

MOGSC

MALAYSIAN OIL, GAS & ENERGY SERVICES COUNCIL

National-level industry association born in 2003 promoted and driven by the industry players. MOGSC's membership includes over 500+ companies representing all sectors within the industry from downstream to upstream services and equipment players.

Our key mission is to promote the capabilities and expertise of the Oil, Gas & Energy Services and Equipment providers.



Source: MPRC OGSE Blueprint



MAIN PRIORITIES



**INDUSTRY
PLAYERS**



**PETRONAS
& PACS**



**RELEVANT GOVERNMENT
MINISTRIES & AGENCIES**

KEY FOCUS AREAS



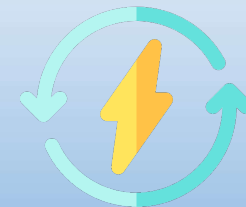
**ADDRESSING LIQUIDITY
IN THE MARKET**



**FAIR & SUSTAINABLE
CONTRACTING
MECHANISM**



**CHAMPIONING LOCAL
INDUSTRY PARTICIPATION &
INTERNATIONAL
EXPANSION**



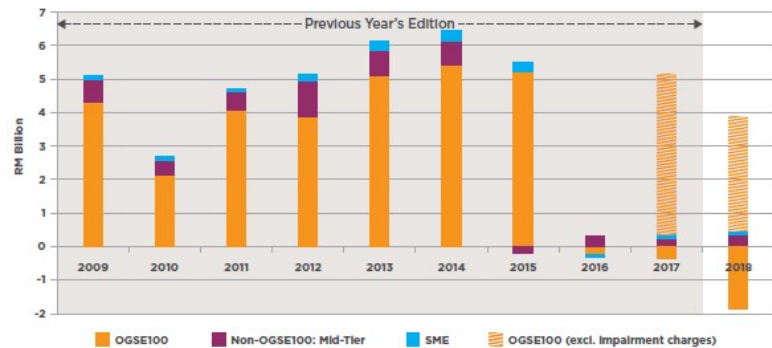
**ADVOCACY FOR ENERGY
TRANSITION &
TRANSFORMATION**

Malaysia OGSE continue to struggle...

Overall OGSE Industry

- Workforce strength of 60,000 employees, down from 80,000 in 2014
- Revenue declined by 20% from a high of RM83 bil in 2013 to RM67 bil in 2018

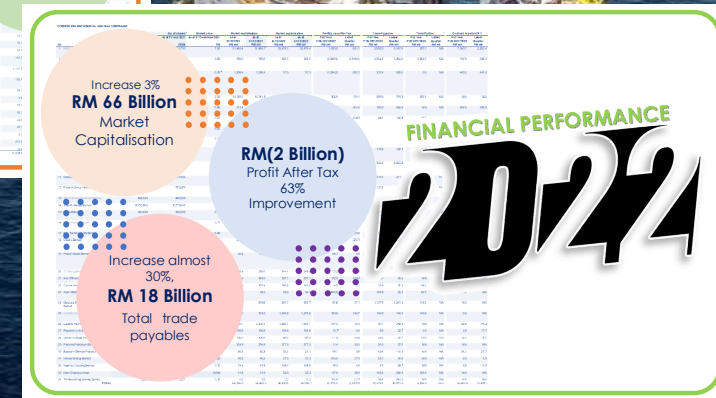
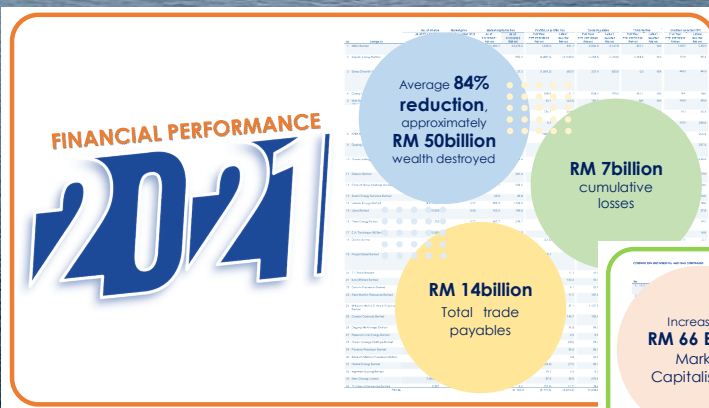
INDUSTRY PROFIT/LOSS BEFORE TAX



