

Subsea Vessel Ops Predicted to Grow Over Coming Years

A close look at how and why emerging market MNCs manage their senior talent for international growth leads the authors to question the conventional wisdom on talent management practices

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Courtesy of Ulstein Group/Tonje Alvestad

Over the next five years Douglas-Westwood (DW) expect \$122 billion (bn) to be spent on global subsea vessel operations – an increase of 64% compared to the previous five year period. This growth will be driven not only by volumes of work but also by the growing usage of higher-end vessels able to cope with increasingly harsh operating conditions and evolving customer requirements with regards to safety and operational efficiency.

Field development activities, including SURF installation and light/medium construction, will account for 40% of forecast expenditure. Given the prevalence of high value assets such as Reel-lay, Flex-lay and larger MSVs this segment is the most cost-intensive in the subsea vessel industry; accounting for just 35% of anticipated vessel days over the next five years. The field development market will enjoy the fastest growth profile driven primarily by continued pre-salt developments in Brazil, revitalized activity in the Gulf of Guinea and the emergence of East Africa, with these regions accounting for 48% of projected global spend. Longer term, pre-salt potential in the Gulf of Mexico, signaled by PEMEX's recent Vasto prospect, could see the region become a major buyer of subsea vessel services.

The installation, repair & maintenance (IRM) of existing infrastructure will account for 42% of total vessel operational day requirements, the largest of all market segments. However, a tendency to use smaller vessels and long-term contracting leads to only 39% of projected spend. Unlike field development the IRM market is less associated with deepwater/subsea and is driven by conventional, shallow water infrastructure. Asia and North America will dominate global IRM requirements accounting for 46% of projected expenditure. The former in particular is becoming

an increasingly attractive market to international contractors as local operators turn to more modern DSV/MSV assets to improve operational efficiency.

Construction of export pipelines and international trunklines, including supporting DSV and MSV activity, will account for 19% of projected spend over the period. Total volumes of activity are expected to be sustained at around current levels with the Middle East and Asia retaining a combined 66% share of the market. Geopolitical uncertainty in Europe is currently threatening the viability of high profile trunklines such as Gazprom's South Stream project which could impact anticipated demand for both dedicated pipe layers and support vessels.

Subsea well intervention is the smallest market segment covered in DW's definition of subsea vessel services, accounting for just 5% of forecast spend. Aimed at providing a cost competitive means of improving productivity from ageing subsea wells, this had previously been seen as a game changer for the subsea market but a hesitance to adopt new technology by operators has seen subsea well intervention fall out of focus in recent years, a fact compounded by Total's recent cancellation of a contract with Aker Oilfield Services in June 2014. Therefore DW expect limited growth in this segment with activity continuing to be focused in the North Sea where a combination of ageing well stocks and falling well productivity and relatively shallow waters provide the biggest incentive to the local E&P community.

Africa

Africa will remain a strong contributor towards subsea vessel demand, accounting for 16% of the global vessel operations expenditure at \$19.8bn over the 2015-2019 period. The significant increase in expenditure from the preceding five years is due to higher vessel specification requirements as deeper water activities increase. Vessel demand is also anticipated to increase by 57% from the 2010-2014 period. Projects in countries such as Mozambique and Tanzania will contribute to regional spending.

Asia

The majority of subsea developments in Asia are located in shallow waters but this is expected to move continuously towards water depths beyond 1,000m over the next five years. Deepwater developments are driven by projects such as Chevron's Gandang, Gehem and Gendalo fields, Reliance Industries M-1 and Shell's Kamunsu East. Both Malaysia and India are expected to account for the largest field development-related vessel demand in Asia over 2015-2019.

Australasia

Subsea vessel demand in the region will be largely driven by shallow water LNG developments in Western Australia from fields in the Bonaparte, Browse and Canarvon basins. Vessel requirement is also anticipated to increase by 54% as compared to the 2010-2014 period. Field development will account for the largest requirement in the region followed by IRM. Subsea trees in deeper waters are expected to be installed towards the end of the forecast period on the Great Gorgon and Scarborough projects.

Eastern Europe & FSU

The majority of EE&FSU regional developments are shallow water-focused with increasing deepwater projects coming online through the forecast period in the Caspian Sea. The majority of

regional expenditure is associated with pipe laying and pipeline support vessel activities due to large pipeline installation projects in Azerbaijan and Russia. Vessel demand is anticipated to be approximately 22,000 days over the forecast period.

