risk Management?



Identification and control  
of internal and external factors  
that can adversely impact a business  
or  
provide previously unrecognized  
opportunities



# Discussion Overview



- Market Drivers - what is changing to create new environmental business risks? And opportunities?
- What are Environmental/Sustainability Best Practices for addressing business risks?
- How is the Role of EHS Managers changing?



# Drivers of Change in the Old Millennium



Largely built on legal/regulatory compliance:

- Public Disclosure – TRI (Toxic Release Inventory)
- SEC Disclosures – Accrued Environmental Liabilities
- DOJ Sentencing Guidelines
- Significant increase in regulation—federal and state
- State “Brownfield” Laws for Industrial Redevelopment
- Industry Standards & Guidelines – ACC’s Responsible Care
- Global Market Standards – ISO 14001 and other standards



# Traditional EHS Risks



- Operational non-compliance with environmental regulations—CAA, CWA, RCRA, CERCLA.....
- Emergencies—spills, leaks, fires.....
- Employee safety
- Neighbor and community issues
- Contaminated properties—clean-up costs; property transfer limitations, acquisition liabilities

# Drivers of Change in New Millennium



- Growing Concerns – Global Climate/Warming (GHG)
- Changing Personal Liability of Directors, Audit Committees, and.....**Environmental Managers**
- Financial Reporting – Sarbanes-Oxley, FAS 5, SOP 96-1, FIN 14, FAS 143, FIN 47,.....
- Global Markets - EHS as a Competitive Issue.....  
...costs, productivity, efficiency, sustainability, social responsibility, pressure on resources – materials, water, energy, petroleum



# New Millennium ... (continued)



- Supply-Chain Management and “Greening” – supplier codes of conduct, risk assessments, audits, standards, metrics
- Non-Financial Reporting/Transparency - Public, Community, Socially Responsible Investors, sustainability reporting (GRI)
- Government/Industry Partnerships – Climate Leaders, Energy Star, Smart-way Transport

# Less Obvious but Emerging Risks



- Unexpected controls from global market regulation (e.g. supply chain REACH, RoHS)
- Regulatory requirements from other sources—e.g. financial reporting of liabilities
- Lack of strategy for emerging issues—GHG, cap/trade, energy costs
- “Green” marketing without ability to verify

# Business Risks—Supply Chain Issues



## Regulations, Customer Demands, and Supply Chain Requirements



# Substance and Product Restrictions & Supply Chain Impacts



## European Initiatives

- **ELV: End of Vehicle Life** is a regulation prohibiting and restricting certain substances to allow vehicles to be recyclable at the end of their life without contamination concerns
- **RoHS:** similar to ELV but applicable to the electronics industry
- **REACH: Registration, Evaluation, Authorization and Restriction of Chemical substances.** Greater responsibility to industry to manage the risks from chemicals and to provide safety information on the substances.



# Environmentally Impaired Properties



## **Business Risks (and Lessons) from Environmental Liabilities**



# Financial Reporting—Contingent Liabilities



- Financial Reporting to Security and Exchange Commission (10K)
- Sarbanes Oxley
  - *302: Corporate responsibility for financial reports*
  - *404: Management assessment of internal controls*
- Standards and Guidance—FAS 5, FIN 14, SOP 96-1, FAS 143, FIN 47.....
- “Material” liabilities—costs of compliance, legal proceedings, remediation liabilities.....GHG controls?