- Top 100 OGSE companies generate 82% of revenue and holds 97% of assets, recorded an average margin of (3.4%) and a total loss of RM1.9 bil for 2018.
- Top 100 OGSE companies had an estimated RM16.2B impairment for 2016-2018

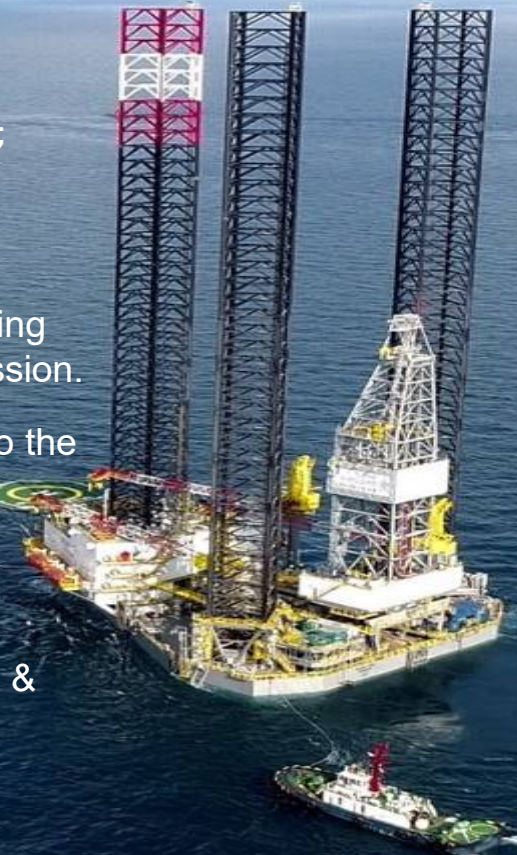
Top 24 OGSE PLC 2020

- Share price dropped an average 54%
- RM24 bil Market Capitalization lost
- Debt increased by RM9 bil (15%) since 2014 to RM68 bil



Our Advocacies

- Energy Transition- OGSE is critical part of ecosystem and success factor
- OGSE financial level need to be nurtured by Fair and Conducive contacting and business environment; palatable and sustainable
- Equitable and NOT Equal – In sharing Risk
- Hydrocarbon is not the villain, it is the industry that has given prosperity, enabled lives and living in Asia, and the word. We are not the enemy, emission is...Let's focus on how tackle the emission.
- Under-Investment just makes things worse and not better and this is not in the best position to the industry and the people whose life are dependent on hydrocarbon.
- Is it fair for O&G to become an ATM machine for future subsidies? Social justice to the O&G Industry talents?
- Transition has to be sustainable without adverse impact to socioeconomic need of the people & country without compromising any Trilemma (i.e Affordability)
- O&G is required to provide energy security which is essential for: global peace, harmony and prosperity





