

Stacking the technology bricks

Technology development has been high on Subsea 7's agenda for decades. Aligning that mission with a rapidly evolving market is at the top of Thomas Sunde's to-do list, as the company's technology chief tells Russell McCulley in an exclusive interview.

Thomas Sunde's career path at Subsea 7 has taken him from technical and project management assignments to a series of commercial positions, including subsequent stints as vice president of sales and marketing for the company's Asia-Pacific regional division and North Sea and Canada business. The experience prepared him well for the vice president technology post, which he assumed in 2014 amid a restructuring at the company.

"From a Subsea 7 perspective, we've been investing in technology development from day one," Sunde says, citing the company's evolution from diving to subsea heavyweight.

"When the market moved into deeper water, the company transformed itself more towards a diver-less company. We looked at the expansion of our company and continually moved in that direction, and we've developed technology."

Sunde moved into his new post

as the company was sharpening its business strategy.

"We acknowledged that we were a technology-driven company, but we weren't properly linking that to the market drivers," he explains. "With an increased commercial view, we transformed what we were doing on the technology side to be purely market-driven. We changed the way we worked."

The company sought input from within its ranks as well as advice from major clients about current and future challenges and the technology needed to address them, adopting what Sunde calls "a more long-term focus on creating value". One target was to engage early with clients in order to optimise field architecture and develop subsea components on the basis of a total system view.

It was an evident area of improvement, he says, even before the current downturn, when the industry experienced what he describes as "the recycling of bids" — the tendency for bids to come in higher than a client

expects, sometimes throwing the viability of projects into question.

Subsea 7 opted to "relook at the concepts" and formulate a new approach, he says. "We saw the value, and so did the clients, in early engagement by companies like ourselves, contractors and manufacturers. We assessed the opportunities and entered into two alliances. One was with KBR and (subsidiary) Granherne. That gave us an increased capacity and capability within concept and front-end engineering and design work (FEED). We also established the alliance with OneSubsea, which gave us the ability to take a more holistic, total system view.

"The alliances give us the vehicle to take a total look at the systems being developed, the full architecture, and say, 'can we optimise it?' Which I think is a huge gain in the industry."

Sunde's team also set out to identify "the building blocks, the technology 'bricks' needed to reduce costs and increase

recovery rates". An important way to achieve those goals, the company has determined, is to make better use of existing infrastructure.

"The lengthening of tie-backs has a significant impact on future business, as we see it," Sunde notes. "If you look at a mature area where there has been a lot of exploration drilling — say, from a North Sea perspective — if you could double the tie-back length you could more or less quadruple the number of fields that can tie back to one facility."

Subsea 7 also identified the increased costs and flow assurance challenges of complex reservoirs as targets of technology development, as well as life-of-field issues such as asset integrity and data management.

"We took those main challenges and looked into specifics around them — case studies, developments that are on the table today — and asked, 'can we change it?'"



MARKET MINDED: Subsea 7 vice president technology Thomas Sunde at the 2016 Offshore Technology Conference in Houston.