# Risks from Greenhouse Gas Issues



## Operating in a Carbon-Constrained World



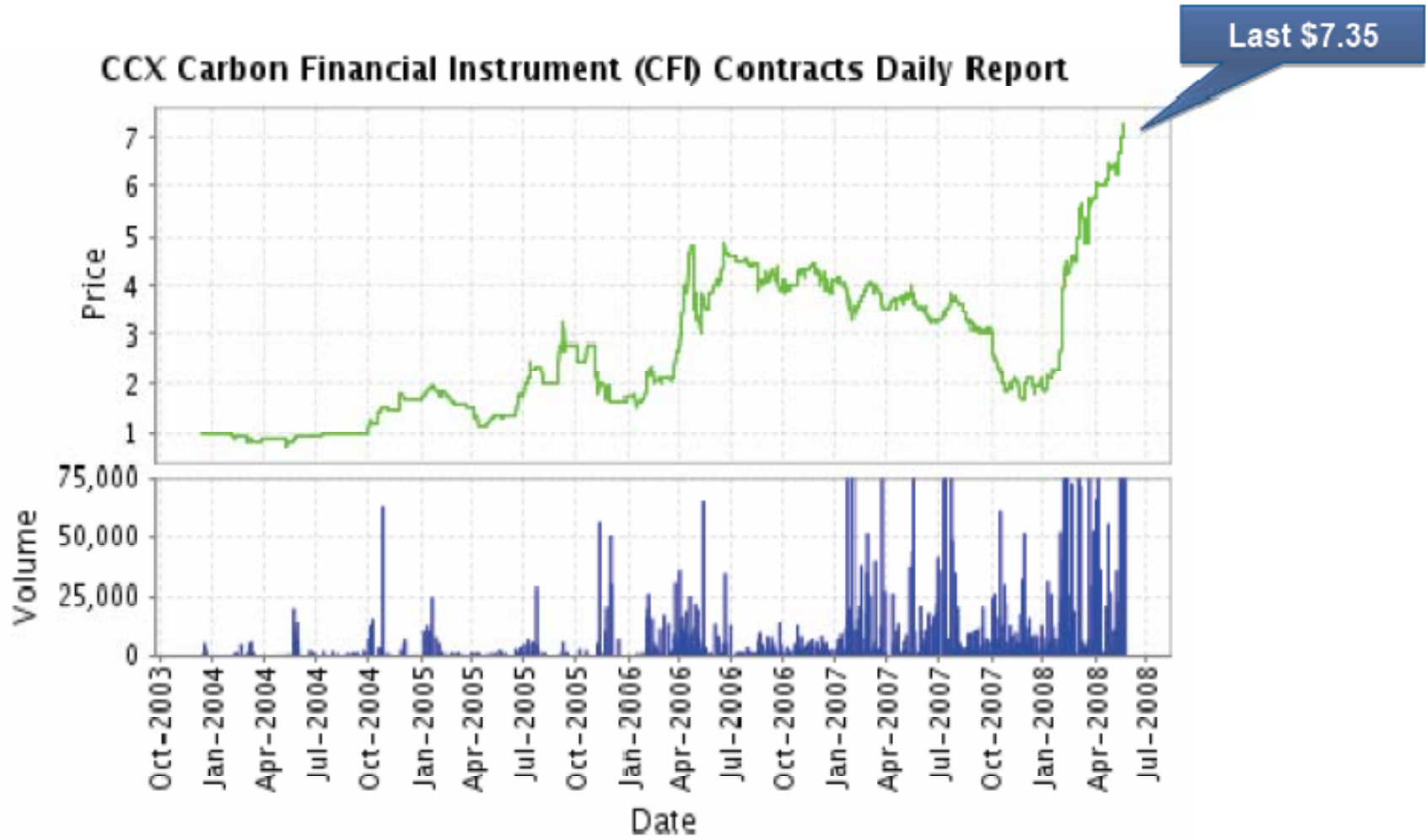
# GHG Standards & Programs



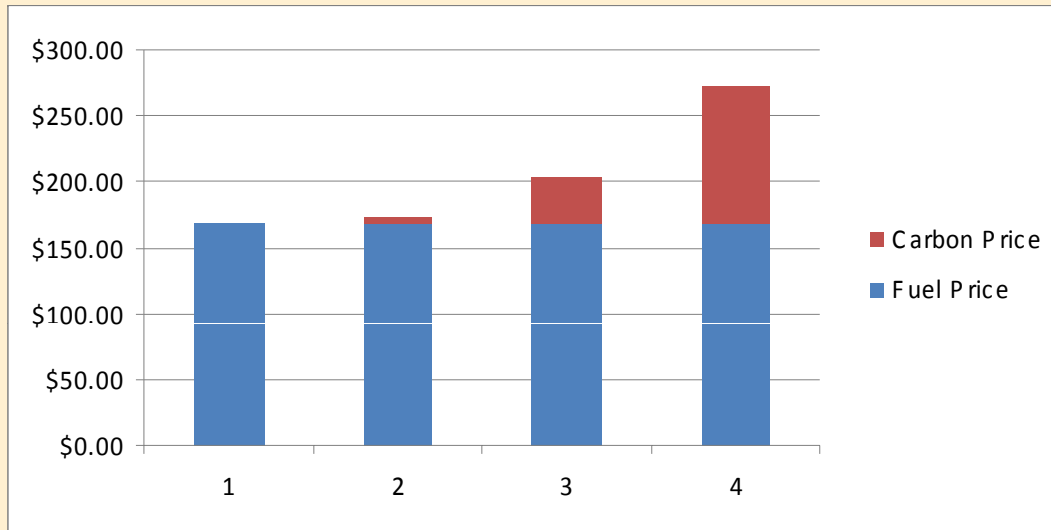
- International standards/guidance
- Voluntary emissions trading exchanges
- Regulatory cap-and-trade programs
- USEPA—Proposed Rule Regulating GHG—  
July 30!!
- Industry-specific calculation and reporting protocols
- Government Sponsored programs
- Non-Government-sponsored



# Meanwhile, Carbon Holds a Real Market Price... Which Means We Stand at the Dawn of a New Era



# Example \$ Impacts on Diesel and Electricity



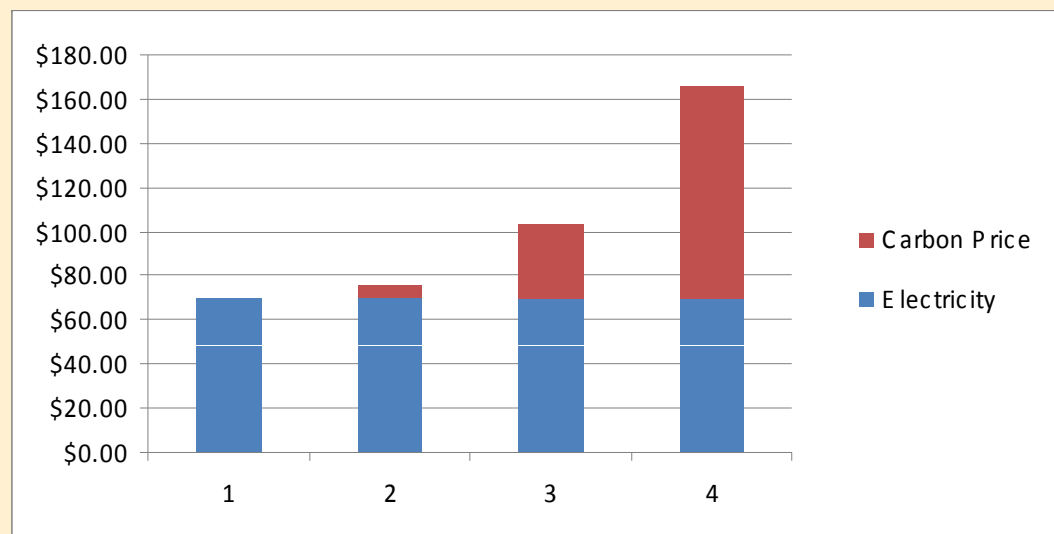
## Conditions:

**1- Baseline No Carbon Market and Diesel at \$4 per gallon & Electricity at 7 cents/kwHr**

**2-CCX today**

**3-CCX at European values**

**4-CCX at predicted European values**



# Impact of Carbon Price Signals



- Conclusion:  
“The effects of re-pricing of Carbon will be profound”
- There will be winners and losers in a carbon-constrained future – how will your business fare in the face of such enterprise risks?
  - Your footprint? Method to estimate? Validate/replicate?
  - Policies, procedures and practices suitable?
  - Control of your operations? Your supply chain?
  - Forward looking plans, goals and preparations?
  - Organizational roles and responsibilities?

# EHS Becomes “Mission Critical”



The point: These non-traditional emerging risks will become significant driving forces for future business planning, finance and operations!

The lesson: EHS is becoming a mission-critical aspect of **business**, no longer just a support function to address “EPA/OSHA” issues.