Wells P&A and Decom Market Analysis, Challenges & Opportunities

Ts Anwarudin Saidu Mohamed
Hon Secretary, MOGSC

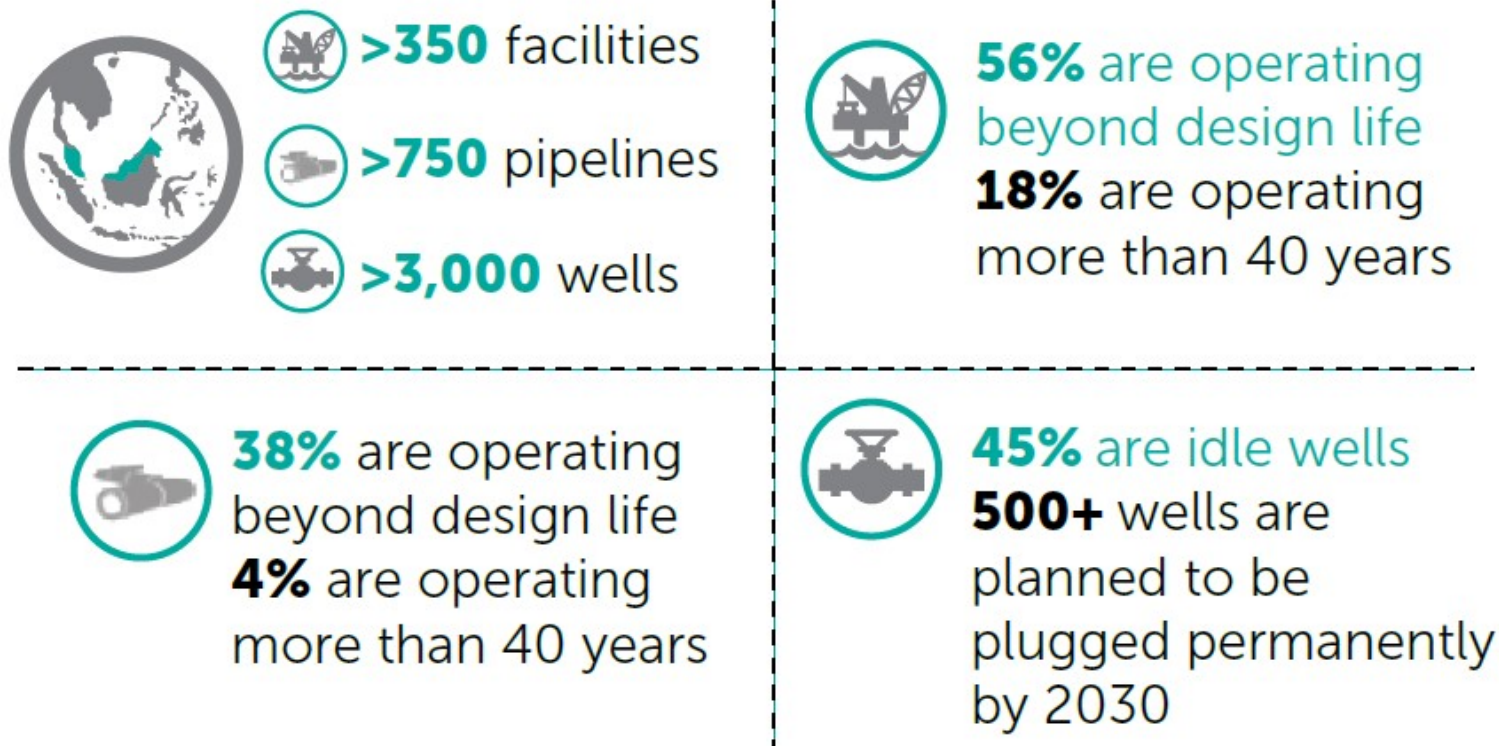
Overview- Malaysia O&G Production facility and Infrastructure



