

Shifting the dial in asset optimisation solutions

Proserv Controls' **John Bright**, Director, ADNOC Operations and **Angus Rodger**, GM, Abu Dhabi, reveal how technology can offer a sea change in service support



The energy sector is undergoing rapid change. On one hand, renewables are becoming increasingly central to the future power generation mix the world over, from vast solar parks being built on the Arabian Peninsula to giant offshore windfarms rising up out of the North Sea. That prospect is only going to loom ever larger as we move towards the aspiration of net zero carbon emissions by 2050.

On the other, hydrocarbons, still bruised by the latest price collapse in 2020 and a Covid-19 induced industrial stagnation, are essentially on the same path they have been since the global downturn of 2014-15, seeking ever greater efficiencies, through production and asset optimisation, and therefore lower overheads.

One common theme between these differing outlooks is the pursuit of, and need for, technology: the development and deployment of innovative solutions and products to either support entirely new assets or monitor mature ones.

As a technology company Proserv must be alert to both the present and the future - and what support is most applicable to current customers and our new ones moving forwards. So, at a strategic level, like other forward-

thinking businesses in multiple sectors, we are prioritising the generation of disruptive new offerings that will not only make a real difference to the performance of topside and subsea control systems within oil and gas, but also in the offshore wind space, as we recognise how we need to play a key role within the energy transition.

Current capabilities

For our own Abu Dhabi based service business, like any supplier alive to a global economic landscape overshadowed by the ongoing pandemic, we recognise that, right now, operators require support providers to deliver a rapid response when issues arise and that means having a specialist team positioned just minutes, not a flight, away - especially in these days of travel restrictions and quarantining.

To offer an effective maintenance optimisation regimen to a client, a service company must have extensive local knowledge of the Arabian Gulf's unique challenges, not fazed by the searing summer heat or the remote and inaccessible desert locations of ageing production towers. Being able to hit the ground running means a job can be



John Bright

done in the desired timeframe, saving an operator revenue and downtime.

Being “OEM agnostic” (able to service any original equipment manufacturer’s kit) and having a manufacturing capability just up the road in Dubai has given us the necessary bandwidth of capability to reassure customers that if we can’t fix a chronic problem on a piece of equipment – we’ll actually build them a new one. That agility and flexibility is vital for any service company to gain the trust of operators as they know you always have a plan B or C.

But, crucially, as our own direct experience with the Abu Dhabi National Oil Company (ADNOC) has shown, truly effective maintenance support comes from the development of a constructive, close partnership built and nurtured over several years. By gaining the trust of a vitally important client, a service provider gets an insight into how they work, the idiosyncrasies of particular assets or core equipment and becomes attuned to specific needs and potential issues ahead of time. This is crucial for maximising efficiencies around time and costs.

Targeting technology

Sometimes offering the necessary service support might amount to little more than a fast rollout of technicians to undertake a change-out of parts or components. But truly sophisticated maintenance optimisation and asset enhancement is moving towards the integration of smarter applications and solutions that can provide close condition monitoring of performance. Having the ability to capture in real-time, and then interpret, greater amounts of data related to core processes on an asset can deliver a seismic change in preventative maintenance planning and operational efficiencies.

When technologies such as machine learning are applied to condition monitoring products (as we intend with a new subsea cable health solution for the offshore wind segment that we are developing alongside several


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partners) minuscule anomalies in performance, even still within normal parameters, can be flagged up indicating a need for future remedial work in the coming months. That means avoiding sudden, unexpected outages as equipment fails.

In the Arabian Gulf, a serious issue at one remote offshore tower producing 1,000 barrels per day, at \$55 a barrel, could mean hundreds of thousands of dollars of lost revenue while technicians are rushed to the site to diagnose and fix the problem after a shutdown.

Live condition based and performance monitoring can supply a sea change for an operator’s turnaround managers and site supervisors. These individuals have a major responsibility to make sure wells keep on producing and any maintenance is carefully planned to minimise disruption.

In this region, offshore repair rigs and barges are booked up over a year in advance, so organising checks is challenging, but if a turnaround manager has genuine familiarity of the state of his asset he can plan much more accurately, targeting an optimum window.

Open and accessible

Asset owners are increasingly flooded with different technology solutions aimed at improving the monitoring of their equipment and its performance, and many of these are quite complex by design. At Proserv, our philosophy and values regarding our products have always been around emphasising ease of use, accessibility and a conscious transparency around data availability and analysis – while always fitting within the established critical security and privacy protocols of the customer.

As data is key to understanding what is going on – and why – our solutions are geared to integrating fully with wider systems, increasing the visibility of operational



Angus Rodger



performance, and key information, which can then be expertly analysed.

Simplicity of use and sharing data underpin a condition monitoring solution that we are building, not only for our service business in the Middle East, but as a truly global digital offering, known as AEGIS. This utilises an application that can detect any irregularities in performance which could compromise operations - meaning some form of remedial action, or strategic decision, is immediately required. The likely cause of the event, as identified by the condition monitoring, is then shared jointly between Proserv and the customer - enabling the latter to have full sight of what has occurred and the appropriate next steps.

Secure alerts would be sent directly to the client to provide notification of the issue and suggesting a recommended course of action. Such a swift, clear method of addressing an impending problem means a site supervisor could potentially be many kilometres away from the asset itself but would be able to take prompt action, armed with the necessary data, facts and support from the solution provider.

Looking forwards

The Middle East's oil and gas sector has been active for decades now and, like any mature market, issues will routinely occur as production towers and infrastructure age. National oil companies in the region have ambitious plans to drive forwards with production lifts, while at the same time sensibly aligning their businesses towards the energy transition and a time long beyond peak oil. The only way that ramp-up will occur is if existing brownfield assets function efficiently and their capacity is maximised.



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Moving forwards, for the leading service and maintenance providers in the Arabian Gulf, prioritising the vital need to keep ADNOC and Aramco's production lights stuck on green, this will mean combining agility and breadth of capability in day-to-day service support, with the future rollout of a sophisticated, accessible condition monitoring solution that will be enable pre-emptive action before potential problems emerge. Such a blueprint will shift the dial in optimising assets and performance.