The question: Is EHS in your company ready for the business challenges....and...opportunities



# EHS “Capability Maturity”



- Leadership and Strategies/Policies
- Structure and Resources
- Processes and Procedures
- Information for Decision Making
- Data and Systems



# Best Practices in Industry



- Operating Executive or CEO takes charge of EHS
- High-level reporting for the environmental function (e.g., an internal audit committee reporting to the board)
- “EHS” a line management responsibility
- Compensation tied to environmental performance
- Management system as a continuous improvement vehicle
- Environmental costs and benefits are measured
- Performance reports on EHS are published
- Life-cycle approach to products and services
- Turning environmental efforts into business value (e.g. new products and services)



Adapted from Industry Week Magazine

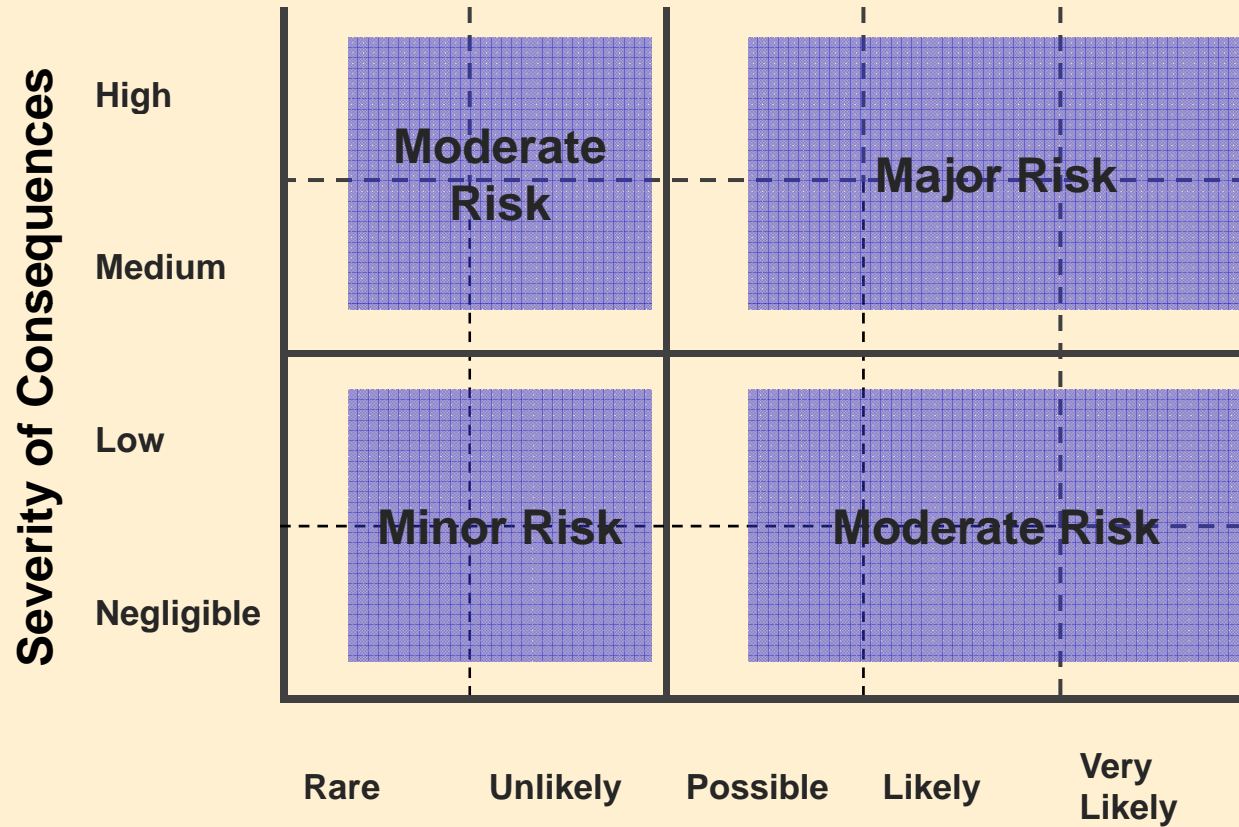
# Key Processes for Risk Management



- Risk Identification
- Assessment and Priority Setting
- Risk Management & Control
- Metrics/measurement
- Defined Actions for Continuous Improvement