Source: PETRONAS Activity Outlook 2023

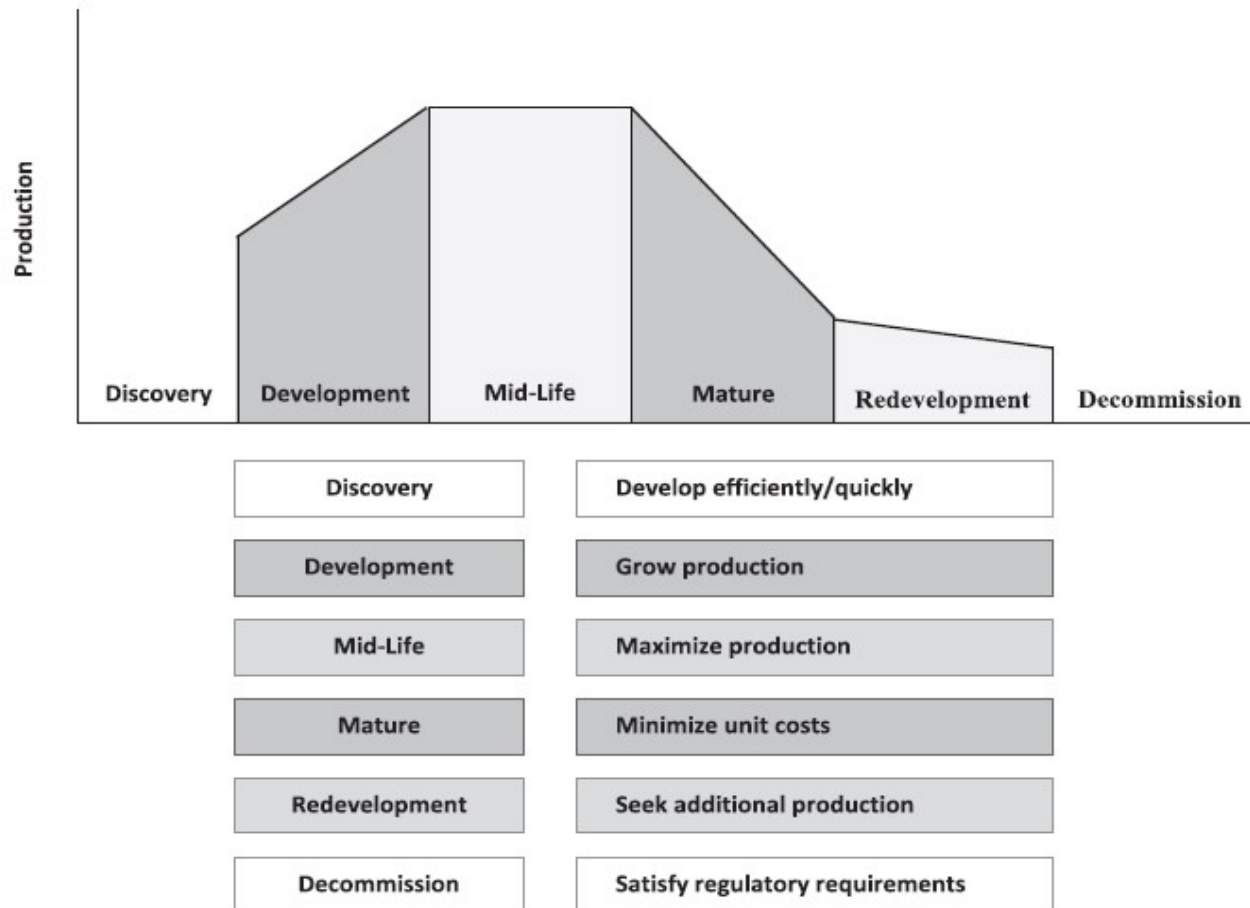
Paint Points

Malaysia Oil and Gas Asset Dimension



Source: PETRONAS Activity Outlook 2021-2023

Era of Decommissioning and well P&A inevitable.....



Decommissioning - Removal and abandonment of Petroleum Facilities as approved regulators that are disused or no longer required for Petroleum Operations to restore the affected Contract Area to a safe and environmentally stable condition

P&A refers to the process of permanently sealing and abandoning offshore oil and gas wells that have reached the end of their productive life or are no longer economically viable

