



# Research on PetroChina's Environmental Strategic Plan

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# Presentation Outline

- Project Background
- PetroChina Company Overview
  - Business Strategy and HSE Policies
- Environmental Leadership
- Organizational Strengthening
- HSE Management System Framework
- Employee Engagement
- ESP Process
- Next Steps



# Project Background

- Project undertaken by:  
Science, Technology & Information Management  
Department of PetroChina in 2003
- Project completed by:  
PetroChina EMC and CDM cooperatively
- Project approved by:  
Science, Technology & Information Management  
Department, and QHSE Department of PetroChina,  
in 2004



# PetroChina Company Overview - 2004

- Ranked 52<sup>th</sup> on Forbes 2003 listing
- Annual sales - \$47.39 billion
- Assets - \$64.3 billion
- Employees ~ 400,000
- Key Business Operations
  - Exploration, development and production of crude oil and natural gas
  - Refining, transportation, storage and marketing, including import and export of crude oil and petroleum products
  - Production and sale of chemical products
  - Transmission, marketing and sale of natural gas



# Business Strategy

- Continue addressing opportunities and challenges arising from recent creation and ongoing transformation into an efficient, profit-oriented, competitive and integrated oil and gas company.
- Enhance operating and financial performance of each business segment, improving technology platform and reducing costs through ongoing restructuring and rationalization of its operations.



# Health, Safety & Environment

- PetroChina is developing and implementing integrated HSE Management Systems
- HSE issues are regarded as major management factors to be included in all production and business activities
- HSE policies, regulations and standards have been mapped out and responsibilities identified
- HSE targets have been identified as key business indicators



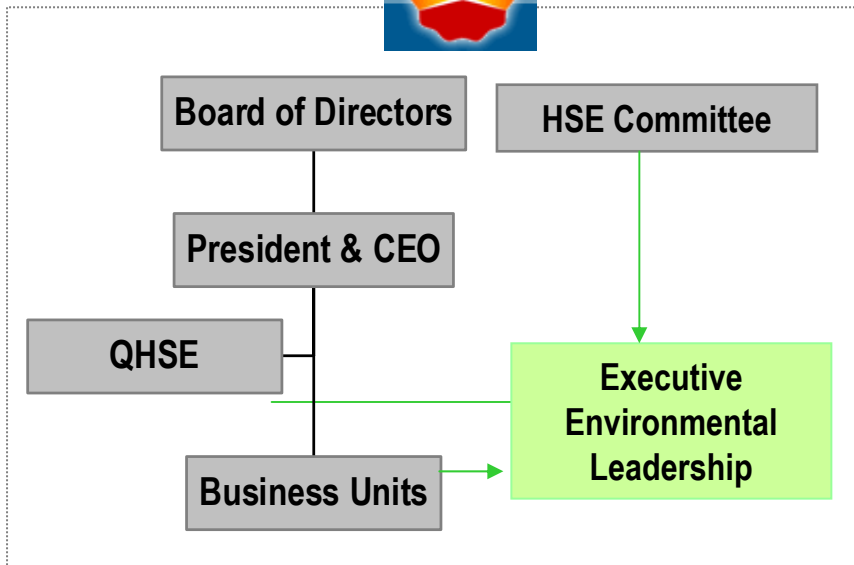
# Environmental Strategic Planning

- Continual process of making environmental strategic decisions based on:
  - understanding current situation and trends
  - anticipating future conditions based on systematic assessment of current situation and
  - putting actions in place using organizational framework and processes to achieve the desired outcome
- Environmental Strategic Plan communicates priorities and provides a roadmap to meet objectives and targets