Latin America

Latin America is one of the largest regional markets with total expenditure amounting to \$18.2bn between 2015 and 2019, an 86% increase from the 2010-2014 period. Vessel demand is also anticipated to increase by 50%. The growth in the region will be led by the field development sector (59%) which will peak in 2018 led by projects from Petrobras. A large majority of developments will be ultradeep water projects in fields such as Lula and lara field.

Middle East

Total spending on vessel operations in the region amounts to \$14.2bn. Subsea expenditure in the region will largely be driven by pipe laying and supporting vessels, as well as IRM-related vessel spending. The majority of pipeline related projects are expected to occur in Iran and Kuwait. Field development-related vessel expenditure contributes marginally to the region's spending over 2015-2019 with the exception of deepwater offshore gas field developments in Noble Energy's Leviathan field.

North America

North America is a large, mature subsea market with deepwater developments predominantly in the US Gulf of Mexico. Over the next five years, there will be an increased portion of subsea developments in water depths beyond 1,500m. IRM-related vessel expenditure represents 63% of regional spending and the biggest of all the regions due to the large installed base of offshore infrastructure.

Norway

Norway is a mature region where majority of production is located in shallow waters. However, field development is expected to total 55% of spending due to increasing activity in the 250-499m water depth bracket as well as in deepwater areas with such projects as Aasta Hansteen and Ormen Lange.

UK

Similar to Norway, the UK is considered a matured region with harsh subsea operating conditions in the North Sea. The vast majority of the subsea production will take place in shallow waters with subsea trees tied back to existing infrastructure. Field development spending represents a significant portion of regional vessel operating expenditure (54%). The majority of these developments are led by IOCs and independent oil companies. Key projects driving the UK subsea developments over the medium term include Fair Field Energy's Darwin and Premier Oil's Greater Catcher.

RoWE

The Rest of Western Europe is a mature region with the vast majority of subsea production attributed to shallow waters. The IRM-related vessel expenditure will remain high, driven by a

large number of mature subsea infrastructure. The region will experience a moderate growth of 0.3% CAGR over the forecast period with a lack of project visibility in 2019. Deepwater developments (beyond 500m water depth) should occur off the southeastern coast of Cyprus and the Atlantic side of Ireland.

Market Supply

Cyclicalities are an inherent characteristic of the subsea vessel industry. To date there have been two major build cycles, where the size of the global subsea fleet increased by 112%, driven by interworking factors such as the changing E&P environment and oil & gas prices.

Among the various vessel types, MSVs have the highest order book to existing fleet ratio. Across the global subsea vessel fleet, average vessel days are expected to become more expensive due to increasing demand for higher specification vessels and stringent customer requirements.

There will likely be a decoupling of supply from demand due to market fragmentation, as more vessel owners enter the market. There is also a growing number of vessels being constructed in the Chinese shipyards as attractive financing terms lower building costs for vessel owners.

Despite the potential growth in subsea vessel supply, we still see a shortage of vessels in regions with harsh operating conditions, requiring units with higher specifications.

Conclusion

Global expenditure for subsea vessel operations will undoubtedly grow over the next five years. This increase in expenditure will be driven by growing requirements for vessels to operate in harsh conditions in isolated regions, for longer duration on site and the large increase in deepwater activities. The outlook for subsea vessel activities will be robust over the forecast period in regions such as Asia, Africa, Latin America and North America. Despite unprecedented levels of recent vessel deliveries, increasingly complex operating conditions and stringent customer requirements will drive demand for further deliveries.

About the Author

Chen Wei is a researcher in the Singapore Office, undertaking research and analysis for publications and projects. He holds a Bachelor of Science (Economics) and a second major in finance from the Singapore Management University. During his industry attachment, he was an Associate at Contintento Research Private Limited where he conducted research and data analysis on the maritime sector. He also spent some time at IHS Private Limited as an Intern for Economics and Country Risk Consulting Asia Pacific.

Order the Report

The World Subsea Vessel Operations Market Forecast 2015-2019 analyses the main factors driving demand for MSV, DSV, Flexlay, LWIV and Pipelay Vessels. Results analyse vessel demand for key subsea markets, with historic data covering the period 2010-2014 and forecast data for 2015-2019.

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