Data democratisation

by Arnaud Dianoux, *Founder and Managing Director, Opsealog*

Shipping has a long history of regulatory interventions to protect the environment, from the London Convention to MARPOL, through the Ballast Water Convention, and now the Energy Efficiency Existing Ship Index (EEXI) and the Carbon Intensity Indicator (CII). All these initiatives involve data collection. In most cases, however, these data sets are stored on paper, in spreadsheets, or lurk elsewhere in the email box: all inaccessible, siloed, unsecured locations where the gathered information adds no value and serves no purpose beyond compliance. We can deliver a step-change in mitigating shipping's environmental impact – likewise, better its social responsibility & governance – if we break data silos and share information more seamlessly along the value chain.

For each new regulation, it is common to 'simply' add another spreadsheet. In the past, this was a reflection of the data recording methods available at the time, but it also demonstrates an absence of motivation. As such, the value of the data was overlooked.

Now, in the age of accountability, the case for change is more compelling. Companies will increasingly pay for the harm they cause, so conversely, they will reap the benefits of the proactive steps they take to mitigate that harm.

With the digital technologies available today, once idle data becomes a sustainability-building opportunity that pays dividends because it can now be entered once, verified, shared, and mined for insights.

Demonstrating impact

Our mission at Opsealog is to support data democratisation across the maritime community, up & down supply chains so that all organisations, big or small, can contribute their data insights and collectively harvest the fruits. Our goal is to help companies harness the potential of data to deliver constant improvements, demonstrate their positive impact, and reinforce partner trust.

Shipping's digital transformation is not a one-company initiative: if the entire maritime sector takes steps towards democratising data within our communities, networks, and supply chains, we all stand to gain. Raising the data maturity of one partner enables them to better support the shared goals of the others.

Digitalisation can then close the gap between environmental ambitions and the proper measuring of results, guiding the sector towards its goals while bringing transparency to the industry. This makes the difference between greenwashing and meaningful action and extends the democratic process to include society as a whole. After all, we are all stakeholders in sustainability.

The shipping industry already supports a similar approach through reporting requirements for the International Maritime Organization's Data Collection System regulations, which will bring more information to the industry. For example, CII rankings will be made available to charterers, giving them better awareness of a ship's sustainability credentials.

Moving forward, companies will – if they aren't already – face growing scrutiny from cargo owners, financial institutions, and investors about their genuine efforts to reduce their emissions – and their actual impact.

Puzzles that fit

Thankfully, the actionable insights derived from data are becoming more sophisticated, broadening the consideration horizon beyond self-evident fuel consumption and how to lower it. We now see digitalised reports that enable us to act on more complicated operational challenges, such as giving companies insights on why their vessel is late, why they had to increase speed (hence use more bunker), and why they had to reimburse customers or pay an extended invoice to the ports, among others.

Further advances will be as much about organisational advancement as technological change. Part of the needed cultural evolution is greater collaboration between different data providers, acting as suppliers for a specific ship or company, to ensure seamless data integration. No single digital solution will achieve everything; instead, we need an ecosystem where different data providers and analytical services work together and share data to generate added value and achieve the best possible outcome for their common customer.

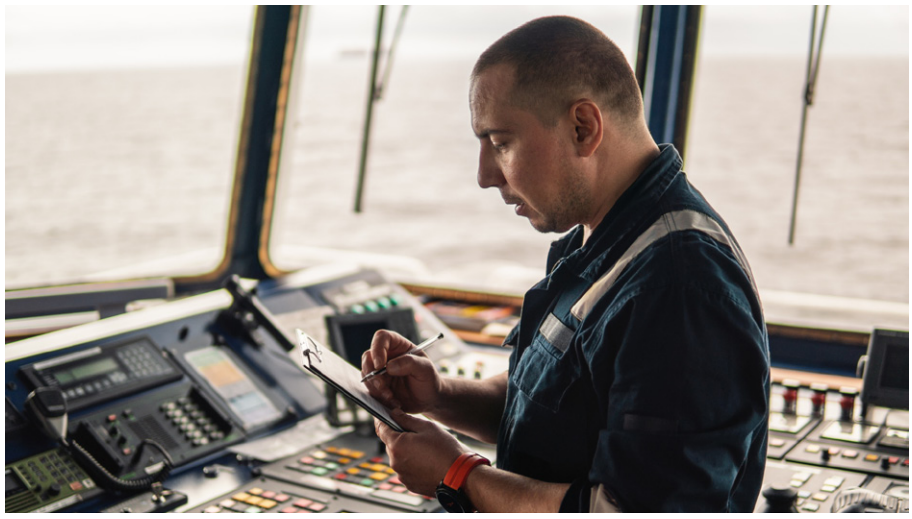
This is becoming an expectation on the client side – that the companies providing data services can talk to each other. This push is a game-changer, and we're already seeing more willingness to collaborate for that reason, as data providers know that they must work with others to keep and expand their customer base.

