Knowledge Development within Industry P&A practices

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Contents

• Why is Knowledge Management key to Well-Safe Solutions?
• What are current issues with Knowledge Management.
• How do we build on current systems
• What does our model lesson learnt system look like?
• How do we further progress from here?

Same Old Thinking

Same Old Results
What Do We Actually Mean by Knowledge Management?

• “Knowledge Management is the process of capturing, distributing, and effectively using knowledge”
  Tom Davenport

• Encompasses having the correct organisational structure and processes in place to ensure project execution efficiency and decision making, lower costs and improved communication across an organisation.
Why is Knowledge Management Key to Well-Safe Solutions?

- We are performance driven
- Continued success is dependent on a kaizen mentality
- A large aspect of this is lessons learnt
- Drive to consider Well Decommissioning as a production line...then identify how we can completely eliminate all waste
- This is an industry wide challenge
## Current Challenges with Knowledge Management?

<table>
<thead>
<tr>
<th>Behaviour</th>
<th>Organisation</th>
<th>I.T Systems</th>
<th>Processes</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Individual and team discipline.</td>
<td>• Internal to company</td>
<td>• Use of excel</td>
<td>• Do current processes allow lessons learnt to be captured</td>
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<tr>
<td>• What size of lesson gets recorded?</td>
<td>• Communication between departments</td>
<td>• Often just a database of information</td>
<td>• Are the instructions in place to ensure past lessons are considered and incorporated</td>
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<tr>
<td>• Is it only a lesson if it effects critical path?</td>
<td>• How well do we learn lessons from supply chain</td>
<td>• Require large amounts of manual input</td>
<td>• Who has responsibility and accountability</td>
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<tr>
<td>• Are lessons written so that anyone can understand them, regardless of experience?</td>
<td>• P&amp;A activities are typically piece-meal with cross-discipline teams pulled together for short period?</td>
<td>• Has there been a system built with well abandonment in mind?</td>
<td></td>
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<td>• Are they systematically applied at feed – planning stage.</td>
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## What is the Functionality of Lessons Learnt I.T Systems Available

<table>
<thead>
<tr>
<th>Most Basic</th>
<th>Specific Designed Systems</th>
<th>Latest Developments</th>
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</thead>
<tbody>
<tr>
<td>• Excel spreadsheet</td>
<td>• Incorporated as part of a reporting software</td>
<td>• Reporting software's that are Microsoft azure based, and can suggest lessons learnt automatically into Microsoft office documents.</td>
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<tr>
<td>• Access database</td>
<td>• HTML based</td>
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<tr>
<td>• HTML based</td>
<td>• Find key features by searching key words. Either in the description or if system has potential for keyword to be assigned</td>
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<tr>
<td></td>
<td>• Cloud based database with more functionality, can link to an event.</td>
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Creation of Knowledge Management System
Well-Safe Solutions I.T Landscape
Well-Safe Production line

1. Well package information is communicated to operations teams
2. Timely Well Decommissioning
3. Delivery of required parts
4. Producing materials and tools required

The well package is efficiently incorporated into the rig club

- Detailed Engineering Plan
- Sequence Plan
- Well Package Agreed

2. Efficiently Decommissioning Wells with different architecture one at a time, in a timely manner while ensuring high quality, safety and reduced environmental impact

Only the required materials and tools used are delivered just in time

3. Well-Safe Solutions Dockside Yard

3rd party service partners

4. Efficiently ordering, producing and replenishing

Operator
Customer
What Do We See As A “Model” Knowledge Management

Integration of I.T Based System
• Integration of an I.T based system that feeds into Well-Safe Solutions well-decommissioning Delivery Process.

Lessons Learnt Applied
• At each stage gate, lesson learnt are applied, and mitigations deposited in management system for inclusion in the next revision of processes, procedures and work instructions.

Real Time Analysis
• Capability to automatically pull inefficiencies from real time feeds from assets and compare to targets. Then being able to make suggested lesson learnt input with links to relevant operational step.

Feed to All Departments
• A system that feeds into all departments and provides an auditable trail.
Future Steps

Lessons Learnt Applied
• On commencement of a project, we will run though the process, learn and apply iterations to improve the process, learn mistakes and implement changes in a validated and considered way.

Find the Missing Piece
• Missing piece of jigsaw is an I.T support system that can fully integrate with this, both in assisting the identification of lower performance and identify a reason.

Apply to Whole Business
• This needs to apply to all aspects of our business, so input from all departments can be seen.