



7th CPSS

Chemical Process Safety Sharing

**Topic : Same same but difference
Management of Change (MOC)**

Webinar (Zoom)

May 7, 2021

Present Name : Sittichai Poolsawad

Position : HSE&Facility Manager

Company: Solvay(Bangpoo)

Specialty Chemicals Ltd.



Progress beyond



7th Chemical Process Safety Sharing (CPSS)

May 7, 2021, Thailand





Presenter Biography



Company : Solvay (Bangpoo) Specialty
Chemicals Ltd.



Current Position : HSE & Facility Manager

Working Experience : 22 years

Presentation Abstract:

Management of Change is the key tool to define the risk and mitigation from change. Many accidents occur from lack of MOC management. Digital transformation can support more effective. Same MOC but a different and better way of working.



Sittichai Poolsawad

Same same, but difference MOC



คุณเกี่ยวข้องกับ **Management of Change** อย่างไรบ้าง?

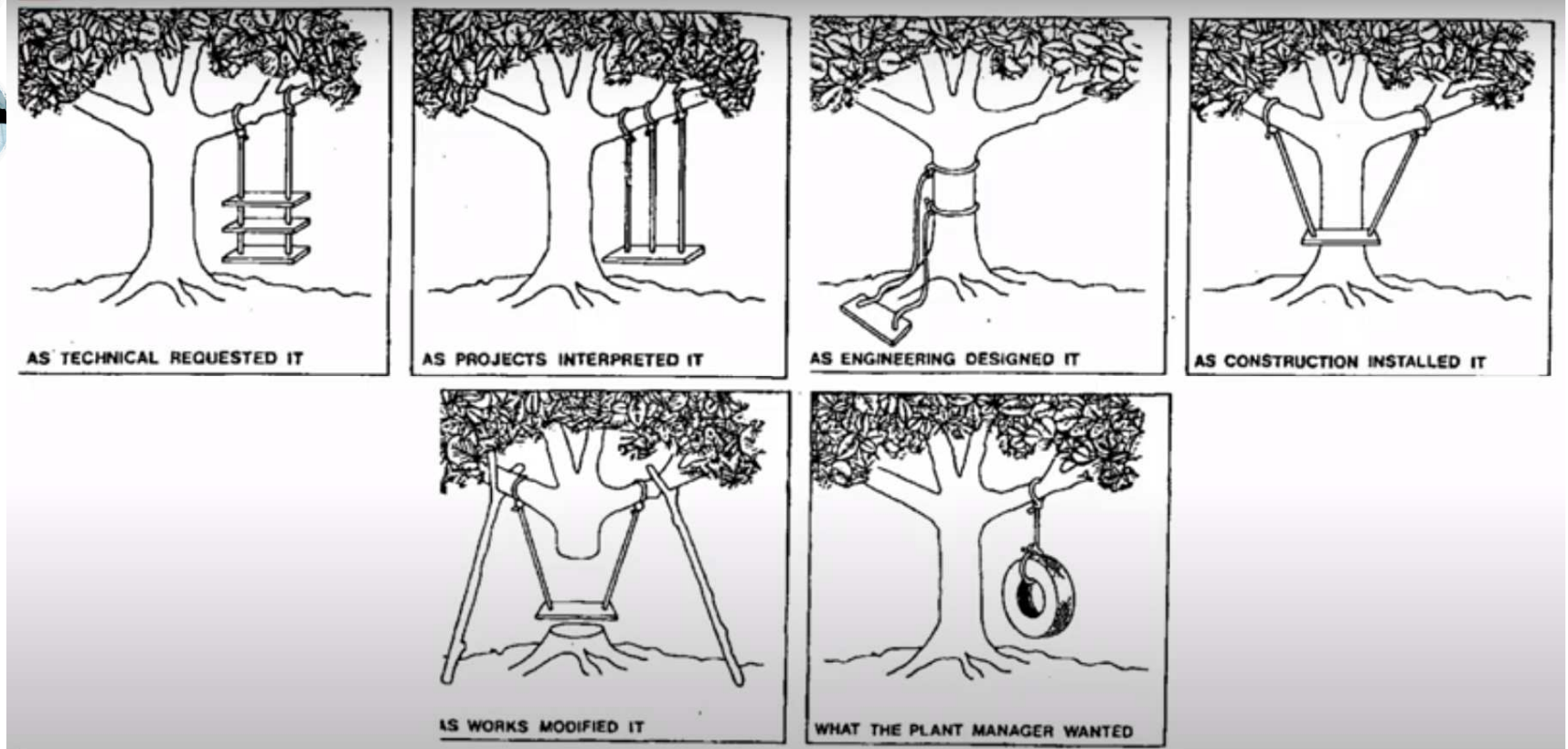
Management of Change

How are you involved?