# Environmental Leadership

## Competition



### **Strengths**

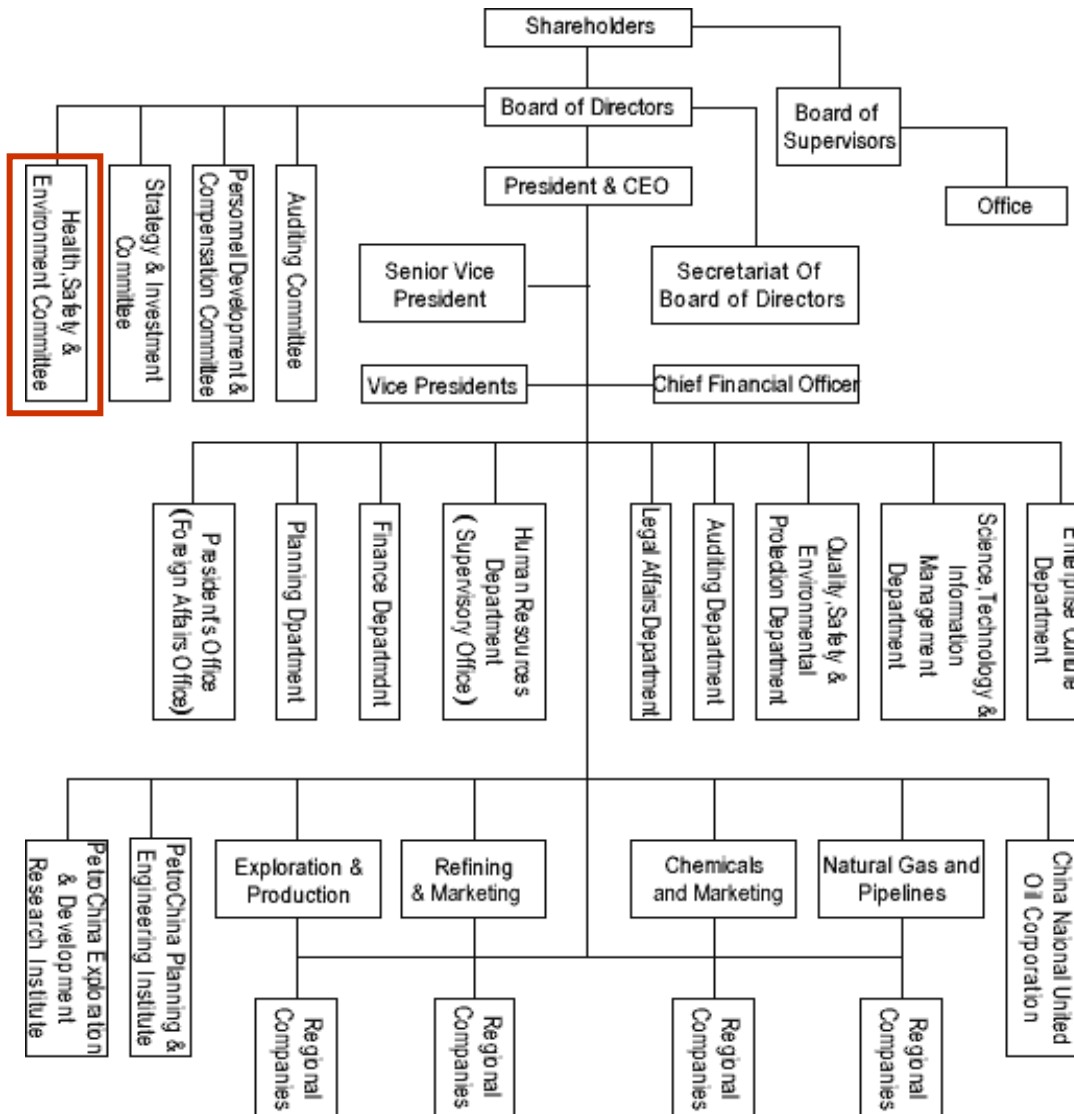
- PetroChina is recognized as a leading oil/gas company
- PetroChina understands the changing national, regional and international competitive landscape
- PetroChina is committed to achieving world-class environmental performance

### **Opportunities**

- Use environmental performance improvement as competitive differentiator
- Drive improve business performance through environmental performance improvement
- Establish position as leader in environmental performance



# Organizational Strengthening



## **Strengths**

- Corporate structure includes HSE functions at key organizational levels

## **Opportunities**

- Build on HSE organizational line of sight
- Link to environmental strategy at all organizational levels
- Foster professional development through training
- Improve knowledge capital management through HSE management system implementation



