Benefits Of Technology Sharing

David Sutton, Global Maritime Monday, April 3, 2017 - 7:00am

Rightly or wrongly, the offshore oil and gas sector has rarely been known as a center of innovation, often being compared unfavorably to its counterparts in medicine, IT and manufacturing. However, at times of greatest challenges technology innovation, sharing and value-added activities come to the fore.

No one needs reminding of the economic challenges the offshore oil and gas sector has faced over the past two years. Yet it is the twin needs for suppliers to look for new revenue streams and meet customer's capital constraints while at the same time increasing efficiencies that have driven innovation and value-added services out of, into and within the oil and gas sector. For example, offshore aquaculture offers enormous potential for food production and human nutrition but has been considered too expensive and difficult to develop. And yet many of the design, stability and structural engineering requirements for an offshore fish farm can be found in today's oil and gas semisubmersible units.

From the need to withstand the harshest offshore environments to stability and structural strength analyses, risk-based structural assessments or secure anchoring and mooring, oil and gas semisubmersible units and offshore fish farms have many commonalities. To this end Global Maritime is using its offshore oil and gas expertise to help design the world's largest fish farm offshore Norway. The facility has been developed as economical and sustainable as possible with limited maintenance requirements, highly durable structural components, the latest in automation and an estimated lifetime of up to 25 years—criteria that would fit comfortably with the latest oil and gas semisubmersible units.

Technology transfer also can be seen in the growing area of marine renewables and wave energy, where effective mooring solutions adopted from the oil and gas sector can be vital, especially as mooring typically can make up to 5% to 10% of total wave energy deployment costs and often higher.

Again, Global Maritime is using its oil and gas expertise in this area, providing mooring and risk management support to the EU's OPERA (Open Sea Operating Experience to Reduce Wave Energy) project with the project goal to reduce wave energy costs by as much as 50%.

Secondly, Global Maritime also is seeing technology transfer into the oil and gas sector. Dynamic positioning (DP) is one example. While jackups and moored drilling units were previously in its areas of operation, new DP technologies have enabled operators to drill and produce at greater depths and in most conditions as well as ensuring quick turnarounds. This has led to an increase in floating rigs and supporting DP vessels, all increasing efficiencies and having a direct impact on the bottom line.

Examples of oil and gas DP operations that Global Maritime recently has undertaken include a multiple analysis of DP mandatory documentation for Woodside Petroleum and a DP failure mode and effect analysis for a Helix Q7000 drilling rig in Singapore.

From the supplier's vantage point many of these developments are driven by the need to find new revenue streams. This is manifesting itself not only in new technology innovations but also in new value-added services from within the sector.

In January, for example, Global Maritime relaunched Eagle Lyon Pope, a specialist marine casualty investigation and loss adjusting division. This new business stream will provide an important service and help mitigate risk in many offshore oil and gas sector companies. And there are many other examples from additional suppliers of new business streams being developed.

For all the difficulties over the last two years, valueadded services and new technologies are emerging that can only benefit oil and gas operators. The challenge is to ensure that this momentum continues—whatever the external economic environment.