- Change initiator
- Design
- Reviewer - Do we need a PHA?
- Approver
- PHA, PSSR leader / team member
- Close out
- Auditor
- Auditee
- Owner of the MOC standard / system / procedure
- Trainer
- The subject of MOC !
- Living with Change

Same same, but difference MOC

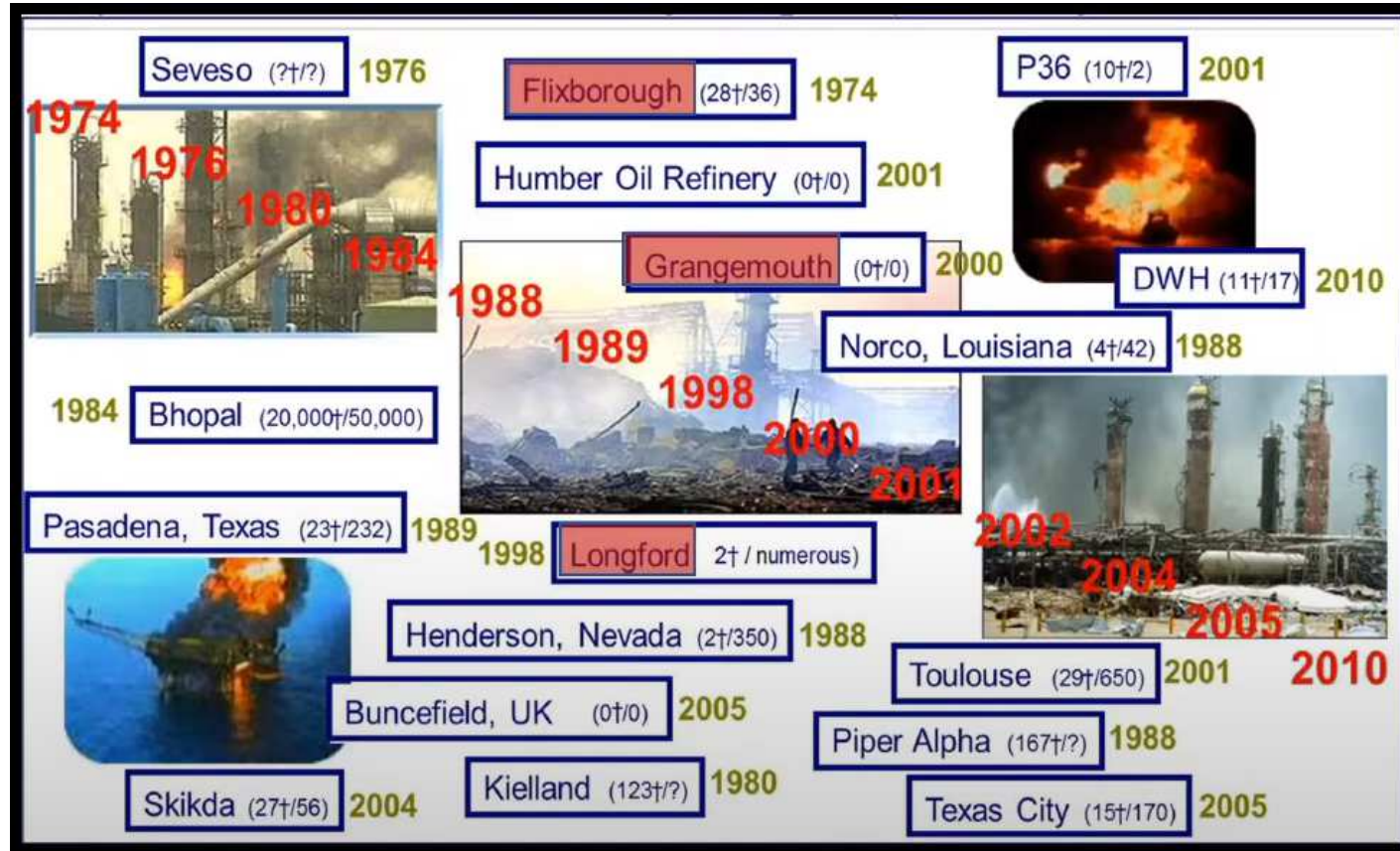
องค์กรของคุณจัดการ **Management of Change** ได้ดีเพียงใด ?