Brief- Malaysia & Asia Decom activities

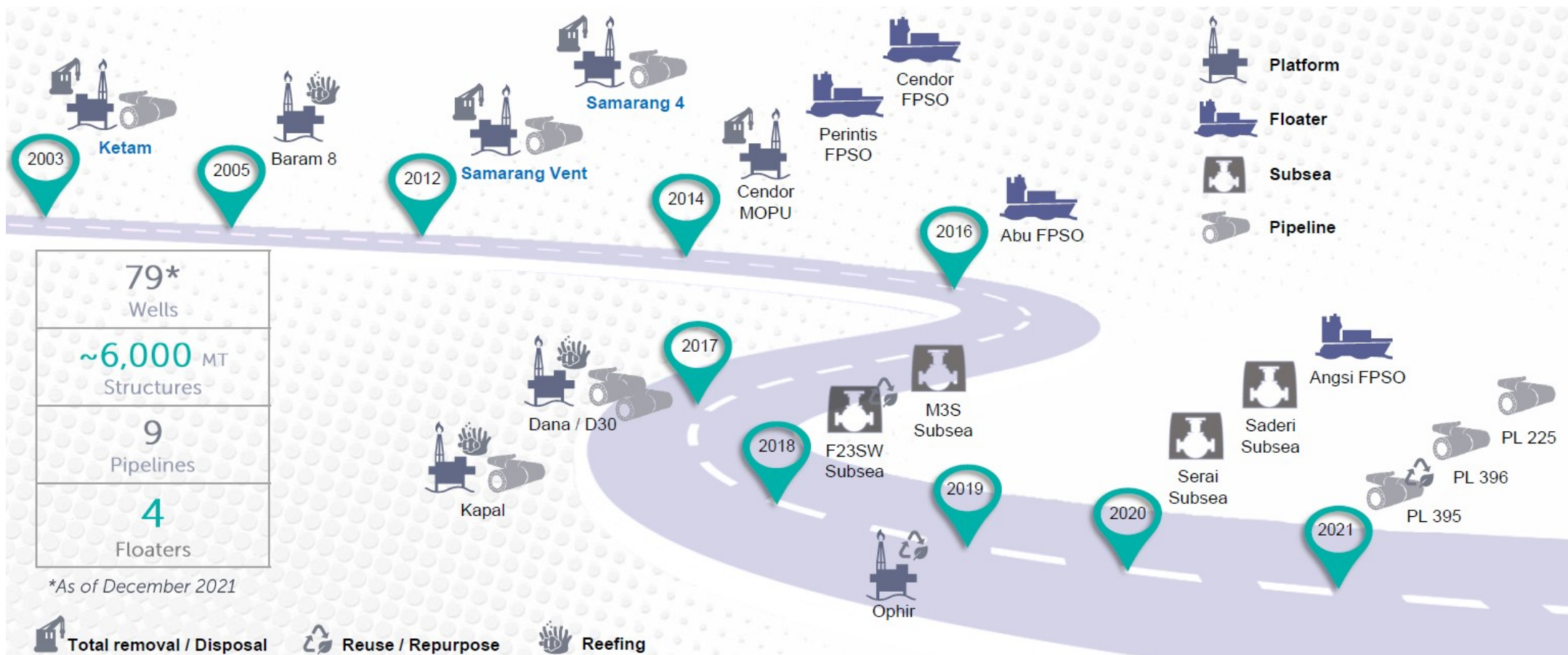
Since 2000, some 801 new offshore structures were installed in the Asia Pacific Region. Presently there are some 1751 offshore structures in the Asia Pacific Region with Indonesia and Malaysia leading in numbers.

Country	No of Offshore Installations	Fixed	Gravity Base	Jack-up Production Unit	Semi-Sumersible Production Unit	Stacked Leg	Spar	Monotower	Mobile Offshore Barge	Semi-Sub	Tension Leg
Australia	62	54	5	2	1						
Bangladesh	1	1									
Brunei	159	159									
China	131	130	1								
India	251	249		1	1						
Indonesia	477	463		3		8		1			2
Japan	4	4		4*							
Malaysia	328	322			1		1		4		
Myanmar	9	9									
New Zealand	5	5									
Papua N Guniua	1	1									
Phillippines	7	6	1								
South Korea	1	1									
Taiwan	3	3									
Thailand	261	260		1							
Malaysia-Thailand JDA	14	14									
Vietnam	37	36			1						
TOTAL	1751	1717	7	7	4	8	1	1	4	0	2

*Cendor, Bayan, D30, Dana (2022)

