

ARPEL 2009 Conference

## OPERATIONS INTEGRITY MANAGEMENT SYSTEM



JIHOON HYUN, HSE MANAGER, P.E.  
SAFETY ENGINEERING TEAM  
HYUNDAI ENGINEERING CO., LTD.

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## Overview

### ■ **Operations Integrity Management System (OIMS) is a Disciplined Management Framework**

#### **Where:**

- HSE Policies Commitments are compatible with the Environmental and Economic needs of all Communities,
- While Protecting the Safety, Health and Security of Employees, Customers and the Public

## Potential Hazards in Oil & Gas Plant

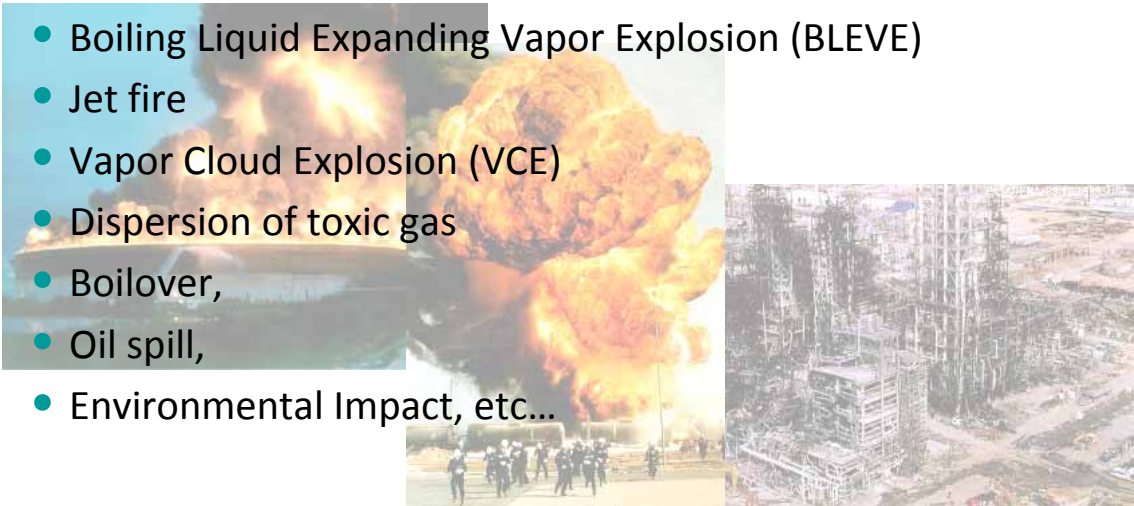
### ■ **Within the Oil & Gas Plant, we are facing everyday with;**

- Potential Release of
  - ◆ Toxic material
  - ◆ Reactive chemicals
  - ◆ Flammable liquids and gases
- Potential Environmental Hazard
  - ◆ NO<sub>x</sub>
  - ◆ SO<sub>x</sub>
  - ◆ CO, CO<sub>2</sub>
  - ◆ Particulate Matter
  - ◆ Fugitive Emissions (VOC)

## Hazardous Event due to Loss of Integrity

### ■ Incidents continue to occur in various industries for many years...

- Liquid Pool fire
- Boiling Liquid Expanding Vapor Explosion (BLEVE)
- Jet fire
- Vapor Cloud Explosion (VCE)
- Dispersion of toxic gas
- Boilover,
- Oil spill,
- Environmental Impact, etc...



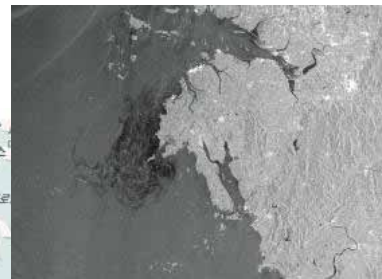
## Major Accidents

- **1984 Bhopal, India, over 2,000 casualties,**
- **1989 Philips Petroleum Company, Pasadena, TX, 23 casualties, 132 injuries;**
  - These incidents lead to the passage of the PSM (Process Safety Management) Rule in 1992
- **1976 Seveso, Italy, over 2,000 were treated for dioxin poisoning**
  - This led to the European “Seveso Directive” to try to prevent similar incidents.