# Organizational Strengthening

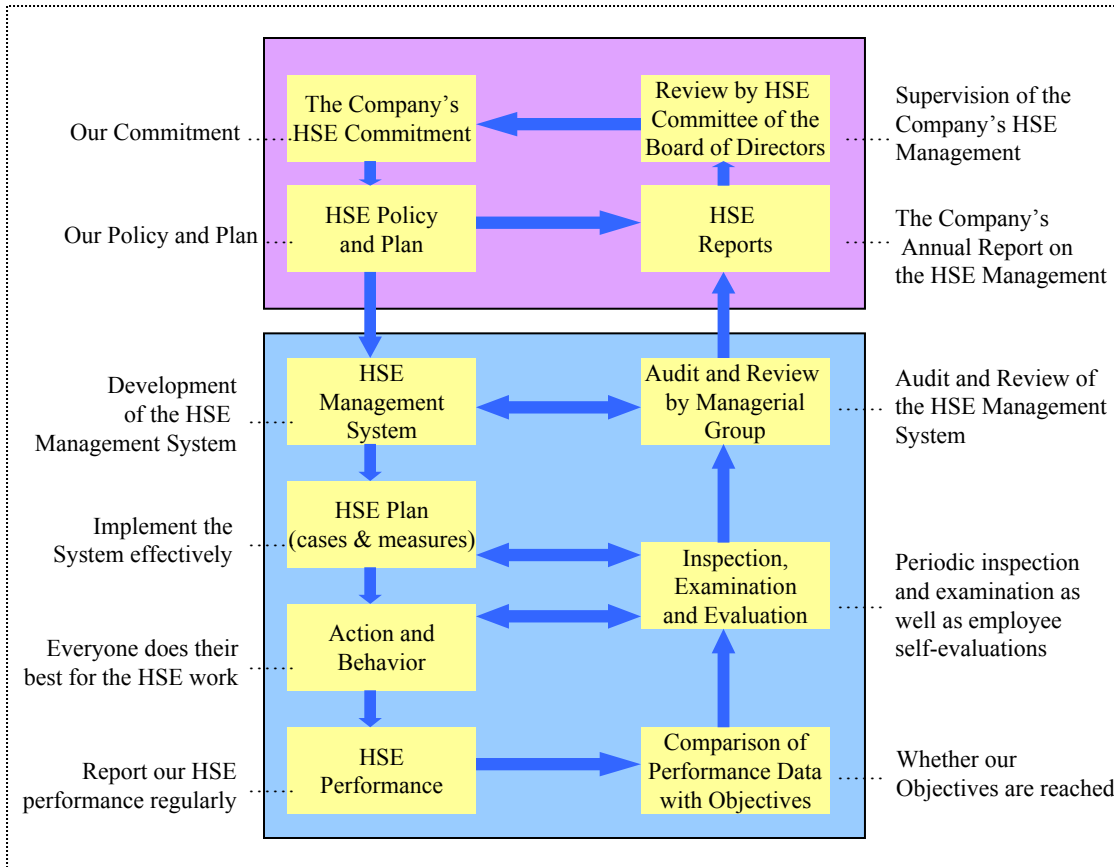
“An organization’s ability to learn and translate that learning into action rapidly is the ultimate competitive advantage.”

Jack Welch, President & CEO - General Electric (retired)