Adopted from Twomey, B. G. (2009). *Introduction to Offshore Asia Pacific*

20 years of Decom Journey



Source : MPM, PETRONAS

Landscape

- Cost to be incurred in the future

Operator/
partners



- Risk of non-compliance and potential liability

Government/
Regulator



- Potential revenue sources and Capability building

Service
companies



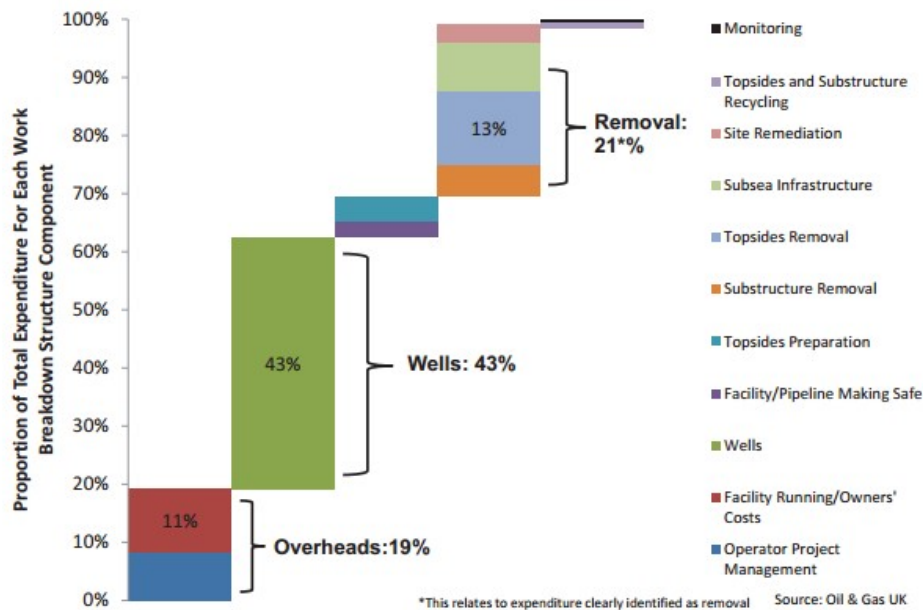
Landscape

- As many oil and gas fields are now approaching or already in the twilight of their productive lives, the offshore platforms decommissioning is an issue of rising concern within the industry.
- Decommissioning cost estimation has been considered as the greatest challenge of all time. This is due to the technical activities involve in a challenging environment and furthermore offshore decommissioning market is still relatively new.
- Ketam Decommissioning Assessment valued that decommissioning by onshore disposal would cost around RM27.6 million. However, data from SSB indicated that the actual cost of the Ketam decommissioning was RM 62.4 million. Thus, decommissioning cost can vary significantly and require adequate budget to meet its objectives.



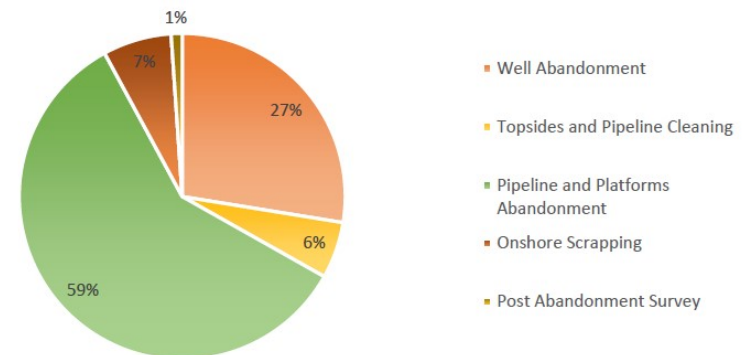
Landscape

- Well plugging and abandonment for Ketam facility was RM 16.4 million. That was 27% of the total decommissioning cost.
- Total decommissioning cost must be critically investigated, and it is crucial to understand the impact of Wells P&A and sufficient fund allocated for works.



Forecast of Total Decommissioning Expenditure on the UKCS by Component of Work Breakdown Structure, from 2013 to 2022.

