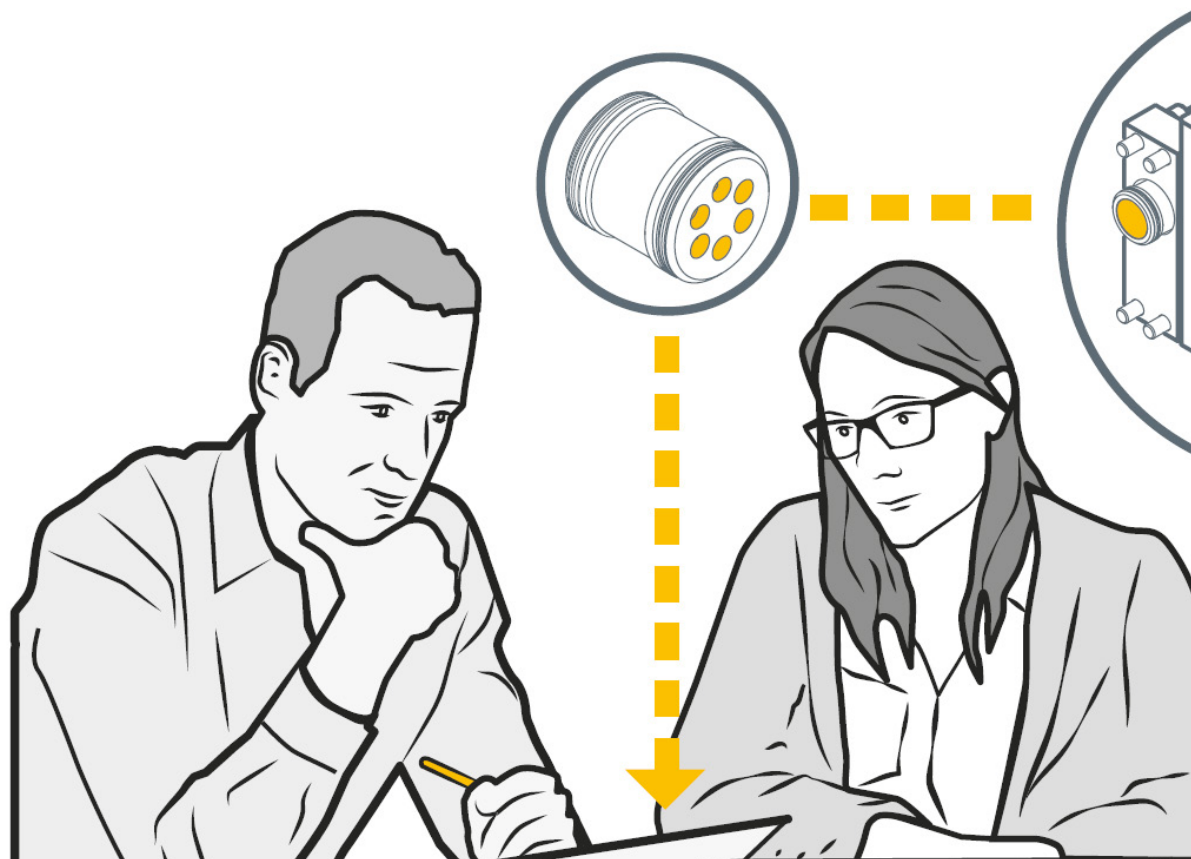


Whitepaper

Proserv helps industry ACT during hard times

2016



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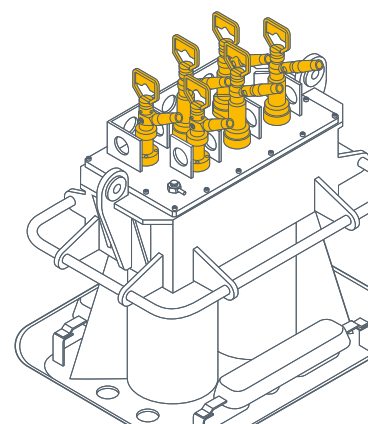
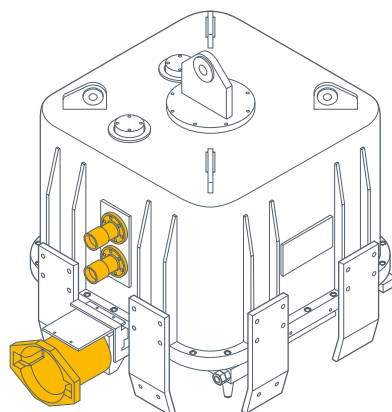
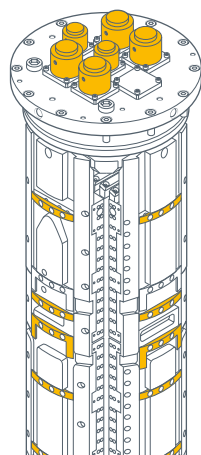
Steadfast technology that's been the bedrock of Proserv's business for more than 50 years is proving a crucial driver towards helping clients significantly improve production and cost efficiencies.

