MASS-EMPLOYMENT AND OCCUPATIONAL HEALTH AND SAFETY: ENFORCEMENT OF STANDARDS AND CAN DISASTERS BE AVOIDED?

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Preamble

- According to the Department of Statistics, labour force participation rate for Malaysia in 2014 is 67.5%.
- That's 14 million individuals working/ employed out of 21 million in the working age population.
- According to DOSH, the fatality rate of 2014 is 4.21 per 100,000 workers (that's about 600 individuals died from their occupational activity)

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LFPR=labour force divided by the total working-age population.

Preamble

- The Occupational Safety and Health Act has been in force since 1994 to safeguard workers from occupational accidents.
- But the sheer number of workforce makes it a tremendous challenge for DOSH to ensure employers compliance.
- Are we heading towards potential industrial disaster?

CAN DISASTER BE AVOIDED?

There's no definitive answer to this question

'Many chemical industry disaster were not due to a failure to control risks, but a failure to identify them'

(Kletz, 1998)

Because as long as men strive to go bigger, taller, deeper, farther and faster, there will always be potential for disaster.

Even NASA estimated that roughly one space shuttle mission out of 130 could be expected to go wrong and end up being a disaster (Hollnagel, 2004).

Even Oil & Gas, one of the strictest industry in terms of risk control and safety barriers; had Deepwater Horizon, a safety and environmental disaster in 2010 (and coming into the cinema near you soon ☺)

These are the faces of death.

I'm sure everyone in this room know or at least have heard of the Bhopal disaster. This event demonstrated that the effects of what we do at work no longer is confined within the boundaries of our premise. The complex system that we have now extends into borders, into the lives of the people around it, into the environment that we live in.

Closer to our home…

BRIGHT SPARKLERS, SG. BULOH 1991

The Bright Sparklers tragedy,

One event that many said, led to the introduction of our OSHA 1994.

True to the words of Prof. Kletz, disasters were the product of risk not being identified or risk being ignored.

Fortunately, Malaysia didn't have any industrial disaster that took the lives of thousands, but I believe as Malaysia is heading towards bigger, taller, deeper, farther, faster projects, disaster is in anticipation and we must be very vigilant.

A better OHS ‘slang’ can be used to paraphrase the earlier question.

CAN WEREDUCE THE LIKELIHOOD (& MAGNITUDE) OF INDUSTRIAL DISASTER?

UNDERSTANDING WHAT CAUSES INDUSTRIAL ACCIDENTS

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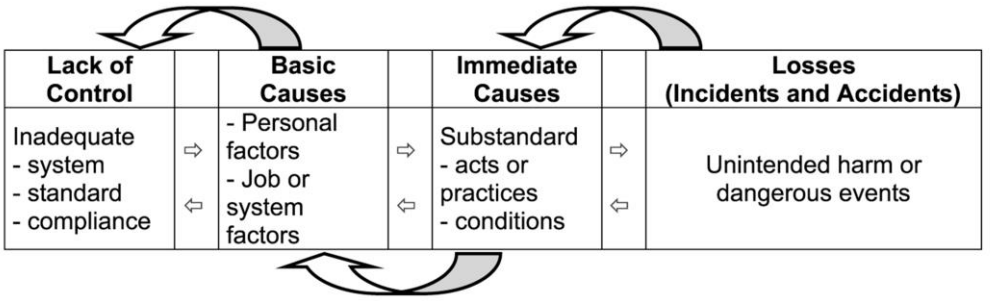
MODIFIED LOSS CAUSATION MODEL BY VINCOLI (1994)



Note: The model is a modification of the Loss Causation Model, originally developed by Bird and Loftus (1976). The basic idea is to start the investigation at the losses, manifested in both incidents and accidents in order to find the chain of events leading to lack of control