Actual Cost for Decommissioning Ketam Facility by Onshore Disposal



Challenges associated with Decom and Well P&A

Cost: P&A operations can be resource intensive, especially for older and more complex wells

Regulatory Compliance: The Decom and P&A process is subject to stringent regulations

Technological Complexity: P&A operations can be technically challenging, particularly for wells in deepwater or with complex geological structures

Decommissioning Liabilities: Estimating and managing decommissioning liabilities can be challenging

Experience : General **lack of experience in the region** leading to weaker decommissioning plans

Environmental Impact: The environmental impact of P&A activities must be minimized

Challenges associated with Wells P&A and Decom for OGSE sector

Liquidity issues in the market

- Difficulties in securing financing for oil and gas projects (Poor liquidity of the market)

Shortages of resources in the market

- Securing skilled and semi-skilled offshore workers due to ultra-competitive market
- Downward trending of rates and continuity of work impacting talent retention

Regulatory requirements and compliances

- Work permits issues and other related state requirements

Unsustainable contracts

- Lower contract value that have cascading impact in the ecosystem – award to the lowest, short duration, call-out
- Hedging of price beyond reasonable period
- **EPCC/ Turnkey contract that load significant risks to service contractors for works to be executed**
- Untenable Risk vs. Reward

Technical Complexity & New Technology

- Most of the structures are more than 40+ years old and unavailability of **up-to-date data** leading to significant cost overloading by contractors to cover for unknowns
- Pressure for “Cost Compression” from operators driving away contractors to other business segments. More focus to be given to implementing new technology that can deliver cost reduction/value without compromising the rates.



Challenges associated with Wells P&A for OGSE sector

What is IWS/IPM and how it came about?

- Integrated Well Services (IWS) Tender was initiated in March 2019
- Legacy from Integrated Idle Well Restoration (IIWR) initiative created by MPM back in 2015 and Well Abandonment Integrated Services (WAISE)
- Most of the T&C and SOW was adopted from IIWR
- In IWS there were 3 packages offered , Package A, Package B and Package C
- Majority **PSC has adopted the IWS Contracting mechanism**

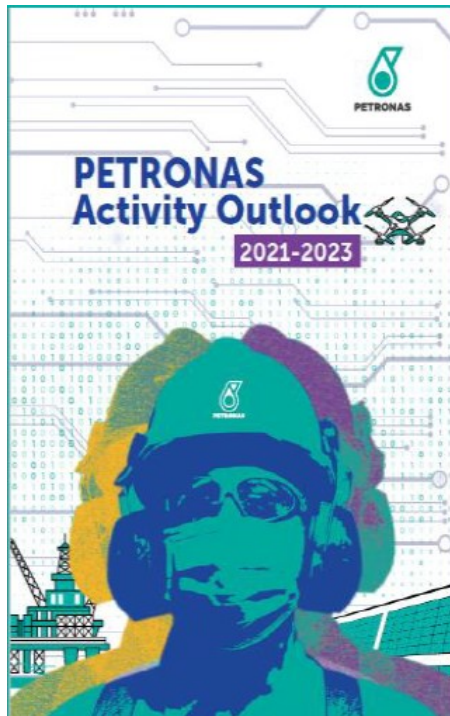
Benefits

- Integrated solutions – Single point of responsibilities
- Develop local capabilities (expansion / new services / talents)
- Technology / knowledge transfer to local service provider
- Synergy between local players and international players
- Potential export of the services
- Developing 2nd and 3rd tier contractor

Challenges

- Work volume
- Terms and conditions (1 down all down)- had been improved
- Weather dependent (had been improved)
- Marine heavy (vessel responsibility had been removed by most players)

Forward journey and opportunities



Decommissioning

Decommissioning refers to the act of removing petroleum facilities that are disused or no longer required for petroleum operation and to restore the affected contract area to a safe and environmentally stable condition.

