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**CORAL 2.0**

**TECHNOLOGY  
REPLICATION  
THRUST**

**FORUM**



# WELCOME

30 November 2018 - Sand Management  
3 December 2018 - Drone, Robotic & Micro-ROV

Kuala Lumpur Convention Centre

# Sand Forum (30<sup>th</sup> November 2018)

| Time          | Agenda  |
|---------------|---|
| 08:00-09:00   | Registration and Breakfast  |
| 09:00-09:15   | Opening Remarks<br>by Encik En Mohd Hisham  |
| 09:15-09:30   | Scene Setting<br>by Anish Gupta   |
| 09:30 – 09:50 | Murphy Sand Management Shaing & Challenges by Mr Michael Tighe                                |
| 09:50 – 10:10 | SGS- Sand Sampling In Gas Wells<br>Challenges & Conceptual Solutions<br>by Mr Suresh Murugiah |
| 10:10 – 10:30 | Exxon Sand Management Strategy<br>by Mr Saraveen  |
| 10:30 – 10:45 | Tea Break and Photo Session   |
| 10:45 – 11:05 | 4-Phase Desander Updates<br>by Mr Jorgen Bruntveit  |
| 11:05 – 11:25 | PCSB Surface Sand Management Campaigns<br>By Ms Nur Farah Izwana Salleh                       |
| 11:25 – 11:45 | Ceramics Sand Screen – Lessons Learnt<br>By Mr Cheol Hwan Roh                                 |
| 11:45 – 12:05 | NMB Sand Management Sharing & Challenges<br>By Ms Lianne Heah                                 |
| 12:05 – 12:15 | Technical Session: Feedback<br>by Mr Anish Gupta  |
| 12:15 – 12:30 | Closing Remarks & Soft launch of GTC Portal<br>By Mrs Nurul Azni                              |
|               | Lunch   |



# OPENING REMARKS

by

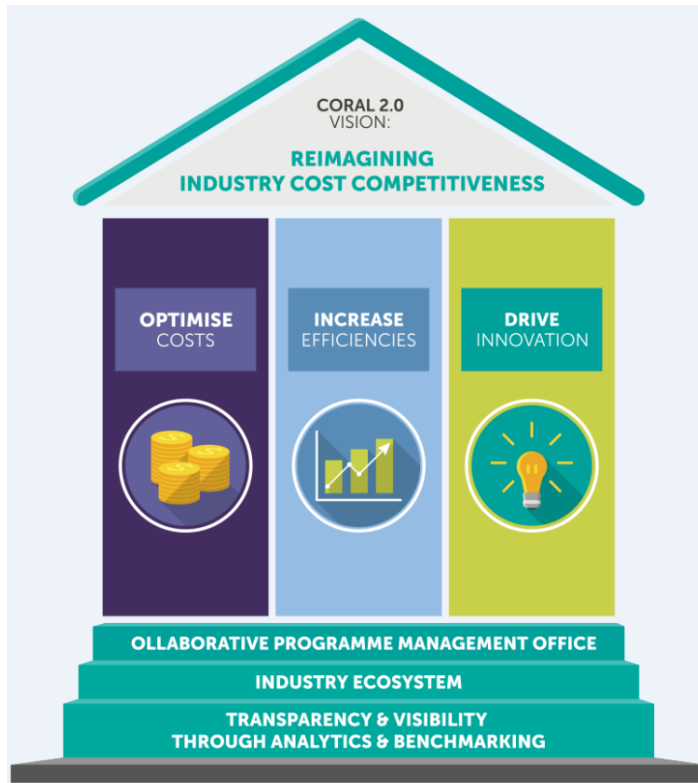
**En Mohd Hisham Md Noor**

*Head,*

*Asset Value Management Production Operation Management*

*from MPM*

# CORAL 2.0 is a result of collaboration across all PACs in Upstream Malaysia since 2015 to navigate through the low oil price environment



- 1** Inculcate a **cost conscious mindset** across the industry
- 2** Achieve **world-class performance through transparency & benchmarking**
- 3** Increase **collaboration and infuse global best practices** into Malaysia
- 4** **Sustainability** through enablers

