Deferred maintenance – a major industry challenge?

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Session 14: Process Safety
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Framing the “deferred maintenance” question...

- Introduction
- Global industry – behaviour drivers
- Australia industry
- Maintenance indicators
- Recent events
- The “Effective Operator”? 
- Establishing better practices
- Next steps & questions
Shell to cut up to 9,000 jobs as oil demand slumps

Shell has said it plans to cut 7,000 to 9,000 jobs as it responds to challenges including the slump in oil demand amid the Covid-19 pandemic.
Offshore facilities – all need maintenance
Australia - offshore hours

Unique event – or start of a trend?
What else is in this data?
Maintenance: safety relationship?
Seeking “better practices”

- Industry survey April/May 2021
- Qualitative review
- Inevitable differences in approach & risks
- Aiming to identify better practices
- The “effective operator”
- Engage industry
- Targeted inspections

Work in progress….
From theory to facts

Theory
Offshore hours worked dropped significantly from March 2020. Deferral of maintenance can be expected as a result, including increased safety risk.

Method
Surveys and sharing contributed to understanding risk and supported industry best practice development in tackling Covid-19 health risks.
- Is deferred maintenance linked to safety risk?
- Can best practice sharing assist industry in identifying risks and best practice control measures for deferred maintenance?

Responses dependent on scale and scope of business.
Industry survey – Deferred Maintenance

**Aims:** How did industry accommodate reduced hours offshore? Links to safety? What does best practice look like? Can benchmarking and information sharing support industry performance?

**Phase 1:** Initial high level view, basis of industry benchmarks. To facilitate response comparison, survey set at the “governance” level (i.e. do you have a system, high level info associated with system, rather than give us your system and we’ll decide how good it is)

Expect other phases as we gather more information.
Thank you for your contributions...
Survey Findings

Do all companies have a documented process for setting maintenance Budget and Managing risk associated with Maintenance deferral?

*Yes they do!*

....So....we should have nothing to worry about?

The remaining survey questions ‘dug into’ the processes to understand a bit better...and it was discovered...

“While there were no 100% ‘Ineffective Operators’, there were also no 100% ‘Effective Operators’ either”

Some examples of ‘**what good looks like**’ were discovered...
<table>
<thead>
<tr>
<th>Topic</th>
<th>Effective Operator traits</th>
<th>Ineffective Operator traits</th>
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| Company Culture – Maintenance Deferral     | • Reasons outside of operator control (Inclement weather, vendor availability, material availability*, status of material on receipt) | • Shutdown timing constraints  
• Spare parts/material availability  
• Access to equipment  
• Resource constraints  
• Work inefficiencies  
• Work raised late / late scope changes |
| Deferring Maintenance – risk assessment – top considerations | • **IS IT SAFE TO KEEP OPERATING?**  
• State of other MAE controls for the affected MAE  
• Alternative options considered  
• Impacts of the change are understood  
• Previous equipment deferrals are considered  
• Temporary controls are considered  
• Learnings for the future | • Consequence and probability (this is the output, not an input/consideration)  
• Next opportunity to complete  
(Suggests manipulation of LACD to meet production schedule) |
Initial assessment against “effective vs ineffective operator” model:

Recent examples of corrosion/poor maintenance indicate there are gaps.

While some useful ‘traits’ were identified by the survey, the 2020 data has not been explained. Is this going to create a longer term impact? Effect of technology?

Survey benchmarked the status of documented process for the management of deferred maintenance across the industry. Are the design and execution of the processes robust?
Next steps – in parallel

• Consolidate findings from survey
• Engage with operators on their specific system to obtain better information
• Discuss with industry including CEO level
• Obtain industry feedback on best practice development
• Targeted inspections to determine robustness of deferred maintenance system design & description
Deferred Maintenance

Questions?