Why do we need MOC?

Same same, but difference MOC

อะไรที่เราได้เรียนรู้..จากความผิดพลาด?

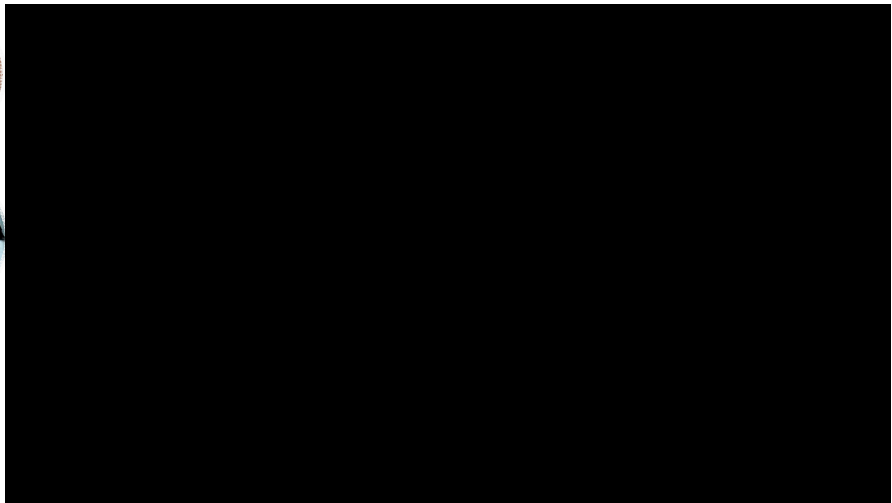


Take a journey through history looking into the “root causes” of events that resulted in some of the worst industrial incidents and accidents and one of the culprits you will find is “failure” in Management of Change (MOC).



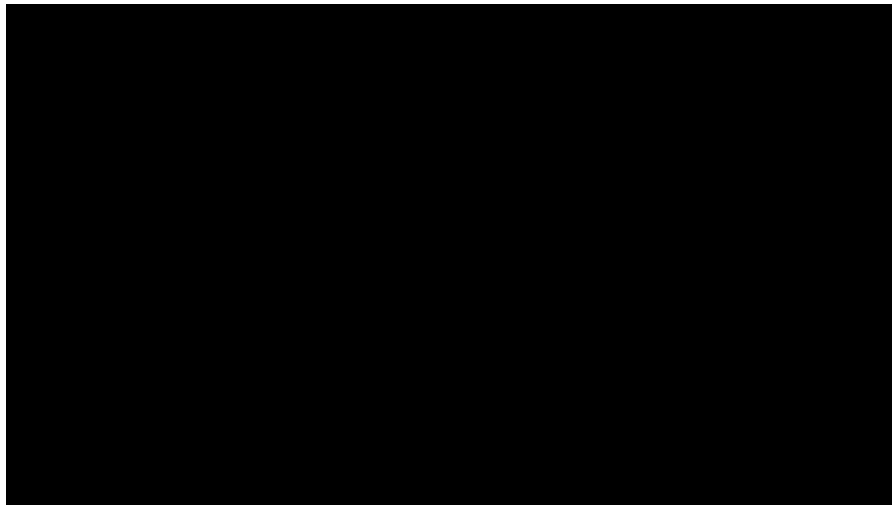
Same same, but difference MOC

อะไรที่เราได้เรียนรู้..จากความผิดพลาด?



1974

A **plant modification** occurred without a full assessment of the potential consequences. Only limited calculations were undertaken on the integrity of the bypass line. **No calculations** were undertaken for the dog-legged shaped line or for the bellows. **No drawing** of the proposed modification was produced



June 13, 2013

Williams Olefins Plant Explosion and Fire

- KEY ISSUES:**
- Overpressure Protection
 - Process Hazard Analysis
 - Management of Change
 - Pre-Startup Safety Review
 - Operating Procedures
 - Hierarchy of Controls
 - Process Safety Culture



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Same same, but difference MOC

อะไรที่เราได้เรียนรู้..จากความผิดพลาด?