**RM**  
**13.9 Bil**

As at Sept'18

# TRT initiative was formed in 2016 to address the need for a platform to drive adoption and replication of proven technologies to increase efficiencies, and in turn reducing costs in managing the assets

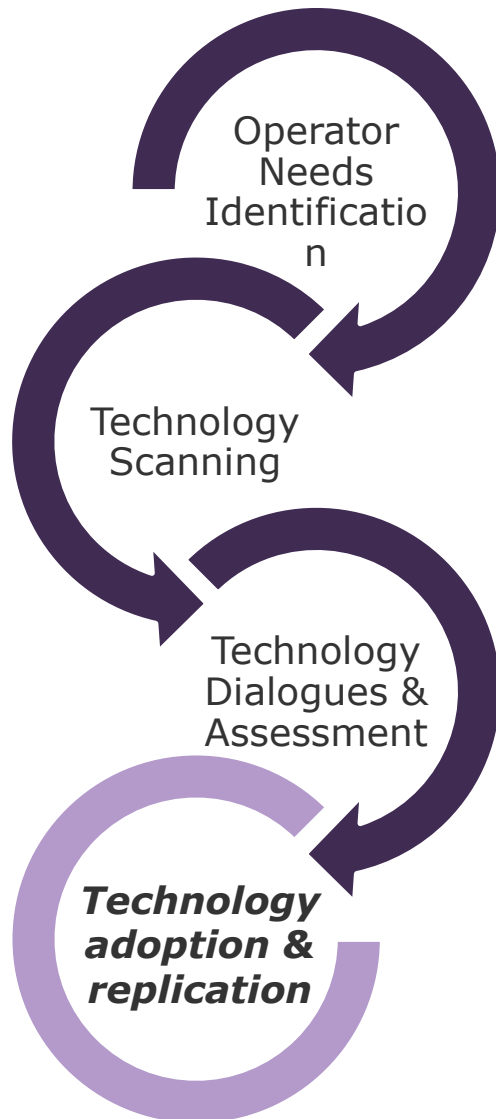


Provide background of Technology replication opportunities in Malaysia

24 July 2017

| Situation  | Challenges  | Technology Replication Thrust  |
|--|---|--|
| <ol style="list-style-type: none"> <li><b>1. Low oil prices to continue</b> <ul style="list-style-type: none"> <li>Crude oil prices are expected to stay below &lt;USD 60/bbl</li> <li>O&amp;G companies have extracted quick cost reduction through capex deferral and hedging</li> <li>2016 onwards, companies are expected to explore other measures</li> </ul> </li> <li><b>2. New technologies adopted by global O&amp;G cos to reduce costs</b> <ul style="list-style-type: none"> <li>New technologies adoption are key to success at Statoil, Shell, Exxon etc.</li> <li>Malaysia's increased dependency on mature fields is a catalyst for change</li> </ul> </li> <li><b>3. Upstream Malaysia focused technology ecosystem must grow</b> <ul style="list-style-type: none"> <li>Limited success in achieving synergies across ecosystem players incl. operators, suppliers, academia, financial svcs cos, regulatory bodies</li> </ul> </li> </ol> | <ol style="list-style-type: none"> <li><b>1. Technology selection</b> <ul style="list-style-type: none"> <li>Lack of structured framework (e.g. stage-gate/ SME involvement) for consistent selection of technologies</li> </ul> </li> <li><b>2. Adoption of technology</b> <ul style="list-style-type: none"> <li>Limited business model/ regulatory construct for ease in adoption</li> <li>Limited propensity of operators to adopt even "proven" technologies</li> </ul> </li> <li><b>3. Local Content Development</b> <ul style="list-style-type: none"> <li>Long-term planning and capability development for industry ecosystem through technology lifecycle</li> <li>Response to evolving global scenario</li> <li>Leverage government funding</li> </ul> </li> <li><b>4. Value delivery</b> <ul style="list-style-type: none"> <li>Track and deliver cost savings from adoption of new technologies</li> <li>Sharing of lessons learned x-operators</li> </ul> </li> </ol> | <p><b>Drive adoption of technologies focused on cost reduction by:</b></p> <ol style="list-style-type: none"> <li>Technology Screening</li> <li>Technology Integration across cost buckets &amp; themes</li> <li>Business model for bringing foreign technologies</li> <li>Local Content Development- encourage home-grown technologies</li> <li>Implementation Roadmap</li> <li>Field-testing of "unproven" technologies</li> <li>Recommendations for regulatory changes</li> </ol> |

