

## Managing risk in a digital world

The digitalisation of the maritime and offshore industry is both an inevitable and welcome development. But as the industry accelerates its migration from analogue to digital solutions, many owners have the same question: Can we trust the data?



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Increased investments in on-board sensor technology and land-based digital platforms are changing how shipowners manage and operate assets and interact with suppliers and regulators. Digital tools enable a broad range of benefits touching almost every aspect of fleet operations and management, from ship design to on-board condition monitoring, decision support to cargo tracking, automation to class approval, and many more. Digital tools have also created new business models where data – not hardware – defines the parameters of contracts.

### Data overload

According to Bjørn-Johan Vartdal, Program Director for Technology and Research at the DNV GL Group, a combination of weak shipping markets, evolving technology and a new generation of managers are all driving this rapid shift to digitalisation. “Access to vast amounts of data offers new opportunities for reducing costs and improving performance,” he says. “But more doesn’t always mean better. Digital information can be an effective decision support tool, but many owners struggle to manage their data effectively.”

Vartdal explains that owners face three big questions while migrating to digital platforms: Can they trust the data? Is it safe to share data? And how best to secure and monetise their data? “If owners are using these new data streams to make

business-critical decisions, they have to trust not only that the information is accurate, but that it is secure and has been analysed correctly,” he says. “And while sharing data with suppliers can generate efficiencies, some owners may resist exchanging sensitive fleet information and worry they are more exposed to having their data hacked.”

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### Performance based contracts

In the case of performance-based contracts, data integrity is especially critical. Unlike more traditional fee for hardware or service agreements, performance-based contracts rely on a pre-determined set of criteria based on shared data. “In such contracts, it is suppliers – not owners – who are responsible for condition monitoring, service and maintenance, so these types of contracts help incentivise manufacturers to ensure their products are fully optimised and work as advertised,” says Vartdal. “But if either party cannot trust the data, the validity of the contract is at risk.”



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Another area where digitalisation has raised questions has to do with liability. “There remain some questions – especially among marine insurers – as to what parties are responsible if an incident occurs as a result of corrupted data, faulty sensors, a cyber attack or poor data analysis,” says Vartdal. “We don’t think of machines making mistakes, but humans do – and humans are still responsible for data inputs. Junk in is junk out.”

### The role of class

Vartdal notes that while the issue of trust applies to all parts of the industry, much of the burden is on class, which the industry relies on for verification and approvals. Like many class societies, DNV GL is working with different industry stakeholders to try to manage a broad range of digital risks, from data assurance to cyber security. “We offer tools to help owners verify, organise and secure their data more effectively,” he says. “And as in everything we do, it is vital that the industry trusts that we offer truly transparent and independent third-party services.”

For example, DNV GL recently announced a pilot programme, in cooperation with other key stakeholders in the design and commissioning phase, to automate the approval process. “Rather than exchanging drawings, we can upload 3D simulation models to the cloud, providing all stakeholders with access to the design and allowing us to verify any changes in real time,” he says. “This not only dramatically streamlines the approval process, but helps to avoid potentially costly mistakes at an earlier stage.”

### Embracing a digital future

For all the uncertainties, Vartdal insists that the digitalisation of shipping will lead to a safer, more efficient and environmentally friendly world fleet. “Many owners have struggled to develop workable digital strategies due to institutional inertia or silo thinking and a lot more work needs to be done to standardise systems,” he says. “But the benefits so outweigh analogue practices that we anticipate digitalisation will accelerate rapidly in the next five years, completely transforming the industry. And from our perspective, the sooner the better.”