Brunei Shell Petroleum Fabrication
A new way of working

Brunei Shell Petroleum (BSP) is a world-class company and the largest oil and gas producer in Brunei Darussalam. BSP supplies 350,000 barrels of oil and gas equivalent every day through an extensive and complex land and offshore infrastructure – over 200 offshore structures linked by over 2,000km of pipelines, recovering oil and gas from over 4,500 individual reservoirs produced through more than 800 wells.

As as the backbone of Brunei’s economy, contributing around 90% to Brunei’s oil and gas revenues, which accounts for over half the country’s GDP and 90 percent of total export earnings.

ANALYSIS
Renoir was appointed to conduct an analysis and improvement program for the Fabrication Department of BSP, a critical factor for the success of ORMC and offshore execution goals.

The key project objective was to improve the existing systems, processes, working practices and particularly the behavioural aspect of the people, to create change from within the organization and improve material availability for the Fabrication contractors.

The focused deliverables, called Measure of Success (MOS) were: (1) Improve Fabrication Scope Completion and (2) Improve Fabrication Cut-off Compliance. The baseline and target were set as shown in Diagram A.

<table>
<thead>
<tr>
<th>MOS</th>
<th>DEFINITION</th>
<th>BASELINE</th>
<th>TARGET</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope Completion</td>
<td>Completed fabrication (M22 m/hr) vs. Frozen worklist (Total mhrs) by the signed off Milestone Date</td>
<td>24.42%</td>
<td>75%</td>
<td>Consider Q until T:4M (Y materials delivered) – freezing point of MOS</td>
</tr>
<tr>
<td>Cut-off Compliance</td>
<td>Actual vs. plan for finish fabrication based on the signed off Milestone Date (days)</td>
<td>80 days</td>
<td>40 days</td>
<td></td>
</tr>
</tbody>
</table>

Diagram A : AER/1 Measure of Success

PROJECT APPROACH
The Project was kicked off with Renoir’s Focus Process® during which several end to end process diagnostic studies were conducted to identify the improvement areas. Twelve new system elements were subsequently developed during this stage.

In addition, several engagements across different departments were conducted through brown paper and white paper sessions. All feedback was considered in order to ensure buy-in, identification and prioritisation of the most important problems to enable and ensure that the Fabrication Department achieved its MOS goal.

PROJECT IMPLEMENTATION
Renoir, together with the AER/1 Management Action Team were able to design, develop and install improved Management Control Systems (MCS) and work processes for this department. The MCS and work processes

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provided complete information loops from the start through completion of maintenance execution jobs, empowering managers to take effective action and monitor department performance.

Throughout the implementation, training program and on the job coaching were provided and the BSP Fabrication Team responded with great commitment and full cooperation. As a result, the new system elements developed for the New Ways of Working began to show good results, both operationally and behaviourally.

The fabrication escalation process from the ground level meetings (Operational Weekly Meeting), as well as a more structured walkaround report, ensured that bottlenecks within fabrication were highlighted and resolved in a timely fashion. Moreover, tools developed during the process, such as the MIPS Integrated Report, provided a high-level picture of the fabrication progress and status by enabling management to take actions where relevant.

As a result, Fabrication significantly improved its MOS as shown in the following chart.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Baseline</th>
<th>Target</th>
<th>Current Result</th>
<th>Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope Completion</td>
<td>24.4%</td>
<td>75%</td>
<td>57.3%</td>
<td>135%</td>
</tr>
<tr>
<td>Cut-off Compliance</td>
<td>80 days</td>
<td>40 days</td>
<td>57.5 days</td>
<td>28%</td>
</tr>
</tbody>
</table>

Both MOS measures have improved by 135% and 28% respectively, and based on the current Fabrication progress and the Team’s new skill levels and enthusiasm, success with future Turnarounds looks promising.

**SUSTAINABILITY**

To ensure that sustainability of New Ways of Working stays with the BSP Fabrication Department, a Standard Operating Procedure (SOP) and sustainability plan was created and agreed by Fabrication Management who are confident that it will happen.