# MPM as regulator will continue to play an active role in promoting and managing technology adoption and replication in Malaysia



- Current operational challenges
- Collective wishlist from PACs, e.g. technology for the future
- Solution offering by worldwide technology vendors
- Agreed pilot implementation in Malaysia
- Sharing from early adopters
- Quarterly updates on pilots
- Quarterly technology dialogue
- *Technology replication business model*
- *Framework with enhanced processes in technical approval and procurement*



# SCENE SETTING

by

**Mr Anish Gupta**

*Workstream Lead, TRT*



# MURPHY SAND MANAGEMENT SHARING & CHALLENGES

by

**Mr Michael Tighe**

*MOC*





# SGS- SAND SAMPLING IN GAS WELLS CHALLENGES & CONCEPTUAL SOLUTIONS

by

**Mr Suresh Muruqiah**

*SGS*



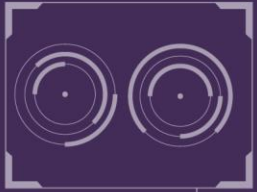
# EXXON SAND MANAGEMENT STRATEGY

by

**Mr Saraveen**

*EMEPMI*

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# TEA BREAK & PHOTO SESSION

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# 4-PHASE DESANDER UPDATES

by

**Mr Jorgen Bruntveit**

*FourPhase*



# PCSB SURFACE SAND MANAGEMENT CAMPAIGNS

by

**Ms Nur Farah Izwana Salleh**

*PCSB*



# CERAMICS SAND SCREEN- LESSON LEARNT

by

**Mr Cheol Hwan Roh**

*PCSB*



# NMB SAND MANAGEMENT SHARING & CHALLENGES

by

**Ms Lianne Heah**

*HESS*



# TECHNICAL SESSION: FEEDBACK

by

**Mr Anish Gupta**

*Workstream Lead, TRT*





# CLOSING REMARKS & SOFT LAUNCH OF GTC PORTAL

by

**Ms Nurul Azni**

*MPM*

# MPM through Asset Value Management will continue advocating Efficiency, Profitability & Sustainability elements into Malaysia Upstream industry to better safeguard overall enterprise values in E&P business

## ASSET VALUE MANAGEMENT

### EFFICIENCY

Maximizing Efficiency through right resource allocation for PETRONAS commercial-centric management

1. Steward value optimization for Malaysia-owned Assets through Asset Grouping.
2. Steer prudent budget and resource allocation to maximize growth and profitability.

### PROFITABILITY

Improving Profitability of Upstream Malaysia Operations through strategic cost take-outs initiatives

### SUSTAINABILITY

Sustainability through institutionalizing capability of;

1. Value optimization
2. Cost optimization
3. Initiative Management

Facilitated through structured Change Management

### DIGITALIZATION

### TECHNOLOGY

**“Does technology drive us, or do we drive technology?”**



# Global Technology Collaboration is the virtual technology centre and platform for TRT to expand its benefit through upstream industry



## OPPORTUNITY

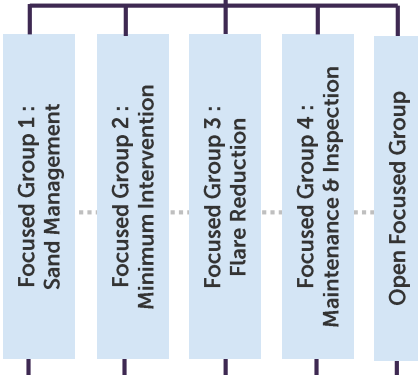
1. The platform allows for **technologies replication** since it is openly shared, discussed and debated.
2. Allows for **co-creation** of new technologies.

