Smooth flow of data – and cargo

by Arto Viitanen, *VP Product, Seaber.io*

There are few options to digitise processes for cargo owners that rely on contracts of affreightment (COA) and spot voyages. On one side of the equation, you have enterprise resource planning (ERP) systems, possibly several of them, from where the maritime transportation needs are derived. On the other side, you have the shipowner's voyage management systems (VMS), where seaborne transports are eventually created and managed. For almost every company, everything in-between is up to an offline protocol dependent on a mass (better still: mess) of emails and improvised spreadsheets.

Most businesses have their low-tech way of performing the following core processes. First, sending COA cargoes or monthly volumes to shipowners; this is typically done using emails with spreadsheet attachments, either as monthly targets per commodity and port pair or as individual parcels.

Second, the COA vessel nomination process: after planning or chartering and the final schedule preparation of their fleet, a shipowner sends a vessel and laycan proposal to the cargo owner for approval.

Third, estimated time of arrival/berthing/departure updates and resulting delays; these often originate from vessel's noon reports or automatic identification system data and then are confirmed by ship operators (eventually, these data make it to all relevant stakeholders, like mills or consignees, in emails sent by agents or operators and/or logistics planners).

Fourth, loaded cargo amounts are observed by the agents in the loading ports and reported to logistics planners as emails and bill-of-lading documents. Sixth, agents typically submit fact statements and demurrage calculations as email attachments.

Lastly, voyage cost estimations and reporting, with freight, bunker adjustment factor (BAF), and other invoices, are often collected into spreadsheets and bookkeeping systems.

The roadmap

This is precisely where a specific customer of ours was traditionally a frontrunner, but their in-house system was becoming technically obsolete. They were looking for a replacement and contracted us to build a unified scheme for managing these processes and communication flows.

The first step in the Seaber process is to create digital replicas of the COA contracts one has with shipowners. The next step is when the company's logistics planners make voyages by assigning the cargoes onto existing COA or new spot contracts.

Once planned and published, the voyages are booked and communicated to shipowners, who can finalise the vessel nomination and provide a more precise ETA for the load port. At the same time, senders and receivers of the cargo are also made aware of the planned voyage, and agents get prepared to provide more detailed information about the port call.

The lifecycle of a voyage ends in the last discharge port, where cargo measurement, statement of facts, and all other documents and invoices are filed in Seaber. The journey is then available for reporting and analysis. All accumulated data can be pulled from the Seaber system into spreadsheets or business intelligence tools.

Next on the roadmap is the inclusion of demurrage and bunker adjustment factors, which, in combination with a third-party berth planning tool, congestion data and just-in-time arrival tools, will make it possible to predict the effect of schedule changes and related costs already in the planning stage.

Seaber provides user accounts and detailed data access policies for all stakeholders. The accumulated information and communication are stored within Seaber and shared automatically with all relevant parties.

Points of discontinuity

Seaber is bridging the gap between ERPs, shipowners, and all other stakeholders. This gap-bridging continues on the other side of the table with Seaber's Fleet Planning product, offered to shipowners and charterers with their fleet for optimising their chartering and vessel scheduling.

"We have the tools to ensure smooth information flow all the way from cargo owner ERPs to shipowner VMSes by eliminating all existing points of discontinuity. We can predict the costs and durations of bulk and break-bulk shipping operations to the degree that we can assist in generating very realistic schedules with longer planning horizons for cargo flows and fleets," Sebastian Sjöberg, CEO and Co-Founder, underlines.

After the cargoes are planned onto COA's, another significant point of discontinuity in the grand scheme of maritime digitalisation lies between the emails arriving in the shipowners' inbox and their transformation into voyages in a VMS. A couple of steps are essential for efficiency, but lack proper planning, analysing, and communication tools. This refers to the scheduling dilemma and the selection of market cargo.

Photos: Wagenborg Shipping

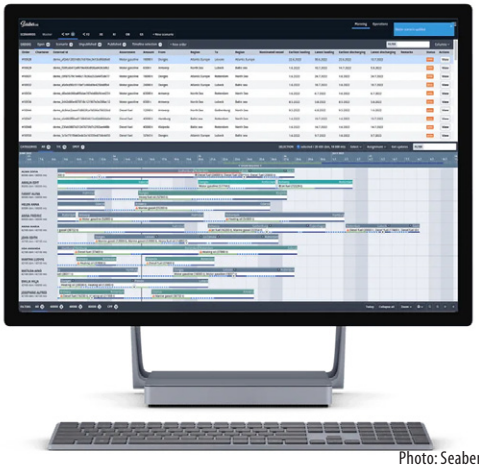

Photo: Seaber

The former is about efficiently planning fixed- and COA cargoes onto the fleet. It's incredibly hard to estimate the total cost and durations of a fleet schedule for a week. Making several scenarios of it and looking a few weeks ahead is a pipe dream.

Closely related to schedule planning, there is the question of identifying the most profitable market cargoes, which are optimal for the entire fleet's efficiency. Simply looking for profitable cargo for a single open position might be suboptimal for the whole fleet's time charter equivalent. With the current tools, there's no way to truly discover, iterate, and compare different schedule alternatives.

One such alternative

Improving the shipowner's planning process might not directly affect the cargo owners' bottom line. Still, the increase in fleet utilisation, reduction of ballast voyages, and better schedule predictability will certainly positively impact freight rates and ensure more predictable and efficient operations.

As it will take decades before the world fleet can expect a significant decrease in fossil fuel consumption, it's essential to try to increase vessel utilisation and reduce ballast voyages in other (already doable today) ways. Seaber is providing one such alternative. ■

Seaber.io

Seaber is a Finnish maritime software company dedicated to reducing inefficiencies, errors, costs, and the environmental impact of bulk and break-bulk shipping. Our bulk shipping software solution helps charterers and shipowners to plan, communicate, operate, and optimise cargo flows and fleet schedules, resulting in improved asset utilisation and profitability, streamlined port calls, as well as reduced fuel consumption and emissions. We are cooperating closely with charterer and shipowner companies to drive the digital transformation of maritime logistics of the entire shipping industry. Click **seaber.io** to learn more.