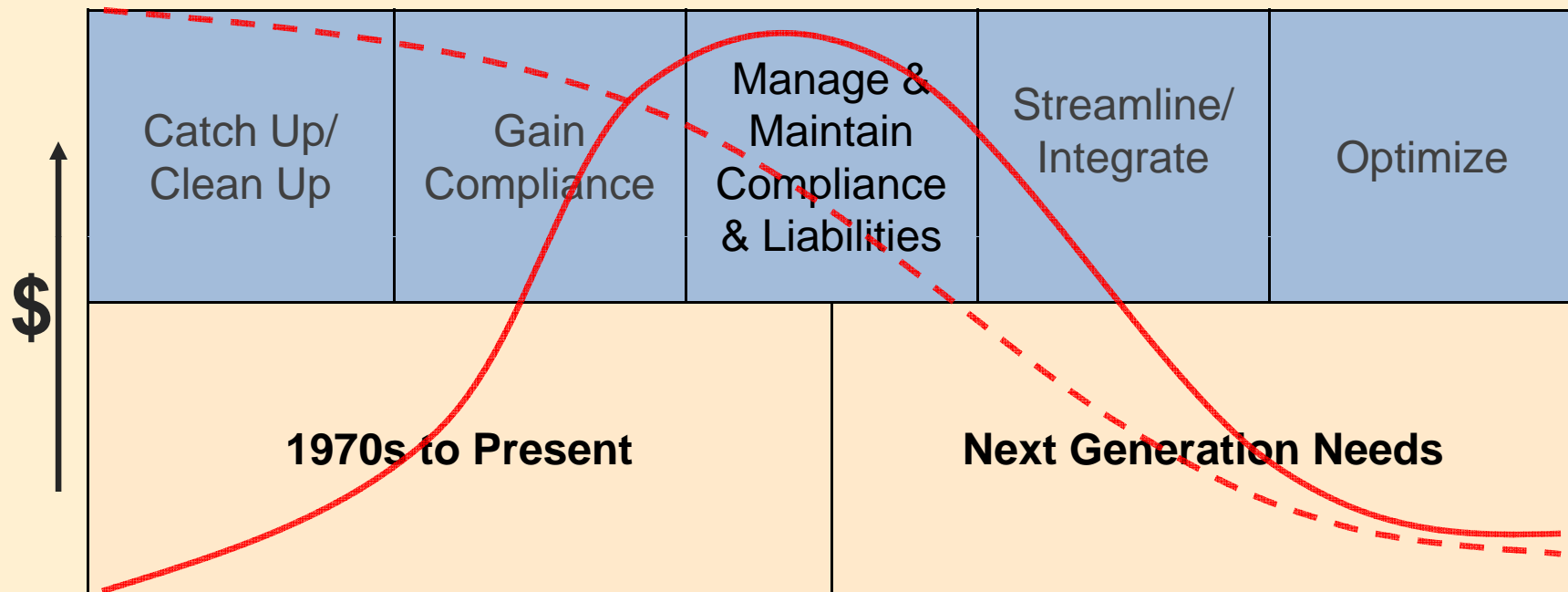


# Sample Risk Map



**Likelihood of Occurrence**

# Evolution of EHS Operations



————— Cost of Compliance

- - - - - Occurrence Cost



# ...from Compliance to Sustainable EHS Management



## Compliance

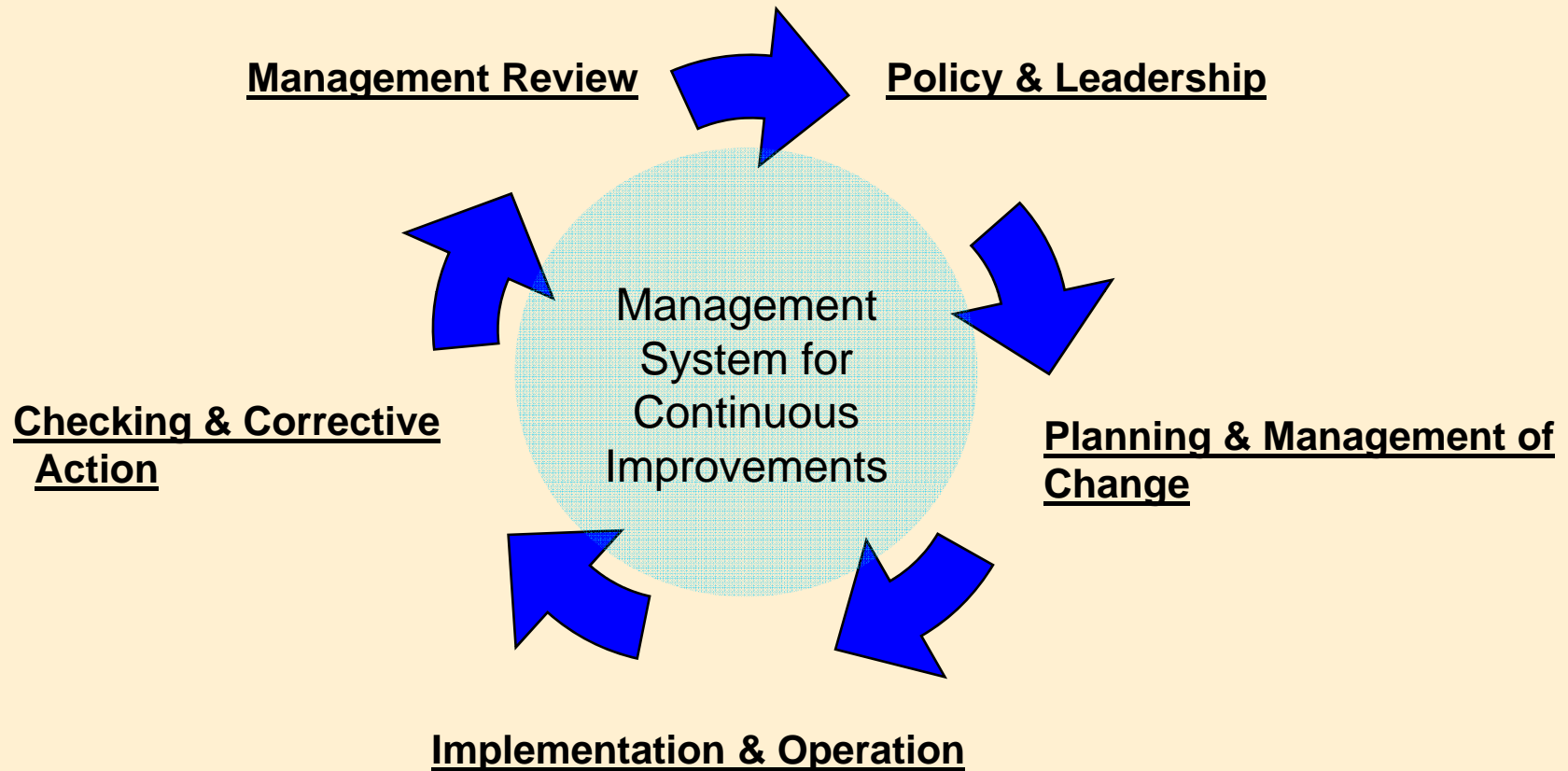
- Driven by legal requirements
- Reporting on compliance
- Event-centered
- Threshold standards
- Media focused
- Operations constrained
- Pollution control
- Goal of zero violations
- Incident response

## Sustainable Management System

- Driven by business requirements
- Reporting on performance
- Systems-centered
- Continuous Improvement
- Cross-media
- Operational solutions
- Pollution prevention
- Goal of zero waste
- Incident prevention