## GTC PLATFORM

- Technologies parked here will be evaluated by the community.
- An icon will be given if it has been evaluated

Online

Offline



- A discussion by focused group of SMEs and end-users to evaluate the technologies proposed in the platform
- Group discussion in threads to solve problems of business needs collaboratively.

- Pilot implementation to volunteered candidates
- Technology forums held by focused group to discuss and evaluate the technologies

- Other PACs can help to solve if they have the technology / process used in their PACs.
- Vendor can propose their technology
- Academia can propose their research or technology.

- Co-create a new solution technology through focused group which consist of subject matter experts and end-users

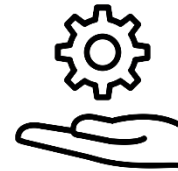
# GTC Portal acts as a virtual platform for all parties in the industry to benefit from one another

## PACs



- Access to tested & proven technologies available in the market
- An avenue to obtain feedback, opinion & insights from fellow practitioners in oil & gas industry
- An avenue for crowd-sourcing of ideas to solve operational challenges

- An avenue for a more effective promotion of technology offering
- An avenue to understand current challenges/technology needs in Malaysia upstream operations

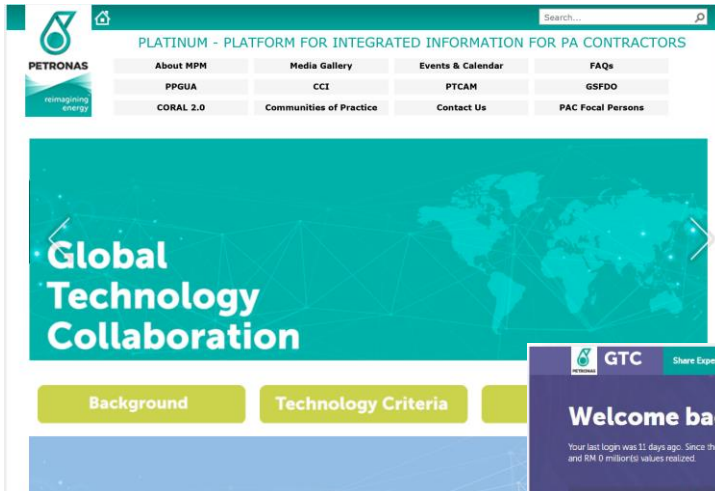


## Technology Vendors

- Promote higher and properly-risked technology adoption in Malaysia upstream
- Increase the pace of technology evolution in Malaysia oil & gas industry



# Current portal is designed as an i-MVP, developed by GTD at no cost



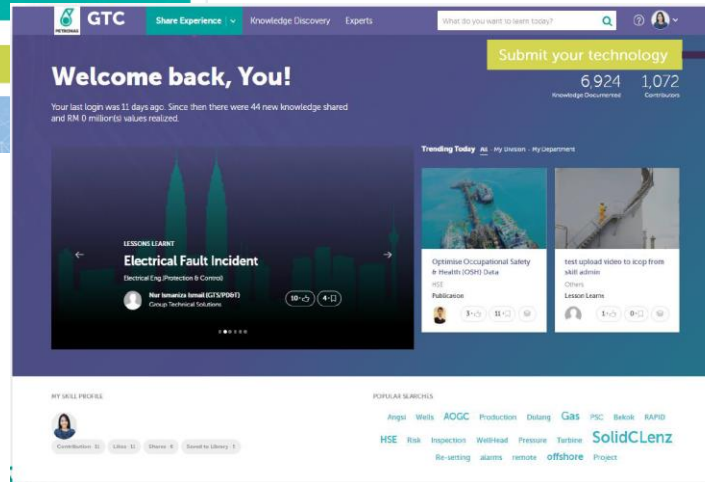
Target users:

- Other engineers from PETRONAS & PACs



Target users:

- SMEs in TRT team
- Members of various COPs



Nov 2018: Making it Available (i-MVP version)

Target: 100 users

2019: Making it Desirable (web-responsive version)

Target: 1000 users

2020: Making it Sexy (mobile app version)





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