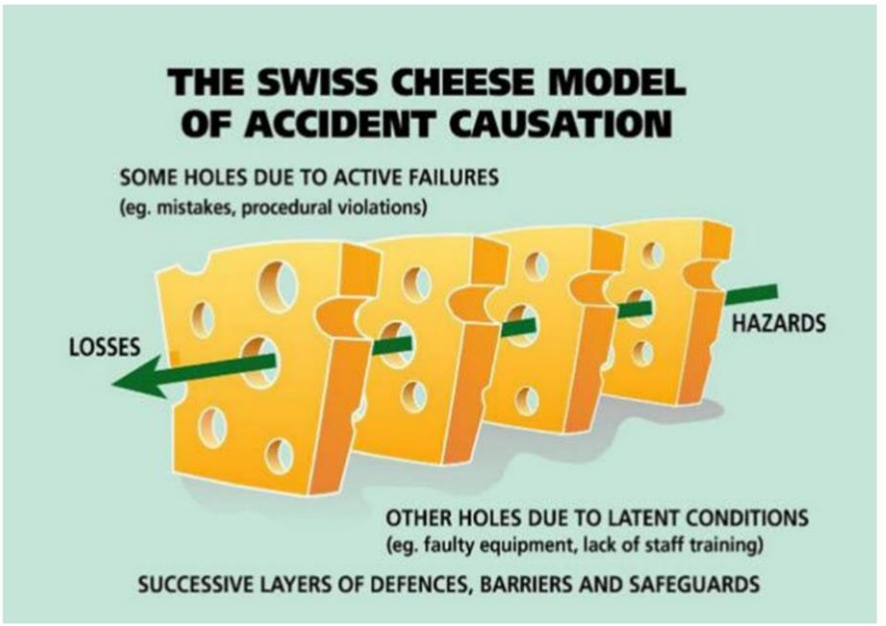
This is a loss causation model by Jeffrey Vincoli. It is an improved version of the works of Heinrich, Bird and Loftus.

As you can see here, many accidents were caused ultimately by management lack of control. As it is the base of this theoretical deduction.

Thus to theoretically avoid an accident, management must make sure they have adequate systems and standards and to comply to it rigorously.

Ok then, you might say, yeahh we have all of that..systems, standards, compliance in place…does it mean now that my organization is free from accidents?

Let us see…



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You said that you have everything in place. The systems, the standards, the compliance, and they form some sort of barriers that separates hazards from rearing its ugly head and hurt people.

In this Swiss Cheese Model, those systems, standards, compliance barriers are represented by those stack of cheese. Over time, workers get comfortable, forgetful, start to cut corners, making silly mistakes, delay routine maintenance and skip training because the money you need it for company parties, represented as holes in the slice of cheese. In the original work of Prof. James Reason, it is called active failures and latent conditions. Active failure means the wrong thing you do frequently and gets away with it or errors simply being accepted as normal. Latent conditions are abnormal conditions that lies dormant for a long period of time such as aging equipment that needs to be replaced but still being used.

One fine day, all of these holes will align and creates a 'trajectory of accident opportunity' (Reason, 1990) and wallah..accident happens.

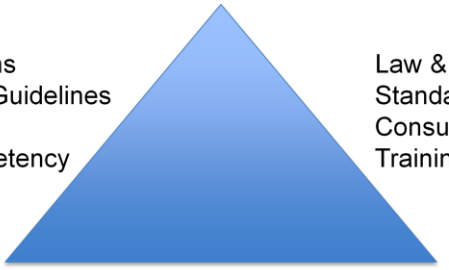
A good case that demonstrates this model is the Deepwater Horizon where procedural violations, cutting corners, faulty equipment missed during commissioning or testing, all came together and resulted in hydrocarbon and gas leaks, and explosion.

WHAT CAN WE DO?

The Tripartite Model

GOVERNMENT

Law & Regulations
Standards/COP/Guidelines
Consultation
Training & Competency
Enforcement



Law & Regulations
Standards/COP/Guidelines
Consultation
Training & Competency

EMPLOYER

Policy & Rulemaking
Responsibility & Care
Engagement
Enforcement
Training & Competency

EMPLOYEE

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The Management Systems Approach