OSHA
The Occupational Health and Safety Administration ([OSHA](#)) is the primary agency responsible for **ensuring compliance** with workplace safety guidelines in the United States. This agency is in charge of implementing a systematic approach called Process Safety Management (PSM) and does so under [29 CFR 1910.119](#).

2017

2017 OSHA issued the most citations during the Petroleum Refinery Process Safety Management National Emphasis Program (NEP). These areas include:
Process Safety Information (PSI)
Process Hazards Analysis (PHA)
Operating Procedures
Mechanical Integrity (MI)
Management of Change (MOC)

What can we learn from the regulator?

OSHA - Refining NEP PSM Enforcement Statistics

PSM Element	Number of Citations
Mechanical Integrity	198
Process Safety Information	177
Operating Procedures	174
Process Hazards Analysis	168
Management of Change	92
Incident Investigation	68
Contractors	44
Compliance Audits	41
Training	29

841
80%



- 1.Changes in Equipment Design
- 2.Changes in Operating Procedures
- 3.Changes in Inspection and Test and Maintenance Procedures
- 4.Changes in Facilities
- 5.Time Limitations on Temporary Changes

Reference



Adobe Acrobat

Same same, but difference MOC

What could we have done differently or better?

อะไรที่เราสามารถทำได้แตกต่างหรือดีกว่านี้?





Same same, but difference MOC

อะไรที่เราสามารถทำได้แตกต่างหรือดีกว่านี้?

pur·pose

/ˈpɜːpəs/

Noun

The reason for which something is done or created or for which something exists.

MOC?

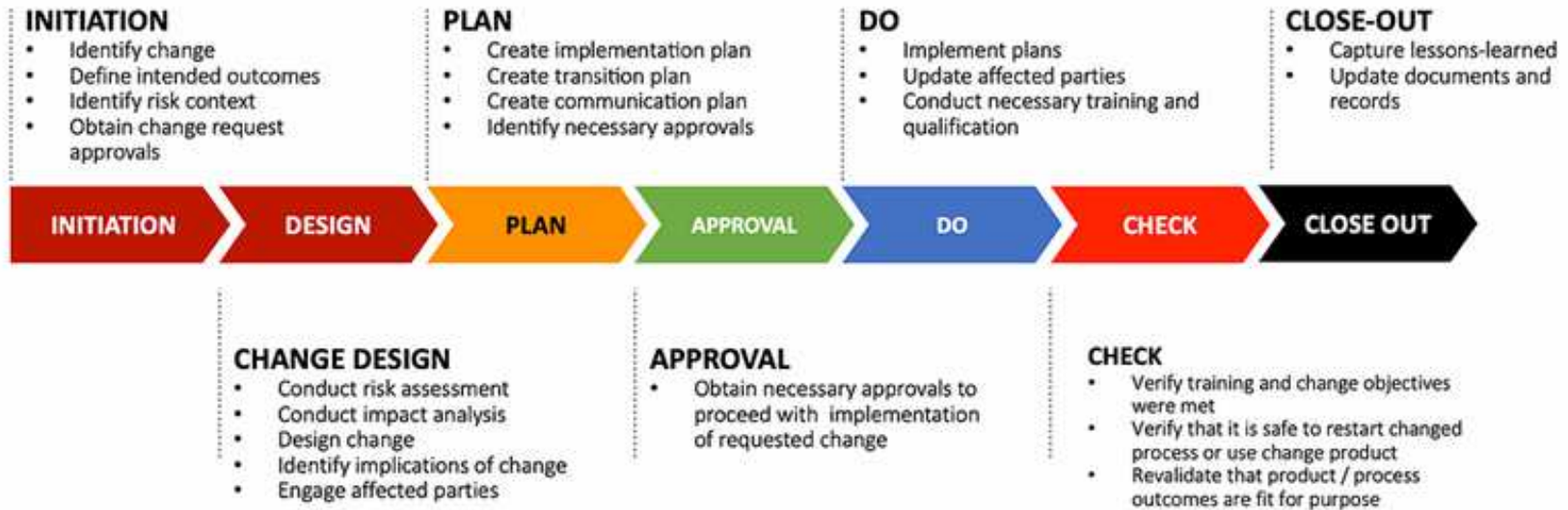
- Identifying potential hazards that a change can introduce, then assessing the risks associated with these hazards and dealing with them.

Changes to Plant

- This are changes that could affect the integrity of a plant or its ability to function properly.
- E.g., minor plant changes such as the addition of a sample point, to significant like a new processing unit or compressor.