# HSE-MS Framework



## **Strengths**

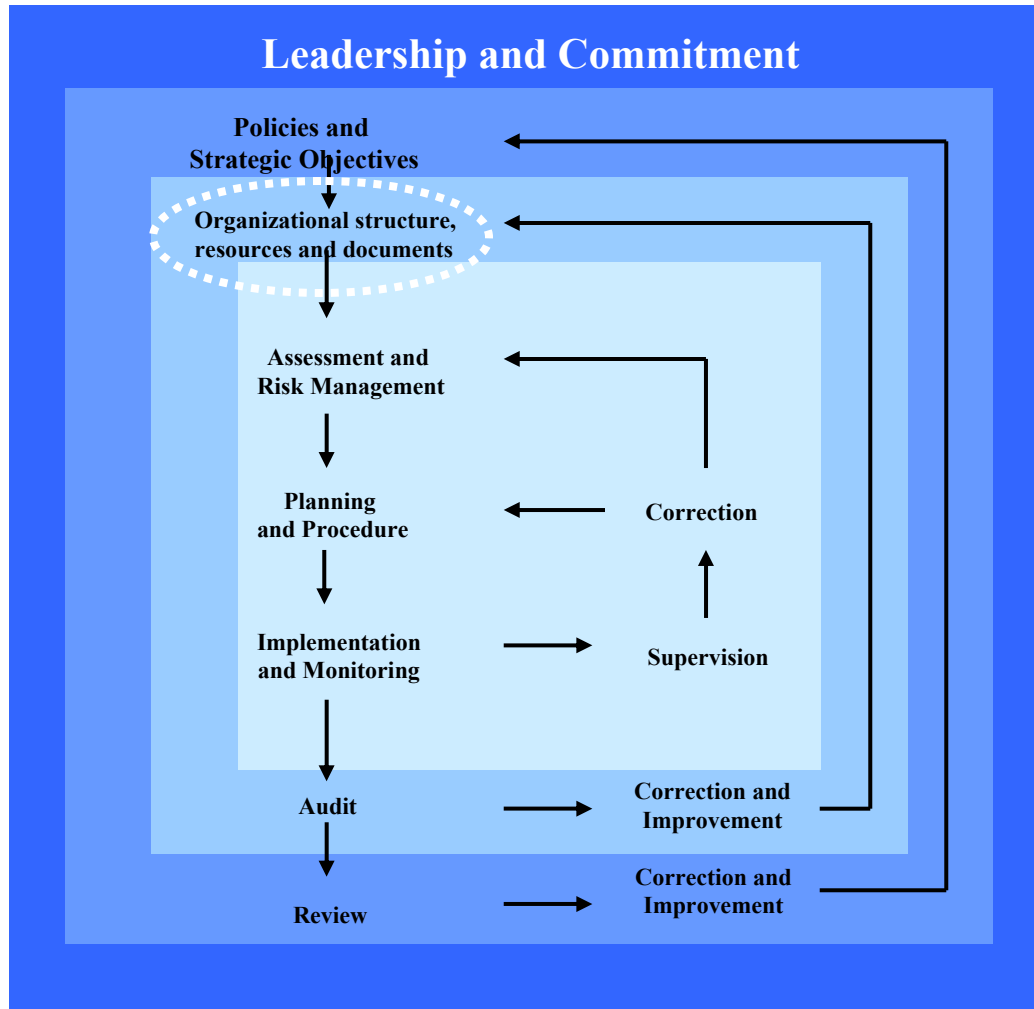
- PetroChina senior executives and senior managers are committed to implementation of HSE-Management Systems
- Guidance for HSE-MS implementation

## **Opportunities**

- Refine and standardize EMS development and implementation approach to mesh with Environmental Strategic Planning and monitoring processes



