



A PDCA Central Line for fire risk management

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noau car pario.

 A shuttle bus service is available from the Lakes Road car park.

BUILDING DETAILS











Date 19 June 2019

Time 11:30 Welcome to Modernity Wicked Problems here now Black Swans in XXX mins Disruption to system order

Deviance is normal Do too much with too little We forget to be afraid

Point



Managing for health and safety (HSG65)



Date of publication: 2013 Series code: HSG65 View the site Download a free copy 2

Using a PDCA Risk Management Cycle to "make arrangements"

The PDCA Navigator Map for Fire Risk Management



The Planning Line

Leadership





Policy development and planning



The Doing Line

Risk Profiling







Comperate Competent



The Checking Line



Measuring

Investigating





quality performance recommendations information organisations training systems

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Information is the lifeblood of an open transparent and candid culture. All professionals, individually and collectively, should be obliged to take part in the development, use and publication of more sophisticated measurements of the effectiveness of what they do, and of their compliance with fundamental standards.

Robert Francis, 2013.

WHY DO WE NEED DATA?

- Regulatory Compliance
- Position in the national /local fire risk space
- Knowing how we are doing
- Continual improvement





MEASURING Information is compared or held up against a recognised standard or indicator



DATA simply raw unorganised facts and figures

INFORMATION Small data that have been processed, interpreted, organised, structured or presented so as to make them meaningful or useful





DATA: each students' exam mark is one piece of data

INFORMATION: the average exam mark of the class is information that can be derived from the given data





DATA: 100 years of temperature readings

INFORMATION: data organised and analysed to find that global temperature is rising





DATA: each PTW request submitted

INFORMATION: all your PTW requests organised and analysed to find the % signed off in accordance with your stated procedure





DATA: door set1, door set2, door set n

INFORMATION: % of high usage door sets that are containment critical. % of these serviced and maintained for RRO article 17? In accordance with ASFP guidance?



BIG DATA characterised by 3 Vs, its: Volume Velocity Variety





INTELLIGENCE

Information that has been processed, sorted and distilled, evaluated and interpreted, aggregated from reliable sources and cross correlated for accuracy, presented to the decision makers in a timely and as complete as possible manner

But are we measuring the right things?

Baker Report into **BP Texas City Refinery Explosion 2005** – recommended that BP should improve its SPIs through considering proactive measures and monitoring its PROCESS (rather than PERSONAL) hazards and BP senior management were criticised for placing too much emphasis on its low LTI rate.

See Houston Chronicle for review of all incidents at refinery in 2004

See HSE sheet for recommendations following Baker (and also note similar fault in Deepwater Horizon 2010)

https://www.youtube.com/watch?v=VCcN4SQkb9A

Texas City Refinery 2005





Deepwater Horizor 2010



Deepwater Horizon: Pre-explosion problems and warnings

There had been previous spills and fires on the *Deepwater Horizon*; the US Coast Guard had issued pollution citations 18 times between 2000 and 2010, and had investigated 16 fires and other incidents. The previous fires, spills, and incidents were not considered unusual for a Gulf platform and have not been connected to the April 2010 explosion and spill. The *Deepwater Horizon* did, however, have other serious incidents, including one in 2008 in which 77 people were evacuated from the platform when it listed and began to sink after a section of pipe was accidentally removed from the platform's ballast system. By April 20, 2010 the *Deepwater Horizon* well operation was already running five weeks late. Internal BP documents show that BP engineers had concerns as early as 2009 that the metal casing BP wanted to use might collapse under high pressure. In March 2010, the rig experienced problems that included <u>drilling mud</u> falling into the undersea oil formation, sudden gas releases, a pipe falling into the well, and at least three occasions of the blowout preventer leaking fluid. The rig's mechanic stated that the well had problems for months and that the drill repeatedly kicked due to high gas pressure providing resistance. A confidential survey commissioned by Transocean weeks before the explosion states that workers were concerned about safety practices and feared reprisals if they reported mistakes or other problems. On the day the rig exploded, 79 of the 126 people on the rig were Transocean employees. BP Vice President of drilling Patrick O'Bryan was on the platform two hours prior to the explosion. He had arrived to celebrate seven years without a "lost-time incident" with the rig's crew.





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Produced by The Strategic Projects Team Ref: ADMPT/10163/091112

The PDCA Management Central Line: "EVEN BETTER" looks like this



The Acting Line

Reviewing Performance





Acting on Learning







What's your pledge to effective fire risk management?