Same same, but difference MOC

อะไรที่เราสามารถทำได้แตกต่างหรือดีกว่านี้?



How Can MOC Benefit Your Company?
It's true that evaluating and documenting organizational change can be time-consuming and costly. But it's 100% worth it.

Equipment and facilities will eventually fail, and people will be exposed to chemical, health, and other job-related risks when they do. It's your job to protect your employees, both legally and because it's the right thing to do.

Same same, but difference MOC

อะไรที่เราสามารถทำได้แตกต่างหรือดีกว่านี้?



MOC ในระบบเอกสารกระดาษ

จัดการยากและใช้เวลานานมาก

ถึงแม้เปลี่ยนมาใช้ระบบ **Information Management System** ด้วย โปรแกรมก็ควร
ปรับวิธีการทำงานเพื่อให้มีประสิทธิภาพ

When you discuss MoC what are the issues that people highlight?

"Some changes are handled by Projects and some are handled by Operations but does the organisation work together adequately?"

"Are we using the most effective tools when it comes to identifying hazards and assessing risks?"

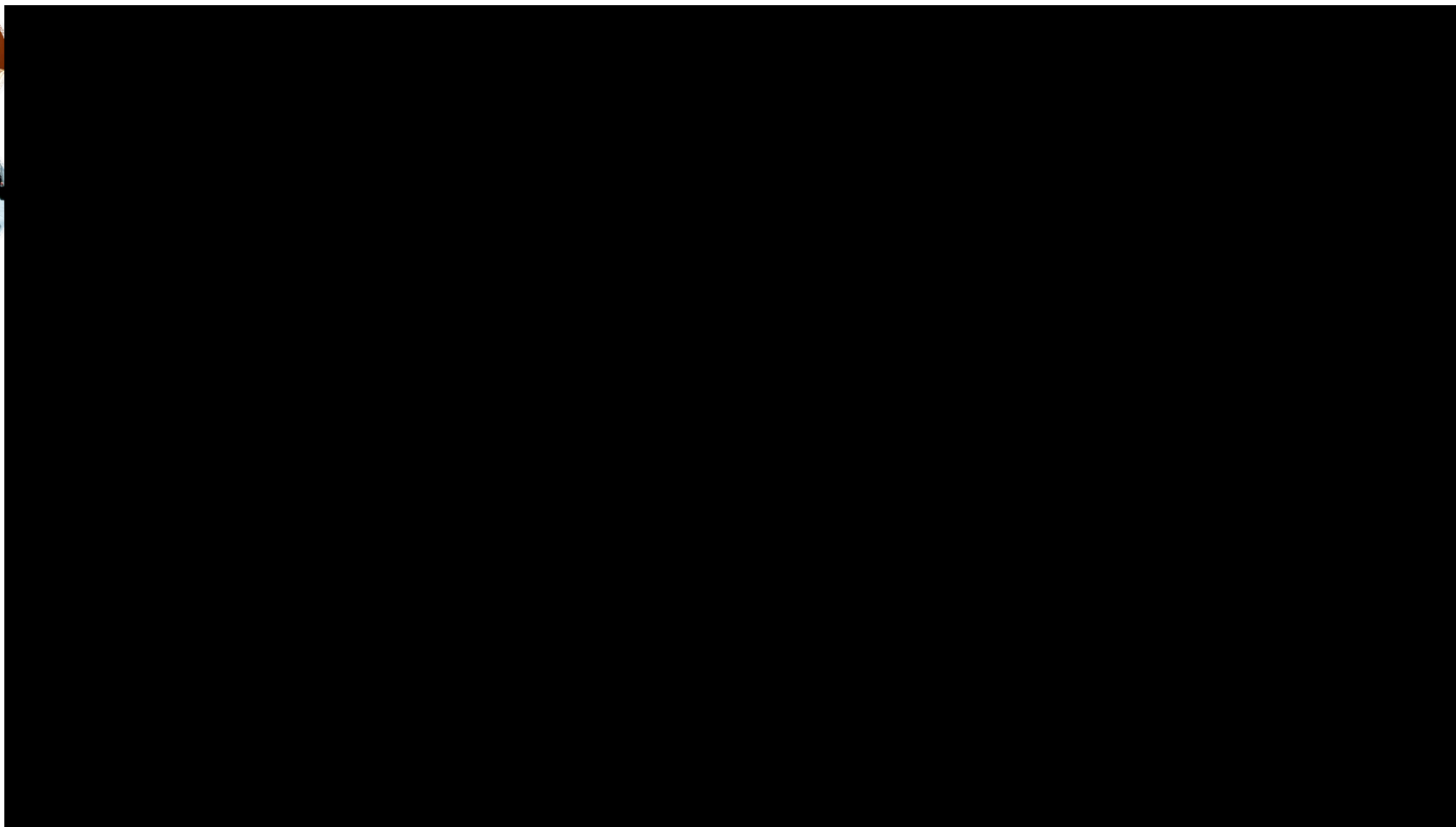
Group Discussion



โดยเน้นการทำงานร่วมกันเป็นทีม
ใช้การจัดการข้อมูลด้วย โปรแกรม
และมีตัวชี้วัด

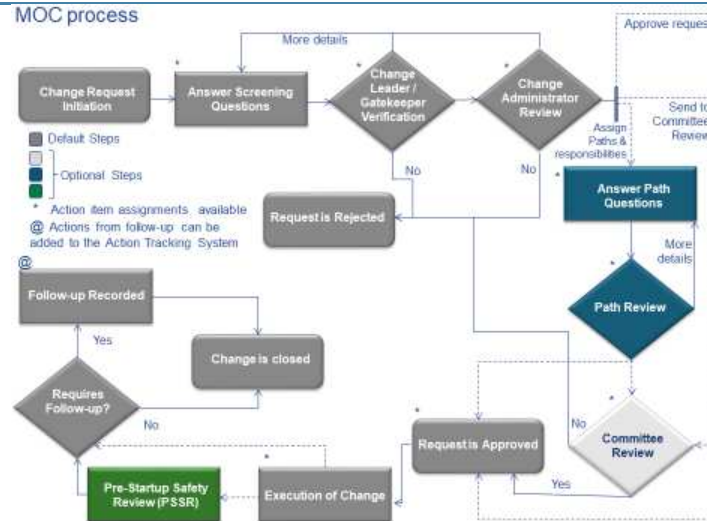