## Recent Largest Oil Spill in Korea

### Oil Spill in Yellow Sea of Korea

- ❖ Oil carrier was struck by the crane barge
- ❖ Accident caused by the negligence of Oil carrier and Crane barge
- ❖ 12,547 kl crude oil spills
- ❖ 50 km of west shore was contaminated
- ❖ 7,130 claims, €211 million
- ❖ 2,128,896 Personnel (1,226,730 Volunteers) are mobilized for cleaning
- ❖ Damage to the Reputation



## Factors driving OIMS

- **High cost of loss,**
- **More stringent regulations,**
- **Increased public awareness and attention,**
- **Experience of high-profile disasters,**
- **Stakeholder demand for accountability on the part of organizational leadership**

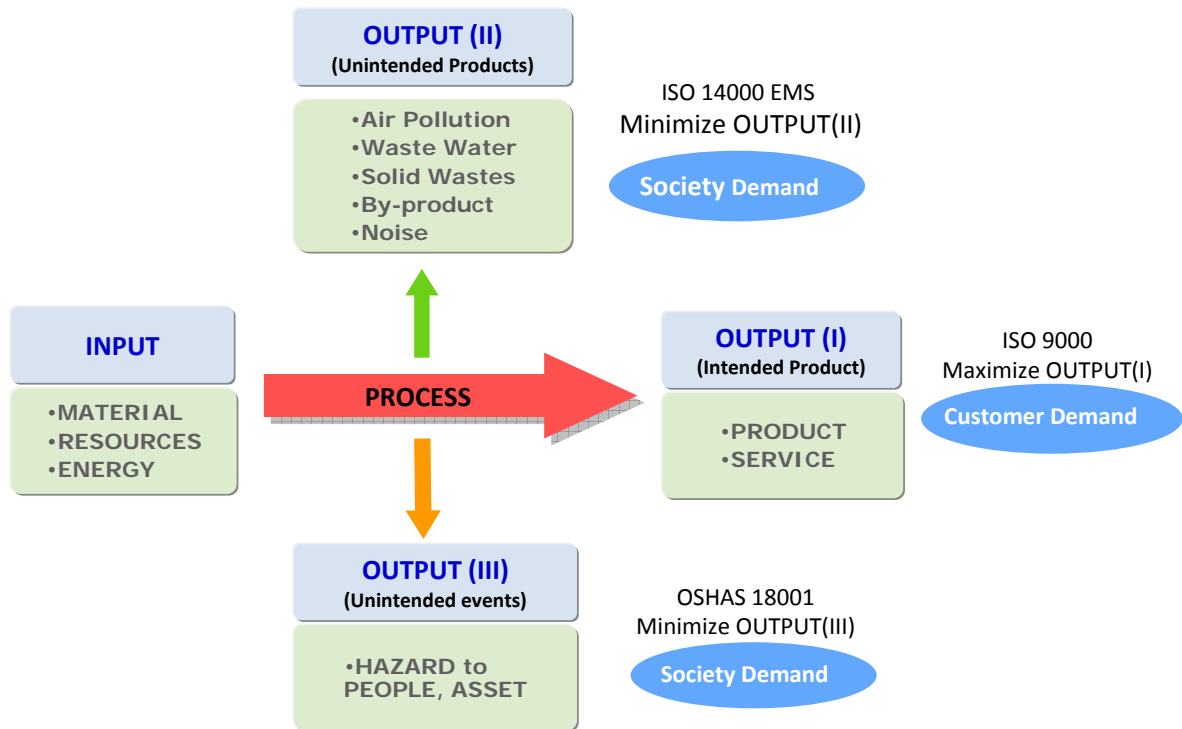
## OIMS helps

- **There is undoubtedly a Price for Safety**
- **Safety Efforts have to be economically practical**
- **The question is**
  - when do you want to pay,
  - and how much do you pay
- **Operations Integrity Management System (OIMS) helps;**
  - who should do;
  - the right things to do;
  - in right ways;
  - at right times;