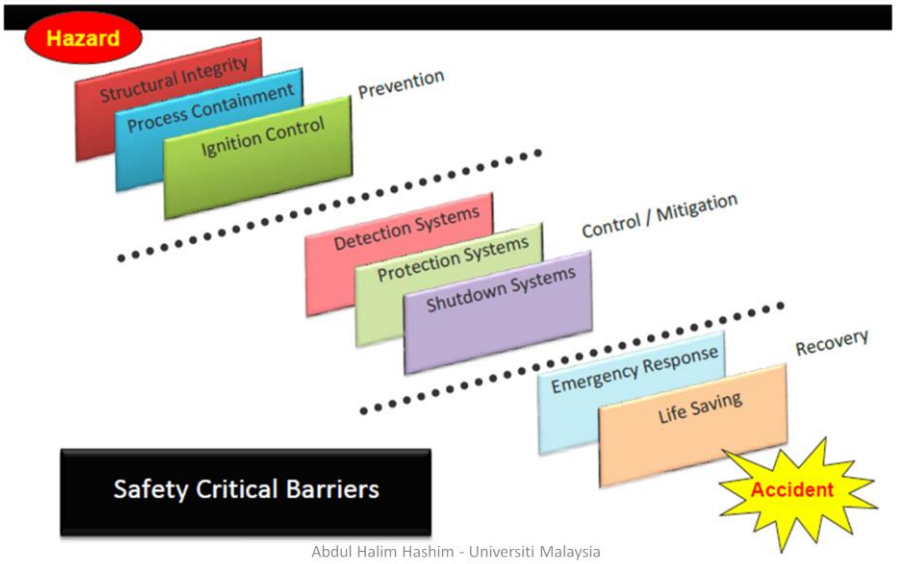
MS 1722:2011

- A voluntary Malaysian Standards that provides requirements on Occupational Safety and Health Management System.
- First published in 2003.
- This standard is based on International Labour Organisations Standard ILO-OSH 2001.

ISO 45001:2016

- An international voluntary standard for Occupational Health and Safety due to be published October 2016.
- Aligned with the revised versions of ISO 14001 and ISO 9001 scheduled for publication in 2015.
- take into account other International Standards such as OHSAS 18001, the International Labour Organization's ILO-OSH Guidelines, various national standards and the ILO's international labour standards and conventions.

A model for reducing the magnitude of industrial accident



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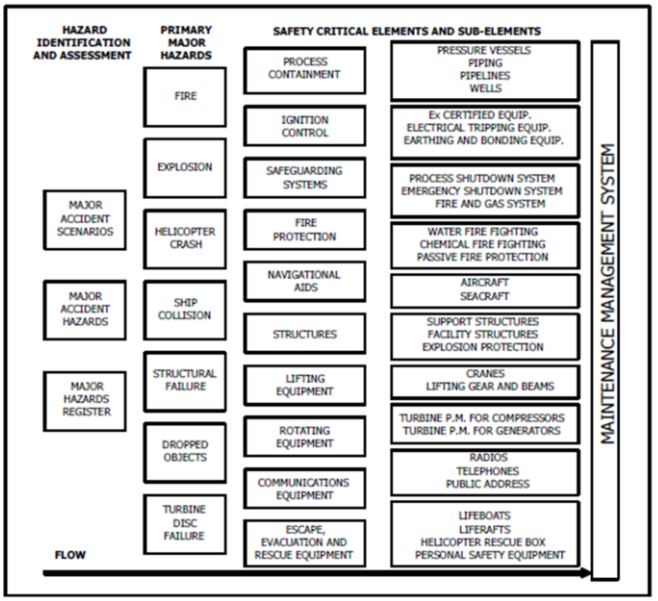
Safety Critical Elements
Lessons from the O&G industry



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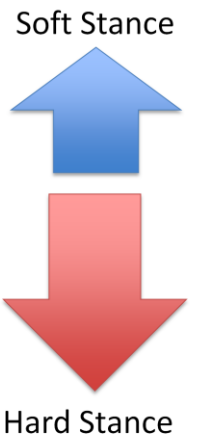
Enforcing OHS

- Different agencies may adopt different definition of ‘enforcement’.
- In general, ‘enforcement’ may include:
  - Inspection
  - Investigation
  - Addressing complaints
  - Enforcement decisions

Enforcing OHS

- Enforcement decisions
  - providing information or advice, face-to-face or in writing
  - serving notices (improvement & prohibition notice)
  - withdrawing approvals
  - varying licenses, conditions or exemptions
  - issuing simple cautions
  - prosecution



Does Enforcement Works? Using the experience of US EPA

- Strict enforcement is far less susceptible to political manipulation than rulemaking.
- A deterrence-based strategy is likely to be more successful than an assistance-based strategy for aggressive minimal compliers.
- Old-fashioned deterrence-based enforcement works.

(McGarity, 2014)

EPA: Environmental Protection Agency

Does Enforcement Works?

- Enforcement inspections are significantly associated with decreasing compensation claims rates especially for fixed site employers. (Baggs, Silverstein & Foley, 2003)

Conclusion

- The risk of disaster happening can be reduced by combination of legal enforcement and self-regulation.
- Management must also equipped themselves with OSH knowledge to facilitate self-regulation in the right way and sustainable.
- Companies are encouraged to apply recognized standards and be certified.

THANK YOU

Hope To See You Again!

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