Same same, but difference MOC

อะไรที่เราจะปรับปรุงได้บ้าง?



Same same, but difference MOC

อะไรที่เราจะปรับปรุงได้บ้าง?



IF YOU CAN'T MEASURE IT, YOU CAN'T IMPROVE IT

Effectiveness of MOC System Key Performance Indicators

The number of MOCs performed each month.

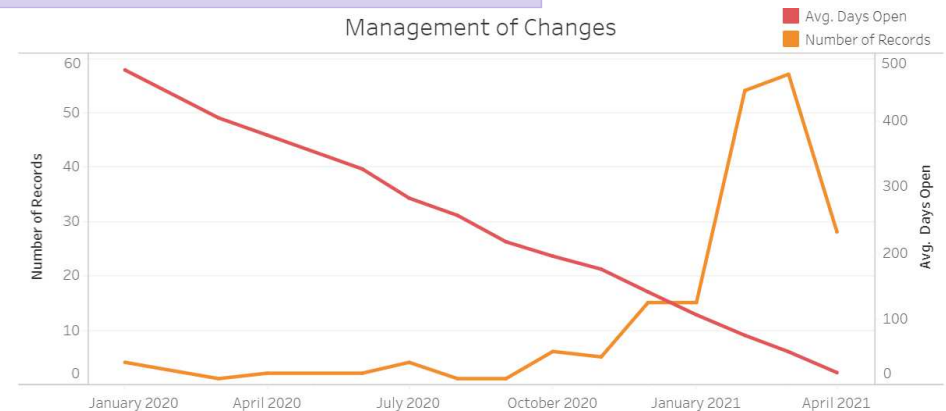
The monthly percentage of work requests that are classified as a change.

The percentage of emergency MOCs.

The average backlog of MOCs.

The average calendar time from MOC origination to MOC authorization

Management of Changes



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อะไรที่เราจะปรับปรุงได้บ้าง?

1. Lack of a clear definition of what a change is
2. Lack of formal training and no clear definition of competency requirements
3. Lack of guidance on when to conduct Hazard Identification and Risk Assessment activities
4. Lack of a visible linkage to updating of Process Safety Information
5. No or poor management systems in place for tracking closure
6. Lack of the use of Process Safety Performance Indicators



**SAME
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BUT
DIFFERENT**



Thank you for your attention



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