# HSE Management Processes



## **Strengths**

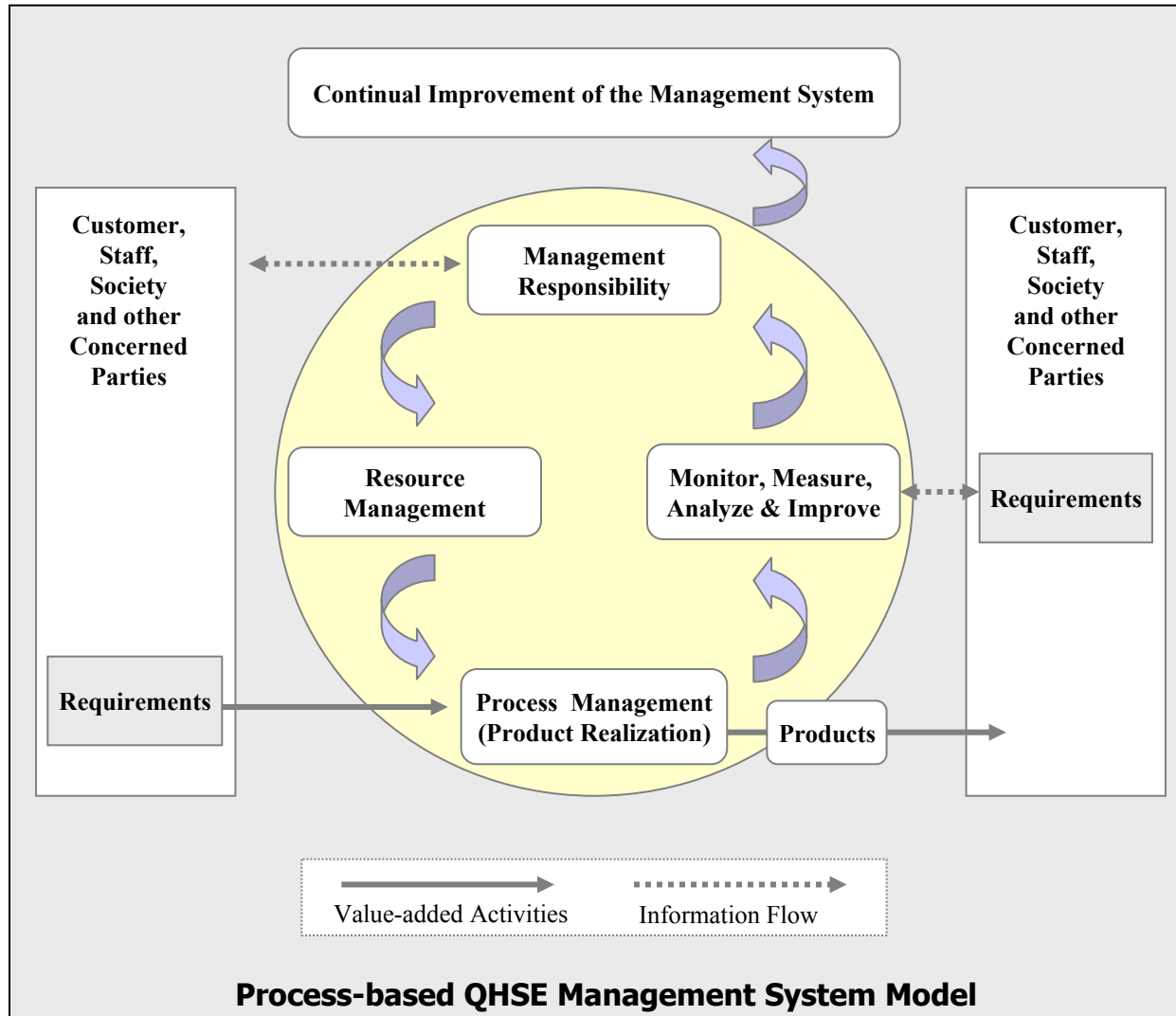
- PetroChina has established environmental management processes
- Corporate role in strategic planning clearly defined

## **Opportunities**

- Systematizing Environmental Strategic Planning, monitoring and reporting
- Identifying roles and responsibilities for Environmental Strategic Management and Reporting



# HSE-MS Implementation



## **Strengths**

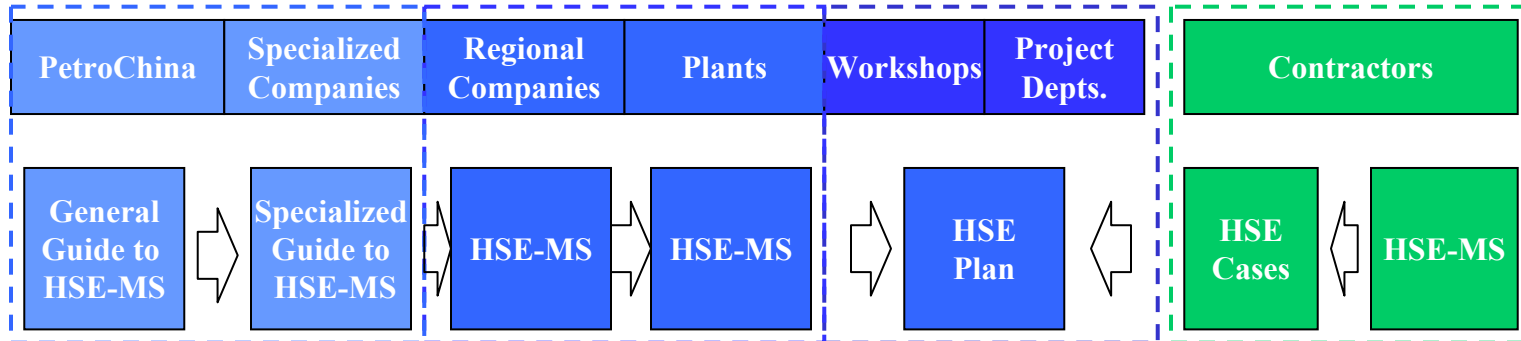
- PetroChina HSE Management System Model addresses 'people' needs
- Framework provides consistent with strategic focus