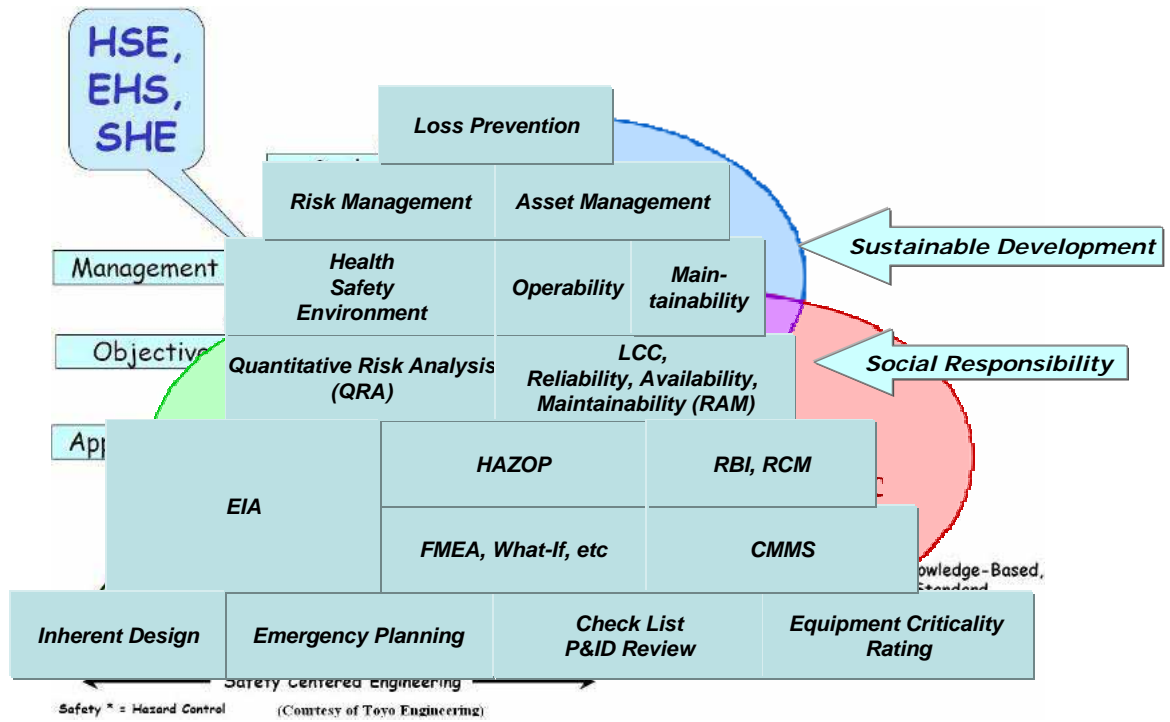
## Functions of OIMS

- **Ensure** appropriate and thorough **implementation** of the HSE Policy into the Facility throughout the lifecycle
- **Perform risk identification** and **Develop** appropriate **Loss Control** to be applicable throughout the Facility Lifecycle
- **Implement** the **Loss Control** effectively throughout the Facility Lifecycle
- **Monitor** performance of OIMS and **improve** the system continuously

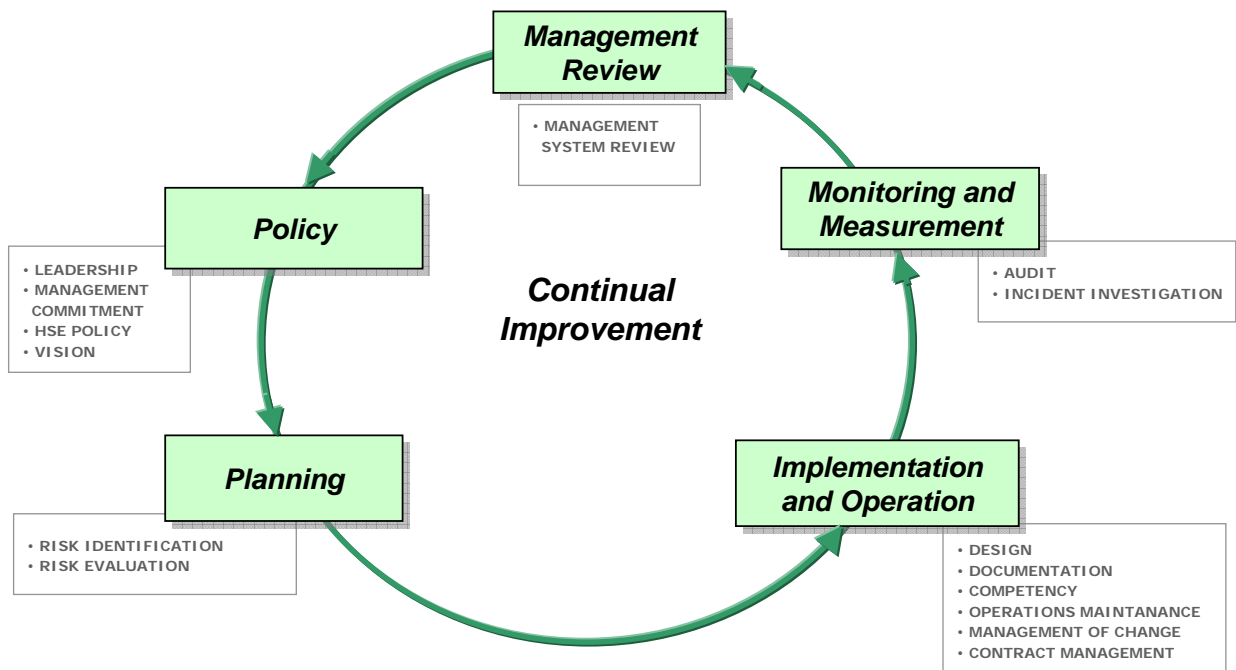
## International Standards / OIMS Relations



## Expansion of OIMS Implementation



## Common Management Process



## Key to Successful OIMS

- HIGH Level Managers **LEADERSHIP & COMMITMENT**
- Clear Management Policy and Organization
- OIMS Implementation is **NOT** a Stand-Alone Effort
- Risk Identification & Loss Control should be **SPECIFIC**
- **RISK Based Approach** Helps Rational Decision
- Assurance these are **working**



Thank you

**CONTACT**

Jihoon Hyun, P.E.  
HSE Manager

Tel: +82-2-2466-8270,  
Email: [jhhyun@hec.co.kr](mailto:jhhyun@hec.co.kr)  
Process Plant Group  
Hyundai Engineering Co., Ltd.