Obligation-turned-opportunity

by Arnaud Dianoux, *former Captain, Managing Director of Opsealog*

The promises of the digital era are high: data from onboard sensors and systems can provide unprecedented insights into a vessel's operations, while digital reporting should reduce workloads for crews. However, the reality on board is too often such that digitalisation isn't easing the reporting burden for seafarers, who instead see their workload increase. Reversing this trend will require companies to adopt a strategic approach to data collection and reporting – and truly make the most of these insights to deliver efficiency and sustainability.

In an increasingly digitised world, data from onboard sensors is a goldmine of information – helping shipowners measure their emissions levels, giving them a fact-based picture of their compliance with regulations, and facilitating their reporting to authorities. It also enables them to identify operational inefficiencies and track actions they take to reduce fuel consumption.

This transparency and accountability will be increasingly important as the industry pushes ahead on decarbonisation and the use of new low-carbon fuels such as methanol, ammonia and hydrogen, all of which are likely to be more expensive than current fossil fuels. Data will be essential to better understand the advantages and disadvantages of each for a fleet's specific operational context, as the optimal fuel choice is likely to be made on a vessel-by-vessel basis.

Therefore, the industry is entering an experimentation phase in which several options are available, and shipping companies will need to determine the best fit for their ships. This exploratory period will have a huge impact on the work that seafarers have to do. And the burden of data collection on board is already increasing as more stakeholders are demanding access to vessel data from a growing number of installed sensors.

It has reached the point where some crews spend so much time on data reporting that it impacts their other responsibilities.

Like robots

Allianz Global Corporate & Specialty's recently published *Safety and Shipping Review 2022* has recognised the risks associated with seafarer workload. Crews stuck in heavily pressurised working environments are more at risk of making mistakes, and the insurer's data shows that three in four shipping incidents involve human error.

Seafarers consistently report on the issues in the latest editions of the Seafarers Happiness Index. In the recent report from Q1 2022, one seafarer said, "The workload is getting increasingly high with minimum crews on board, rest hours are only complied with on paper, yet none of the authorities pay heed. Shipping has become a floating jail where you're just expected to work endlessly like robots without questioning the work scenario."

What went wrong? Obviously, new technologies should help ease data collecting and reporting. Why are then digital projects failing to deliver on this objective?

Optimising data entry

The reality is that digital tools are only one part of good data management. Digital technologies can help reduce the time spent by crew members inputting data on board. Still, if stakeholders fail to agree on which information should be collected and assessed, new reports will keep appearing, whereas existing ones will not disappear. All stakeholders, therefore, need to reach a consensus on what data is required and which key performance indicators (KPIs) should be used, rather than just insisting that information is collected to support their own KPIs in isolation from others.

Software solutions for daily reporting aboard vessels should not add to seafarer workload by forcing them to replicate data collected across multiple interfaces. Instead, the software should facilitate and optimise data entry while mitigating errors. The data should then be ready to be integrated and shared automatically, saving time and avoiding mistakes for shoreside personnel as well.

Project planning should include an analysis of data redundancy. To have a homogeneous reporting framework that works across different departments in an organisation, stakeholders need to agree on a common vocabulary and set of definitions. For example, this means having a shared understanding of terms such as "cargo," "incident," "delay," or "stand-by," with stakeholders agreeing on what each term actually means and what data is to be gathered and reported.

Front and centre

Crucially, what is commonly missing is an authentic dialogue about the realities at sea. Captains and crew should be front and centre in digitalisation projects. The importance of their personal experience cannot be overstated.

To be successful in digitalisation, project managers need people to talk about the realities on the ground and create a genuine dialogue. An excellent way to reduce emissions, for example, is to collect and analyse engine behaviour and utilisation data. In a perfect world, captains could easily boost the efficiency of their voyages by switching off engines or changing power configurations in response to relatively minor changes in weather or operational conditions.

However, so many times, this is not the reality experienced by crews. When faced with fast-changing schedules and meeting demands from ashore, captains and chief engineers must use the limited time available to deliver safe and efficient operations while also addressing administrative demands.

Organisations need to listen and ensure that digitalisation helps make work more



Photo: Canva

efficient – and improves seafarer welfare and quality of life on board.

Collected data, lost insights

Beyond collection, data needs to be processed and analysed to fully deliver efficiency gains. Therefore, it is essential to choose what data elements will be meaningful. The difficulty in achieving this is a consequence of the size and complexity of shipping organisations and the maritime industry's digital ecosystem as a whole. There is often a lack of strategic planning and coordination in digitalisation projects, so while companies may not be struggling in digitising the reporting, they are not ensuring that data exploitation is optimised and workloads are reduced.

For instance, it's ubiquitous to see reports from maritime systems, including vessel monitoring systems and even paper logbooks, fed into a database and then largely forgotten. The data may have been gathered for compliance purposes, but the opportunity to use it to improve safety or operational efficiency is lost. Analysis of multiple events of a similar nature can reveal recurring issues or operational trends. Once those are identified, action can be taken to prevent recurrence or better prepare crews for future occurrences. In the longer run, data-driven insights may highlight the need for structural changes on newbuilds or inform decisions on new fuels and the energy transition.

Beyond software

Digitalisation is a long-term strategy. While it might be tempting to think that digital solutions are plug-and-play, delivering results instantly, the transformation goes beyond software, deep into the company's ethos. And ultimately, creating an onboard digital culture should alleviate the reporting workload of seafarers – not add to it. ■

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