## **Opportunities**

- Addressing customer, employee and concerned party concerns through formalized processes
- Linking HSE-MS implementation with strategic objectives



# Employee Engagement



## **Strengths**

- 15 facilities EMS certified to ISO 14001 by the end of 2003
- Excellent implementation guidance documents

## **Opportunities**

- Development of EMS documentation templates and standard operating procedures that can be shared among business units
- Aligning roles, responsibilities and objectives for environmental performance improvement with corporate vision and strategy.



# Vision, Mission, Strategy and Goals

***Harmonizing Energy and Environment***

***People Oriented and Put Prevention First***

***...to free itself entirely from occupational diseases, industrial accidents and damage to the environment***

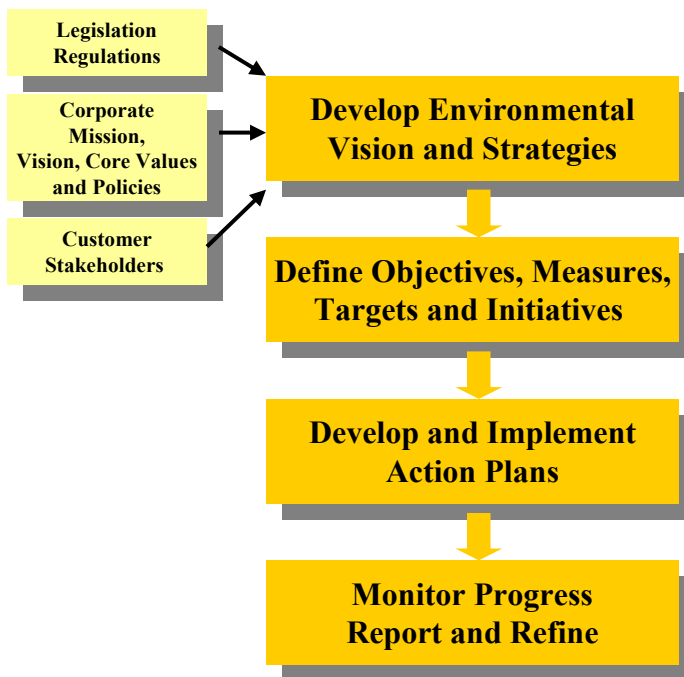
***World-class in environmental performance***

