



Big ships, big headache?

August 1, 2020

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Cargo administration is expanding as fast as ship sizes, as more containers on board the latest ultra large container ships means the documentation must also follow. Cash strapped operators are turning to digitalisation to solve the big data conundrum, says Lars Fischer Managing Director of Softship Data Processing Ltd, Singapore.

It wasn't so many years ago when the industry excitedly welcomed the Mærsk Mc-Kinney Møller into the global fleet. This 18,000TEU vessel – and her sisters – heralded a step change in container shipping and marked a new generation of ultra large container carriers. Since then, vessels have continued to increase their capacity and, recently, we saw the HMM Algeciras at 24,000TEU embark on her maiden string.

The economies of scale generated by these large ships are obvious for all to see, particularly in today's climate of fuel efficiency, environmental protection and depressed freight rates. But ever-increasing capacities also generate administrative issues that need addressing if these big beasts are to operate efficiently.

Information overload

There is a staggeringly large amount of information that must be processed when a containership is in port and engaged in loading and discharging its boxes. As containerships get bigger, this volume of data increases but vessel turnaround times have not really been extended. As a consequence, back-office teams are challenged with processing far more data but without any additional time to complete the task.

There are six standard moves for a container: "gate out depot", "gate in terminal", "load terminal", "discharge terminal", "gate out terminal" and "gate in depot". Each move requires information to be processed. Added to this might be a pre-arrival notice, release order, booking confirmation, bill of lading and an invoice. So it is easy to see how important the efficient handling of data becomes as ship size increases. HMM Algeciras at 24,000TEU could, conceivably, require 144,000 pieces of information for the standard moves and double that if all the terminal/depot requirements are included. Of course, these days most containers are generally 40 or 45-foot units and rarely, if ever, are all boxes loaded or discharged in a single port but even so, the amount of data processing required during a port call should not be underestimated.

Automation and efficiency

Handling this increased amount of information in a relatively short space of time is stretching back office teams and has the potential to affect front-line customer service. Inaccurate invoices and late bills of lading are often cited as unintended consequences of managing such large volumes of containers.

To manage these issues, a carrier has a stark choice – employ more staff or introduce efficiencies to its operations. Coronavirus, macro-economic and more localised industry factors are continuing to squeeze margins and this is ruling out an increase in headcount. Most carriers are opting to build-in a level of intelligent automation instead.

Alongside handling the actual processing and transmission of the data, automation will often reduce errors and omissions that inevitably creep in when manually processing such large quantities of information. Valuable validation controls can also be built-in, for example good software will constantly be asking questions as data is exchanged. Questions such as "is this container part of my fleet?" "will the container arrive in time for the connecting vessel?", "are these the correct rates for my client?" These questions are vital if efficiency and accuracy are to be achieved. Software can also automatically report to the terminal with required information on time – this prevents the unwanted penalties often awarded by terminals for late reporting.

From a customer perspective, automation will also enhance service levels and user experience. Linking the carrier's in-house software with a browser-based or mobile self-service facility will offer customers up-to-the-minute visibility over their actual cargo movements. Technology will deliver "must have" internet bookings, tracking and scheduling as well as creating more transparency between the operator, agent and user.

Taking the plunge

It's fair to say that all carriers of a certain size will be automated to varying degrees but not all will be using technology efficiently. Legacy and cost are often cited as reasons why a carrier might not be achieving the required level of sophistication. In the main, large containerships are operated by large companies and these operators are likely to have been the early adopters of technology some 20 or 30 years ago. In those days, shipping companies were expected to commission a bespoke system that was operated by teams of in-house or external experts. This was (and is) both costly and maintenance heavy but such systems tend to be firmly entrenched within the fabric of the company. Because technology is continuously being upgraded, bespoke systems installed a decade or more ago are now out of step with modern platforms and those companies that run them are now stuck with what is no longer a cutting-edge system.

The answer is to install packaged software but the actualities of doing this. Ripping out a firmly ensconced and company-wide software system and replacing it with something new is a big decision which requires taking one step back before making that forward leap. However, packaged software solution providers are skilled at managing this change process which requires adequate resources, proven methodology and a good knowledge of how the container shipping business works.

Packaged software is a term given to software that has been developed in separate applications that can be linked together to create a tailored solution for a user – rather like the Microsoft Office package that comprises Word, Excel, PowerPoint and other applications. In container shipping, applications might include voyage scheduling, equipment management, operations, finance and more. These can be taken as stand-alone solutions or married together as a comprehensive, all-encompassing system.

Packaged software from good suppliers will have been thoroughly road-tested and so will be bug free and fit-for-purpose. Developers of bespoke solutions inevitably use their client as their testbed which is not helpful when running a busy shipping operation. Good suppliers live or die on their ability to maintain pace with technology advances. This means that packaged software will regularly be updated and migrated onto more up-to-date platforms ensuring customers are never stuck on outdated and under-performing technology. And cost is also an important factor. Typically, packaged software is many times cheaper than the bespoke alternative –which is truly significant.

Detractors will say that a one-size-fits-all solution is not suitable for liner operators, but packaged software does not have to be so uniform. Good software will incorporate "switching" which allows each application to be customised to suit the individualities of the user – even down to page and field levels if required. This enables carriers to manage local differences and other company peculiarities.

Increasingly, containership operators are turning to the packaged solution. No longer is software out of reach for the smaller operator and the large performers are finding that switching from bespoke solutions to something "off-the-shelf" is both cheaper and more efficient. In effect, it is levelling the playing field and giving similar advantages to carriers of all sizes. But automation is also providing a vital role for those operators with vessels that carry many thousands of containers and where simply keeping track of boxes and administering the huge quantities of associated information is beginning to overwhelm.

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