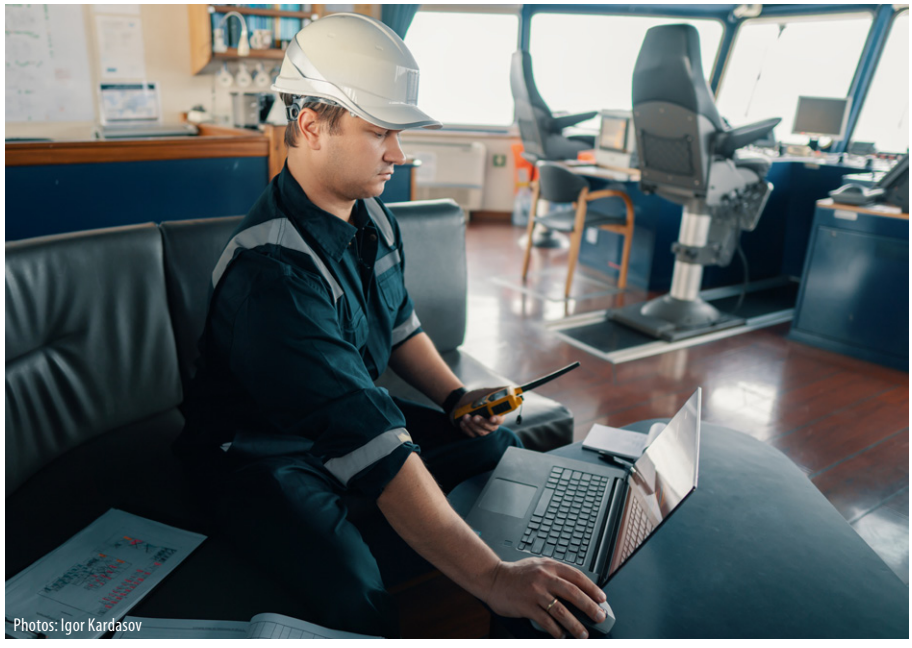
As the number of providers grows exponentially, the capacity to connect and integrate data seamlessly will be even more critical. Otherwise, companies' data ecosystems will look like a puzzle containing only mismatched pieces, limiting their capacity to extract meaningful insights and act on them.

The winding rivers of mindset change

On a technical level, there is no doubt that we can solve the data integration challenge. However, equally important is grappling with the task of evolving mindsets if we are to really take advantage of new solutions.

An illustrative example of this is engine utilisation in the offshore sector: it seems obvious that crews should ensure





Photos: Igor Kardasov

it adequately depending on the type of operations, but this is not always the case. When faced with fast-changing schedules and urgent operations, captains and chief engineers must juggle between adjusting the engine configuration for a specific action and being prepared for subsequent requirements.

Moreover, they often face this decision without access to specialist technology that would help them make more spot-on resolutions. We can bridge this gap by collecting and analysing engine data for easy and timely evaluation. Armed with this intel, crews can assess the options, make the right decision, and take action.

Opsealog's experience in the offshore sector has shown how much impact this can have. In collaboration with Identec Solutions and Shell's fleet in Nigeria, we improved vessel performance using GPS positioning and weather data, along with the ship's operation as reported by the captain through noon reports and e-reporting solutions. As part of a pilot project, nine vessels were equipped with a GPS-SAT removable transponder, configured to send their positions every 30 minutes through the Globalstar network. The insights gained enabled Shell to identify inefficiencies, reduce emissions from its fleet of offshore support vessels in the winding rivers of the Niger Delta, and maximise safety and security in those harsh environments.

A process, not an end

Embracing data democracy will solve today's inefficiencies and position us for the challenges ahead. Digitalisation is a process, not an end. For example, present decarbonisation measurements are based on the current market bunkers. The way we collect and process data will have to evolve in response to the arrival of new low- and zero-carbon fuels. Robust data must accompany the transition to new fuels to measure consumption and emissions, plus the impact on other operational costs, including the logistics of getting these fuels on board and potentially a complete well-to-wake analysis.

We see data democracy as essential for making shipping's decarbonisation a reality. Our vision for the maritime sector is one of openness and accountability, capable of delivering a step-change in curbing the total impact of maritime operations on the environment. Opsealog's solutions have been designed with this goal: accessible in a way that is available to all, beneficial to all, and affordable to all. ■