Based on the company's underlying philosophy and unique problem-solving solution approach to deliver significant value to clients and exceed project expectations, Proserv is well positioned to address the challenges associated with the low commodity marketplace and beyond.

Proserv's Augmented Control Technologies (ACT) involves allowing additional control technologies to be deployed to augment an existing control system and open up a range of opportunities that were previously not available for the client.

Alan Peek, VP Subsea Controls and Communications at Proserv, said: “We have developed a portfolio of products and systems to help optimise our clients' subsea production in a much more cost efficient way. Once we have established the root cause, we utilise our ACT approach to improve or upgrade existing systems – and only where such work is necessary.

“By thinking in a smarter way to solve the problem, and breaking out from the notion that all issues require a full system upgrade, operators will be able to prosper, even in the current economic climate. This results in giving operators a highly reliable subsea production control system and uninterrupted production while improving performance overall!”





Proserv's ACT technology solutions include - co-exist, Subsea Electronics Module (SEM) retrofit, Subsea Control Module (SCM) refurbishment and topside upgrade solutions.

The co-exist offering enables field extensions without affecting the existing installed subsea controls system. It negates the need for spare umbilical conductors and the installation of a new umbilical, therefore minimising any production downtime, and maximising the use of existing infrastructure.

Co-exist also allows additional control technologies to be deployed to augment an existing system and open up a range of previously unavailable opportunities. Examples of this are the addition of control modules, wells, instrumentation and even full field extensions.

Also within the company's ACT technology offering is the Artemis 2G (A2G) subsea electronics module, a next generation controls and communications tool that uniquely frees operators from the constraints of an existing brownfield umbilical by finding additional signal capacity to enable a cost-effective field upgrade or extension.

"A2G can be used to co-exist with existing networks, is fully back compatible with earlier technology and does not require any proprietary software for remote configuration and support," said Mr Peek. "We can superimpose the A2G controls onto a pre-existing control system using either the powerline or the existing signal line, without affecting the OEM control.

"It is effectively the brain of the subsea and control operations because unlike other tools, it controls all of the communication systems and enables the power, speed and accessibility necessary for the control and monitoring of challenging subsea infrastructures and environments."

Proserv believes that the value of the huge number of marginal fields in the North Sea will only be fully realised if the industry works together to make the most of the existing infrastructure while the impact of the global low oil price environment has forced the industry to change the way it operates to ensure its long-term sustainability and future prosperity.

Mr Peek said: "In these austere times, it is fundamental to change the way we act and respond to a challenge. Operators have to ask themselves how long they can afford to do nothing which is why we're encouraging them to think co-exist rather than replacement.

"Just as there's never been a greater need for industry collaboration, we must think smarter about technology and how we can use what already exists in different ways together."



Project Background

An offshore field in the UKCS consists of two subsea templates and the client (a leading global operator) was unable to contract the OEM for controls to extend both templates to accommodate an additional well at each template. The OEM control module design was obsolete and no solution to add these wells was available without a full system replacement, which was not economically viable.

Solution

Proserv provided a Brownfield Upgrade solution. By utilising the power conductors for both communications and power Proserv minimised any cross talk between the two systems. This approach provided the client with a cost effective solution that did not require full system replacement, did not impact on the day to day operation of the field and provided the flexibility to continue to upgrade and add a further field into this controls infrastructure in the future.

Scope

Proserv upgraded the existing subsea control system on the field using an Open Communications Hub (OCH) and two additional Subsea Control Modules (SCMs). The existing topology utilised separate communications and power, enabling Proserv to co-exist with the existing umbilical power cores and share these services with the incumbent system.

Benefits

Proserv enabled the client to improve production from the field by adding two wells without a full system change. The flexibility of this co-exist system now enables the client to consider other wells and other field tie-ins, which were otherwise not available, increasing the life and production from the field.