Smart software helps owners manage the unexpected

The recent spate of connectivity hardware and software, big data and broadband providers – and a disturbing rise in cyber attacks and other breaches of internet security – has made it ever more crucial for owners, operators and managers to choose wisely when buying or leasing IT management software.

Two products that will alert discerning operators to potential problems and help them find cost-effective solutions to their daily operations are a tanker position tracker from Q88 LLC and a risk and threat management software platform called ARMS (Automated Risk Management Solution) from International Maritime Security Associates (IMSA).

Q88's Position List module, as it is known, tracks global tanker positions in a "collaborative community-like environment". Fritz Heidenreich, President of Q88, said: "Being knowledgeable about the industry's most pressing issues is a must because we need to be able to swiftly react to market demands and offer cost-effective solutions to our customers. You can only achieve this if you are lean, cost-wise, and know where, and how, to push forward boundaries.

"Over the years the market has asked us to build a Position List system that better meets their needs. There was certainly a strain on the customer-vendor relationship for this segment. After discussing the potential with the rest of the management team, we realised we could fully deliver on the request for a more complete, mobile-friendly and lower-cost position list platform in a relatively short turn-around time," he said.

The company currently has more than 80 tanker broker shops trialling its Position List system and you can view the video on ***https://www.youtube.com/watch?v=O7y_jpJWTj3Q***.

Three year ago, Q88 launched the maritime industry's first fully web-based voyage management system, Q88VMS (Voyage Management System). "With Q88VMS, we saw that small- and medium-sized ship owners and operators didn't really have an option for a voyage management system. It was either a simple voyage calculator or one of the massive systems they couldn't afford," said Mr Heidenreich.

Now Q88 says its Q88VMS user-base has more than doubled in the past nine months. "A subscription-based system, run over the internet, drastically cuts the implementation and set-up costs that created such a large barrier of entry for many. We're happy to have developed a cost-effective system that fulfils this segment's needs," he said.

IMSA's ARMS platform which aims to combat the "global risks and threats that continue to increase and negatively impact the maritime industry costing billions of dollars in additional operating costs, insurance premiums and negative publicity" connects the user-vessel to IMSA's Global Intelligence, Information and Communications Centre (G-12C).

"The ARMS software platform provides information in five main alert categories, plus cyber alert information and the worldwide NAVTEX notice to mariners' information. The five categories are port delays and closures; civil unrest affecting vessel movements in ports, canals and waterways; maritime security and terrorism including piracy and migrant movements; major weather events; and health epidemics and outbreaks. Our five main alert categories and the NAVTEX information is all provided to vesselsbased on the location of the threat to the vessels," said Corey Ranslem, CEO of IMSA.

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"Cyber alerts come into the vessels via what we call a global alert. Cyber security issues can affect a vessel anywhere in the world so we set up a global notification. The ARMS platform also integrates the vessel's specific response protocols into an alert. So if the vessel receives an alert of a migrant vessel within their vicinity they also get the specific response protocols as part of the alert. The platform is designed to provide information for the captain/crew that they can access within about one click.

The information sent by the ARMS platform is based on the geographical position of the risk or threat to the vessel while integrating the vessel's response protocols. The G-12C's personnel then gather, correlate, validate and disseminate near real-time intelligence through the ARMS platform and give vessels 24/7 offshore emergency global support.

Among the problems ARMS can help owners and operators solve are port delays that can be unexpectedly costly and reduce vessel efficiency and cargo delivery delays that eat into a company and bad weather including hurricanes and earthquakes that affect shipping movements and cause delays. "Right now the main savings will come from improvement of their operations by knowing what risks could or are affecting their vessels and the early avoidance which will help reduce operating costs. For instance, if a vessel manager knows there is a port delay or closure they can make better decisions of how to deal with that, slow the vessel or divert to another port," added Mr Ranslem.

Meanwhile the software provider Hanseaticsoft has launched a module for vessels that need to comply with the upcoming EU MRV (Monitoring, Reporting and Verification) regulations. As its name suggests, the Cloud MRV module stores all of its data on the Cloud.

The regulations, which apply to all vessels of 5,000gt or more calling at any EU port to load or discharge cargo or passengers and comes into force on 1st January 2018, aims to quantify and reduce CO_2 emissions from ships and will create a new kind of benchmarking system in Europe.

To comply, companies must record and report on a range of data including origin and destination information, emissions of fuels used during a voyage, the distance covered and the cargo carried.

Hanseaticsoft's MRV Cloud enables companies to manage their data monitoring, capture and reporting process within the application. Data can be inputted from the ship which is then collected, synchronised and transmitted to all the relevant parties. The data is automatically processed and the results prepared in a format ready for verification by a classification society approved by the EC.

"Using our Cloud Ship Manager (CSM) all data can be captured offline onboard and synchronised to the Cloud as soon as there is an internet connection available. With all the data stored on the Cloud, all that is required is internet access to inspect data from all vessels. This can be done at any time or in any location," said Alexander Buchmann, Managing Director of Hanseaticsoft.

"Data is transmitted from the vessel easily and can be accessed immediately by relevant parties who can inspect reports about their entire fleet using their web browser. They don't have to install any software in the office," he added.

Companies that want to monitor performance to a level beyond the MRV requirements can opt to upgrade to the Hanseaticsoft Cloud Fleet Manager (CFM) platform, a more fully-featured event reporting system with additional data such as docking times, machine-related data and bunker analysis.

However, the exponential growth in the number of satellites handling AIS data – with an expected 100 AIS satellites by end 2017, more than five times the total of 2015 – is potentially lost on owners and operators seeking vessel efficiencies if they do not have the resources or hardware to support them.

NAPA, the ship design software developer, has launched a tool called NAPA Fleet Intelligence which uses algorithms and

Fritz Heidenreich, President of Q88

hydrodynamics to model how ships perform and consume fuel based on AIS data and other sources such as tide and environmental conditions. When it was introduced in May this year the tool had 6.5 million voyages in its database and is currently growing at 10,000 voyages a day and the tool's zero installation, zero hardware approach means owners can analyse transits since January 2015.

"NAPA Fleet Intelligence brings the power of performance monitoring to a much wider segment of the industry. It brings it within the reach of cash-strapped owners and, crucially, charterers who may not be incentivised to instal monitoring equipment onboard vessels that will only be theirs for a short amount of time. Users can compare performance and efficiency against an optimised speed profile, as well as determining whether the cargo capacity is being used efficiently – gateways to some big-ticket carbon and fuel savings. In addition, with NAPA Fleet Intelligence users will be able to shine a light on the phenomenon of 'rush to wait' – speeding up to meet overly conservative arrival times at ports, only to be delayed waiting for a berth when they reach the port. NAPA Fleet Intelligence can put a dollar value on the amount of fuel wasted by this practice, compared to an optimum profile," said Pekka Pakkanen, Director, Development, NAPA Shipping Solutions.