Activity Phase: Abandonment

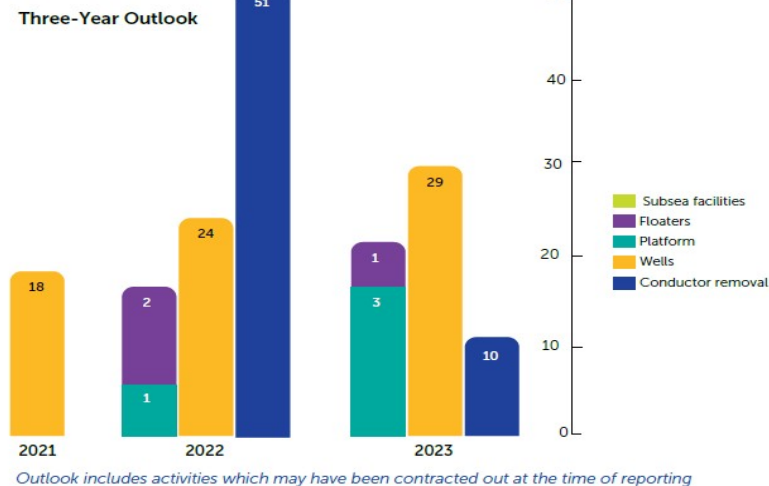
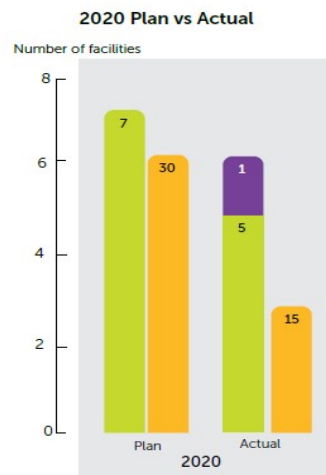
Application: Decommissioning comprises two activities:

- Well Abandonment: prepare wells to be closed permanently.
- Upstream Facilities Decommissioning: permanently make safe the facilities e.g. WHP, CPP, Subsea Tree, etc.

Associated Services: Drilling rigs and HWU, offshore support vessels, lifting and third-party drilling services, engineering services, yard facility, transport, cutting services, conductor removal, pipeline flushing, etc.



Decommissioning of Facilities and Wells:



Forward journey and opportunities



Market Growth: As Malaysia's offshore oil and gas fields mature, there is an increasing demand for P&A services. This provides opportunities for service providers specializing in well abandonment activities.



Technology Development: The P&A market presents opportunities for technological advancements and innovation. Developing cost-effective and environmentally friendly/ low carbon footprint techniques can create a competitive edge for service providers. Focus to be given on implementing new technology that can deliver cost reduction and value without compromising on rates.



Collaboration and Partnerships: Collaboration between operators, service companies, and regulators can lead to shared knowledge and best practices in P&A operations. Establishing partnerships can enhance the efficiency, safety, and cost-effectiveness of the overall abandonment process.



Skilled Workforce: The growing P&A market creates a demand for skilled personnel with expertise in well abandonment operations. This offers employment opportunities and encourages the development of training programs and certifications in the industry.



Environmental Responsibility: Malaysia's commitment to environmental sustainability provides an opportunity to adopt greener practices in P&A operations. Companies that can offer environmentally friendly solutions for well abandonment will be well-positioned in the market.

MOVING FORWARD RECOMMENDATIONS

“The Role of MOGSC in Creating Conducive Decommissioning Ecosystems”

- Decommissioning Working Group
 - ❖ To catalyze Malaysia as a center of excellence for decommissioning services for the Oil, Gas and Petrochemical industry in the Asia Pacific region
- Responsible contracting strategy to ensure sustainability of the segment
 - ❖ To allow long term investments in this segment by ensuring sufficient volume and CONTINUITY of works
 - ❖ Justifiable and reasonable risk and reward sharing by all parties
 - ❖ Ensure liquidity in the market for the segment via involvement of banks and financial institutions
 - ❖ Outcome based contracting strategy that emphasize on technology and deliverables
- Continuous engagement between stakeholders and industry players
 - ❖ Sharing of pain points and lesson learnt
 - ❖ Collective discussion to improve the segment
- Promotion and support for collaborative efforts
 - ❖ Incentivize efforts in forming consortium in leveraging strengths of individual companies
 - ❖ Regional collaboration to ensure sustainable decom environment
 - ❑ Round table discussions between industry players association to determine gaps and way forward

Collaboration and Co-creation





Thank You.



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