Technical Session 6
Malaysia Offshore Construction Man-hours (NORMS)

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Rock bottom oil price has led to one of many cost reduction initiatives including PETRONAS NORMS

![Average annual Brent crude oil price (US dollar per barrel)](chart)

NORMS is one of the initiatives under PETRONAS CORAL 2.0 agenda to optimize costs and increase efficiencies based on work productivity.

Source: The Statistics Portal, 2018
General & 3rd Party Activities

OFFSHORE SCOPE

CONSTRUCTION

Malaysia Offshore Construction Man-hours (NORMS) initiative is a standard guideline for estimating the man-hours for offshore HUC and TMM activities in order to ensure practical execution of the works by PETRONAS and other respective PAC operating in Malaysian.
DEVELOPMENT OF NORMS

Development & Rollout NORMS manual

Roll out of the Malaysia Upstream NORMS Manual to all PACs.

Establishment of NORMS Tools for estimating manhours based on design data.

NORMS Revision 1
- Improved accuracy of the NORMS manual.
- Improved efficiency of the actual NORMS by PM-MCM Contractors.

CORAL 2.0
"Reimagining Cost Competitiveness"
Initiated in 2015

Data Analysis
NORMS data collection, analysis and development.
Syndication with Malaysian Oil & Gas Operators on data conditioning.

Implementation of NORMS
- NORMS is implemented under the newly awarded Pan Malaysia Maintenance, Construction and Modification (PM-MCM) Contract for year 2018 to 2023.
- Situational assessment between Established norms vs. Market norms.
WHERE DO CONTRACTOR’S PRODUCTIVITY STAND COMPARED TO PETRONAS NORMS

CONTRACTOR A

CONTRACTOR B

CONTRACTOR C

CONTRACTOR D

CONTRACTOR E

PETRONAS NORMS

% Deviation

AVERAGE DURATION PIPING WELDING (hours)

117%

21%

-12%

32%

17%

PETRONAS NORMS

PIPING INSTALLATION

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VALUE CREATION THROUGH NORMS

**CHALLENGES**
- Base hours of work.
- Incomplete project data
- Incomplete actual man-hours recorded
- No recordable actual company downtime factors.
- No established contractor performance recorded based on man-hours downtime at site.
- Market-driven

**OPPORTUNITY**
- IDENTIFY SERVICE PROVIDER’S GAP VS. PUBLISHED PETRONAS NORMS

**CONDITIONS**
- HOURS
- Productivity
- External Factor
- UNIT PRICE

**IMPROVEMENT**

**PROJECT EFFICIENCY**
- COST OPTIMIZATION

**REDUCED COST OF EXECUTION**
- COST

**COST**
- High cost of work execution

**IDENTIFICATION**
- PRODUCTIVITY
- NORMS

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**IDENTIFICATION**
- PRODUCTIVITY
- NORMS
NORMS – WHO ARE THE USERS

- PETRONAS
- PETROLEUM ARRANGEMENT CONTRACTORS
- OFFSHORE CONTRACTORS

2017 PHASE 1 ROLL-OUT
2019 PHASE 2 ROLL-OUT
COLLABORATORS FOR THE ESTABLISHMENT OF CONSTRUCTION NORMS
Thank You
WHERE DO CONTRACTOR’S PRODUCTIVITY STAND COMPARED TO PETRONAS NORMS

Highlights:
1) PETRONAS NORMS will have a revision for further improvement on accuracy to the real industry practice.
2) PETRONAS to target minimum 5% improvement on Contractors’ NORMS by annually under PM-MCM.
Ultimate goal – improve efficiency of Offshore contractors operating in Malaysia

Roll out to PAC
• Malaysia Upstream NORMS Manual.
• NORMS Tools.

Data Revalidation:
• NORMS data revalidation based on contract execution, analysis and development (Phase 2).
• Introduction of cost efficiency element to Norms

NORMS data collection, analysis and development.

Execution:
• Embed NORMS in Offshore Construction Contracts (Pan Malaysia Maintenance, Construction and Modifications contract)
• PAC to execute offshore activities based on Contractor’s Norms.
• Data collection.

Execution Phase 2:
• Introduction of NORMS