## **Strengths**

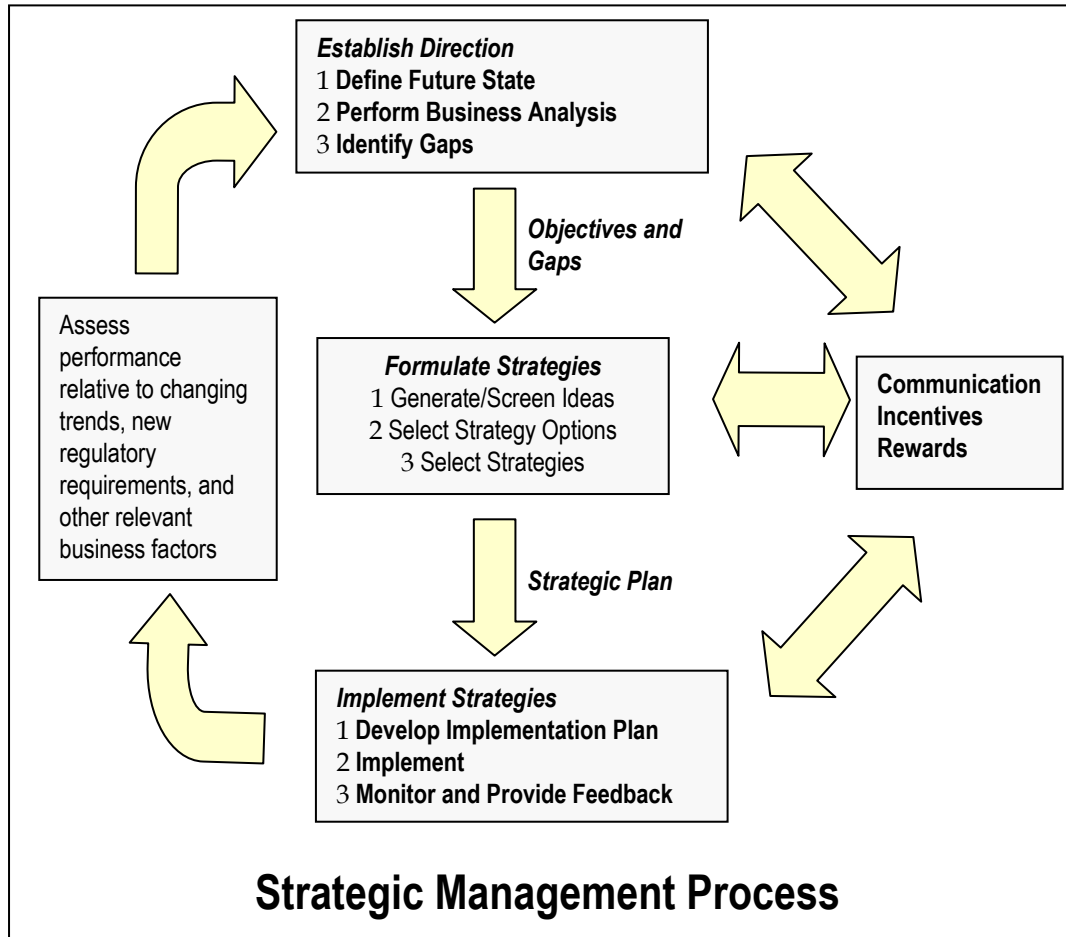
- Environmental policies and objectives clearly communicated

## **Opportunities**

- Operationalizing strategic objectives
- Making environmental strategy everyone's responsibility
- Increasing understanding of how vision and strategies relates to individual employees work



# Environmental Strategic Planning



## **Strengths**

- PetroChina's uses a disciplined approach to strategic planning
- Planning Department provides coordination of strategy development company wide
- Strategic plans are implemented

## **Opportunities**

- Integration of environmental strategic planning with corporate strategic planning process
- Development of a "Balanced Scorecard" that incorporates Environmental issues
- that addresses environmental issues
- Prioritization of needs and optimized use of resources