# The Management System “Cycle”



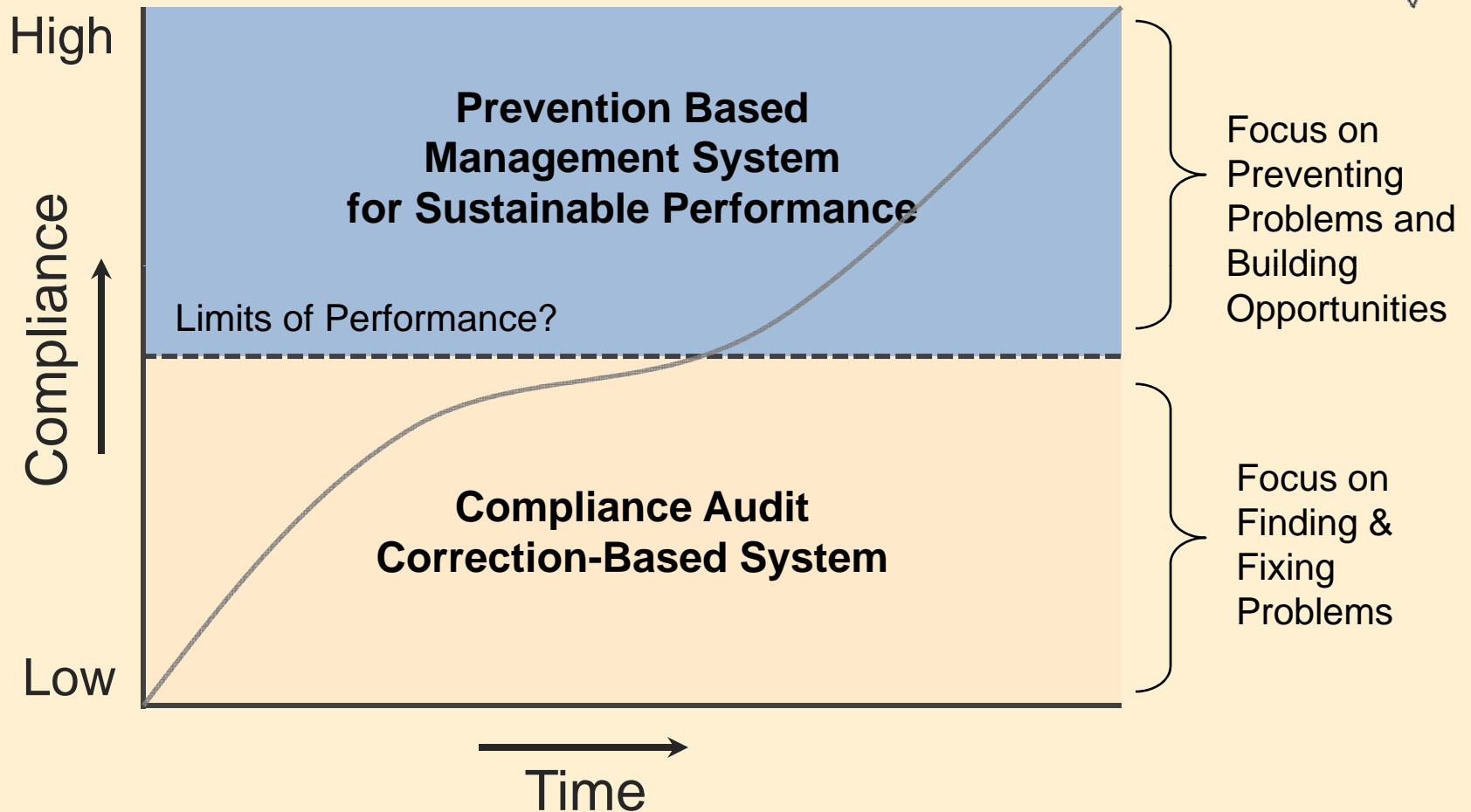
# “Internal Controls” are Critical



- They Require
  - 1) Reliability and defensibility of process, to deliver:  
Accurate financial reports, GHG inventories,  
Sustainability verification, Supply chain management
  - 2) Consistent Application—what is done, by whom, how, tools
- They Integrate into a Management System--for sustaining the process, checking compliance, managing change and improving
- They are based upon a reliable method for keeping up with changing standards of practice



# Evolution of EHS Management



# Summary



- The “Business” drivers of EHS are changing
- “Best Practices” are needed:
  - Organizational structure, reporting, resources, know-how, integration with other mission-critical parts of the company
  - Management systems—processes, procedures, internal controls, review, improvement
  - Metrics and reporting (transparency), compliance assurance, review and continual improvement
- EHS Manager must be a Business Manager!!

# Q&A



## Questions?

