Software for demanding markets

Rapidly evolving software is changing the way tanker operators manage vessels and fleets. Whether its fixing a vessel, booking a cargo, or unravelling ISM codes software can help.

Whichever aspect of a tanker's voyage you contemplate, there is now software available to help manage it. These tools not only support functional efficiency but also progressively integrate different functions and players into a more efficient whole.
This array of tools presents itself right at the very beginning: in the fixture process. The main challenge for owners, charterers and their respective brokers is efficient information sharing. Fabrice Demichel, chief executive of AXSMarine, puts it like this, "Ask whoever you want what's bothering them; you'll get the same answer: the number of incoming messages, redundancy of information and inefficient use of available information. "If you add up the time each person spends on a desk reading messages you easily come to a full time job. This reduces the efficiency of for brokers who really want to be talking to and advising their clients. So, if we can help in dealing with information, we've achieved something."

AXSTanker
AXS has recently launched a new application, AXSTanker, which is specifically aimed at tanker brokers, and allows them to update and share tonnage lists.
The industry routinely uses vetting questionnaires to provide charterers with vessel information. Historically these were prepared from scratch every time a request was made; a very laborious and error-prone manual process. Heidmar has developed Q88.com for the tanker sector to improve the accuracy and efficiency by which shipowners can complete and distribute vessel questionnaires.
The shipowner can start by sending its OCIMF (Oil Companies International Marine Forum) data to Heidmar, who then load it into the database; alternatively, he can fill in the data manually. Once the database is populated, it will automatically fill in all the questionnaires supported by Q88.com; these currently number 198. Of course, not all data is static, so the owner needs to go through the questionnaire regularly to update particular fields when required.
Information is made available to charterers in two ways: first, the owner can respond to a specific charterer's request for a completed questionnaire by emailing or faxing it direct from the Q88.com website; second, owners can make vessel particulars available through the Q88 questionnaire which is accessible to any visitor to the site. The user simply clicks the Q88 tab and selects a vessel name from a drop down list. "The improved accuracy and immediacy of this information certainly contributes to improved safety," says Heidmar's Robert Abraham.
Laycan has a very comprehensive suite of applications covering the whole chartering process (and feeding data into the post-fixture process). Laycan Trading allows users to send quotes for cargoes and vessel positions to other registered users, reply to a quote with a firm offer, start and complete main terms negotiations, automatically generate a preliminary recap and then lift subs and automatically generate a clean recap. With a clean recap in the Trading Application, the user can launch the charter party editor, merge main terms from the recap into the desired charter party and finally, complete charter party negotiations. Information is then merged directly from the recap into a new post-fixture case.
Another example of how applications link is ShipNet's Integrated Calculation System (SNICS), which uses cargo booking lists and COA estimation to feed a voyage calculator. This in turn provides the data to create a fixture note and to initiate a

voyage in the ShipNet Operational System (SNOPS). The calculator also sends an estimate to the voyage accounting system against which actual cost and revenue can be reported. SNICS draws calculation data from different sources: standard distance tables come with the application; operators maintains their own databases of vessel speed and consumption while port charges and bunker prices can be pulled out of the accounting system. SNICS dynamic structure and active registers enable a complete multi cargo calculation to take place in seconds. ShipNet's Sven-Erik Dølvik sees the integration of the different elements of the package as providing a lot of value, "We developed the different ShipNet modules together to create an integrated product. The result for the owner is efficiency and much better control, including control of cash flow."

Plan the voyage

With the fixture complete, it is time to plan the voyage. ABS SafeNet ChemSTOW provides a complete voyage planning system covering the voyage itinerary and stowage planning. The Voyage Planning System allows the planner to run numerous possible scenarios to optimize the vessels operation. With the overall plan fixed, the next step is cargo bookings. Booking records (or parcel records) are transmitted from shore to ship and contain all of the pertinent data that would be required to carry a cargo. The planning module within ChemSTOW then allows the user to develop many different stowage plans and to decide which to use. The module automatically optimizes available space, calculates intact and damage stability and checks cargo compatibility and compliance with regulatory requirements.

ChemSTOW is part of a complete suite of ABS SafeNet modules that covers all aspects of operational management from regulatory requirements to payroll, to planned maintenance programs. These modules are fully integrated to eliminate data rekeying and improve efficiency.

