How CSM Energy's digitalisation hub is helping companies to make better decisions

Operational crews are seeing the benefits of receiving real-time data and intelligence through CSM Energy's state-of-the-art digitalisation hub.

CSM Energy has been leading the way in digitalisation as shipping/offshore/energy companies utilising the company's recently launched Performance Optimisation Control Room (POCR) have been benefiting from the intelligence received to allow them to make better "optimised" decisions while their vessels are at sea.

As the COVID-19 pandemic has affected many operations for shipping organisations, the company has been offering the offshore and energy industry a lifeline in the form of its POCR, allowing vessels to control many of its operations through one dedicated digital platform.

Recently CSM Energy revealed its plans to expand from a ship management company in the oil and gas and renewable energy sector to an integral service platform in the energy sector, with a number of new services added to its portfolio, including the POCR.

The POCR allows for daily data quality and performance alerts and provides comprehensive and customisable monitoring for all types of vessels. The state-of-the-art technology means office operators can check the performance of a fleet by combining vessel reported data with industry information and inputs. The remote operation allows for optimising navigational, operational and commercial performance.

It can be accessed remotely on handheld devices, giving owners and operators the chance to monitor performance, as well as providing clients with a greater level of transparency and visibility of their operations.

Monitored by specialists 24/7, the POCR allows clients to have a greater level of transparency and visibility of their operations. As a cloud-based solution, the POCR function can be immediately transferred to clients' offices, ensuring they can access the real-time data remotely. The set-up is fully customisable, and the majority of features require no onboard equipment installation, although camera, sensor and automatic data collection technology can be provided where necessary.

Alongside its ship management service, CSM Energy is now offering commercial management, financing, digital solutions, and environmental life-cycle management. Image courtesy of CSM Energy

Since the launch of the POCR, CSM Energy has seen several of its functions proving more popular with clients, including routing assistance to its vessels, route monitoring, live monitoring in HRA, speed and consumption analysis, and performance reports. The use of machine learning to reduce the cost of installing flow meters has also been used regularly by clients.

A key advantage of using the POCR is being able to access real-time information to enable better decision making for operational crews on vessels. One key benefit a vessel can achieve through utilising the experts in the POCR control room is driving down its fuel consumption, which can be achieved through the machine learning application.

Joachim Brack, managing director at CSM Energy, said: "Having access to a team of experts is reassuring to the crew member to know that an actual human being is looking after them and not just a computer. We have a team of ex-seafarers monitoring their assigned vessels and giving support 24/7. They make informed decisions based on sea experience, and the data analysed, and the crews on the vessels appreciate having that back up and support. It works as an extension of the vessel.

"Through this high level of support, operational crews can make more informed decisions while out at sea."

The control room was set up prior to the pandemic with the philosophy of working and communicating through a digital platform. Notwithstanding the technology in place, the CSM Energy team still faced challenges during such demanding times.

Joachim Brack, managing director at CSM Energy

Niki Makri, managing director at CSM Energy, explained: "Due to the pandemic our service was needed more than ever and we were having an ever-increasing number of customers requiring us to provide a fully digitalised service. The connected ship is no longer a vision. It became reality."

POCR specialists are on hand at any time to offer support to vessels. As well as providing real-time information through the digital platform, they also communicate regularly through email and telephone. In the future, the company also plans to set up a chat function so messages can be exchanged instantly between the control room experts and crew members.

Ms Makri added: "Our real-time information is accurate and reliable. We can also provide further sources of information which can be provided immediately to vessels if necessary. This can all help operational crews make better decisions while out at sea. Utilising our 24/7 centre, we can offer support to a vessel at anytime and anywhere in the world." DS

Hivecell edge computing to be offered with METIS AI-based solutions

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Maritime data analytics specialist METIS Cyberspace Technology has completed proof of concept trials to confirm that edge computing from Hivecell is wholly compatible with its cloud-based shipboard data acquisition solution.

This completion opens the way for fully scalable Hivecell stack processing power to be used at locations onboard ship, resulting in significant bandwidth savings and improved response times for 'smart' shipowners and managers.

In a maritime industry awash with smart devices yet tied to centralised systems management, cloud storage is increasingly connecting the dots, with processing power 'at the edge' enabling only information relevant to decision-making to be uploaded. On top of reducing hardware and data traffic, edge computing saves on server maintenance and training, while integration is easier.

Hivecell delivers a plug and play 'hive' of smart cells, deployed on the ship in an 'edge-as-service' solution that requires no hardware investment. Crunching data in situ, the distinctive yellow cells pre-process relevant information for upload. Trials at Hivecell using the virtualised METIS Data Fusion Server (DFS) validated Hivecell edge-as-a-service as ready to work with existing METIS cloud-computing software.

"Following the trials, Hivecell can be offered as an integral part of the innovative artificial intelligence-based solutions METIS has developed to empower shipping's digital transformation," said METIS chief executive officer Mike Konstantinidis. "METIS and Hivecell are each innovators in their specialised domains, and each looks forward to identifying common opportunities to implement game-changing solutions that can accelerate maritime digitalisation."

"There's a lot of talk from companies who claim to be able to provide computing power at the edge, but a ship is certainly the true edge," said Jeffrey Ricker, co-founder and CEO of Hivecell. "Our solution is programmed with existing hardware and is simple to deploy, enabling the fleet managers to process data from the METIS system more easily than ever before, which enables faster decision making."

While non-exclusive, the agreement between METIS and Hivecell also opens the way for further development work focusing on improving system redundancy and deploying more machine-learning (ML) at the edge using open-source cloud computing, said Mr Konstantinidis.