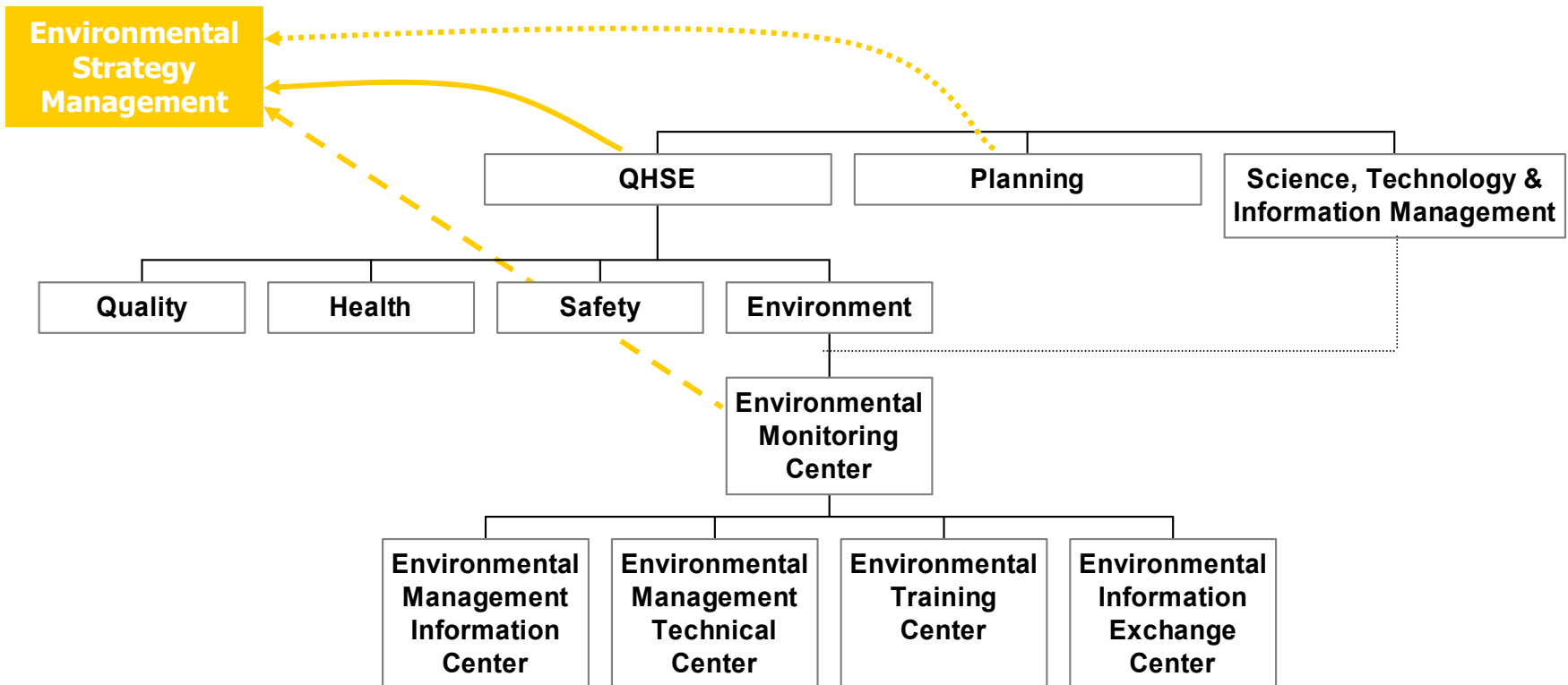
# ESP Responsibilities

## Strength

Strategic Planning is integrated with company business planning activities.

## Opportunities

Dynamic monitoring and reporting on progress towards environmental strategic objectives provides business benefits.



# Strategic Themes and Objectives



A. Strengthen Environmental Organization	B. Improve Pollution Prevention and Control	C. Protect Environmental & Ecological Resources	D. Engage Community	E. Sustainable Development
A-1 ESP and Implementation Plan Development	B-1 Environmental Risk Assessment and Management	C-1 Environmental Compliance Auditing	D-1 Community Environmental Engagement	E-1 Energy Efficiency Improvement
A-2 Functional Excellence	B -2 Company Environmental Standards Development	C-2 Waste Minimizaition and Management	D-2 Environmental Right to Know	E-2 Water Conservation
A-3 EMS Conformance Auditing	B-3 Environmental Pollution Control and Pollution Source Treatment	C-3 Waste Reuse	D-3 Environmental Reporting Initiative	E-3 Environmental Liability Identification & Management
A-4 Environmental Leadership Development	B-4 Environmental Technology Development	C-4 Greenhouse Emission Reduction		E-4 Product Stewardship
A-5 Management Training	B-5 HSE Fatal Flaw Inspection			E-5 Clean Energy
A-6 EMS Implementation Enhancement	B-6 Environmental Emergency Response			



# ESP - Summary

**The Environmental Strategic Plan Research Project was selected to receive the 2004 Project Award by the Research Institute of Petroleum Exploration & Development (RIPED) of PetroChina.**

**PetroChina's Environmental Strategic Plan and the ESP process have been adopted for implementation in PetroChina's 11<sup>th</sup> Five Year Plan**

## **Strengths**

- Corporate Planning and QHSE were proactively engaged in developing the ESP process
- Business units and facilities were key partners in developing the ESP process
- The ESP developed under this project serves as a starting point for continual improvement

## **Opportunities**

- Implementation of 'world class' Environmental Strategic Planning Process
- Development of Environmental Vision and Strategies to guide PetroChina to world-class standards



# Acknowledgements

- PetroChina Chief Technical Officer
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- Business Units of PetroChina
- EMC Staff



# Questions

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