Vector Maritime Systems

Vector Maritime Systems shares this integrated approach. Its comprehensive application suite comes in a number of discrete modules (such as Operations Manager and Maintenance Manager) that can be used alone if the user wishes. Vector, however, believes that the real benefits come when the modules are used together. Mark Jones explains, "All the applications run on a common Oracle database. As more modules are added you can do more with the data you already have".

Vector has adopted workflow management as an integral part of its approach. "Tasks often involve several people within the operator's organisation and Vector's systems help to manage these shared tasks," says Mr Jones. "For example, when a task is ready for handover, the document can be sent by email to the next person in the chain. As the task arrives on their desktop, a beep alerts them that they have something they need to attend to."

For Panteleimon Pantelis of Ulysses, this sort of workflow management is crucial. "Good functional software by itself is not enough in the marine environment where staff, particularly sea staff, are multi-tasking all the time and where the decision of one department has a dramatic impact on another". Mr Pantelis cites the hypothetical example of a vessel due for maintenance that the chartering department wishes to redeploy at short notice, disrupting the maintenance programme. How will the chartering department know about the maintenance plan? How will the vessel's crew be able to reorganize these plans?

"There has to be a link between functions and specific tasks", says Mr Pantelis, "We have seen the trucking and rail industries make huge savings in M&R costs but marine procurement software has often failed to deliver. The environment is different, particularly at sea: crew numbers are tight and members move between vessels. This can disrupt processes. Without tools to manage workflow, there is a high risk

that investment in systems will not deliver the required return." This is the problem that Ulysses' Task Assistant aims to address.
While a number of the software houses offer application suites covering all aspects of vessel operation, most operators tend to have a number of discrete and unconnected legacy systems. Task Assistant is designed to act as an interface platform and to make information available to users according to their role and the task in hand. This is particularly important when an activity involves a number of different staff. In the case of downtime repairs for example, Task Assistant allows technical management, procurement, the vessel's crew and the chartering manager to work together to reduce time out of service, to optimize vessel repairs during downtime and to identify and use idle periods effectively.
Mr Pantelis explains that Ulysses spends a lot of time on ensuring that its users get a good return on investment, "Task Assistant will allow you to do as much integration as you like but our experience is that it is best to tackle the big issues first and secure 80% of the benefits. The rest can follow". He also believes that applications should be tailored to suit use by the vessel's crew, a consideration he believes has been neglected, and that the ROI potential for IT is higher on vessels than ashore.
Central to this workflow approach is the sharing of data between ship and shore. Vector has recognised that larger proportion of office electronic processing workload is generated on board the vessel and deals with the communication and sharing challenge by using what it calls a thin client; In other words, data is replicated on a shore-based server and is updated automatically from the vessel when the appropriate communication link becomes available
This helps if the onboard system crashes as Vector's Mark Jones explains: "The application itself can be restored by transmitting a 2 MB file to the vessel. The data itself is saved ashore, so disruption is minimised". This system allows the operator's reporting forms to be stored in an office system that automatically keeps track of the versions and publishes the effective forms in the Vector ShIPboard system. Data from those forms is transported to the office using existing ship to shore communication means, is fed to the office main database system. This triggers the appropriate workflows and directs tasks to the appropriate users. Similarly, all reports required by the vessel are prepared automatically at the office and are routed instantly to the vessel. They are then available for the use without further communication with the office.
Linking ship to shore is likewise the logic of ShipNet's recent link up with Maritime Workstation. "We have been focusing recently on improving the efficiency of data capture", says ShipNet's Sven-Erik Dølvik.
"Marine Workstation captures data at source on the vessel and feeds it to shore-based applications." Maritime Workstation is a suite of vessel-based systems that manages all manner of forms, manuals, and data provides vessel-based reporting and documentation system with full integration to shore based control and legacy systems. Its configuration database stores all common shipboard information, which is available to populate forms automatically as they are created (cutting key strokes and improving accuracy), keeps track of each form's routing instructions, and manages system security. Integration with the shore is achieved by sending compressed data grams via the vessel's preferred communication mode. This compression effectively reduces satellite airtime by up to 90%.
Capturing data on the vessel and feeding it automatically to shore allows ShipNet to tie up systems that would previously have stood alone. ShipNet's SNOPS system takes data automatically from Vessel Reports to populate the Position Book module. This in turn feeds data to the Voyage and Disbursement Account modules, providing control of voyage related cash flow and facilitating the logging of all voyage related activities, this in turn provides a basis for both sea and port performance recording and analysis.

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