



Still stuck in the dark ages?

by Osher Perry, CEO, ShipIn Systems

Shipping has spent decades making vessels more measurable. Fuel consumption, machinery health, emissions, and routing can now be monitored in extraordinary detail. Yet, much of the work that determines whether a voyage is safe, efficient, and on schedule remains invisible until something goes wrong. This is the industry's next performance gap. A missed step, a repeated shortcut, or an overlooked warning sign can quickly escalate into an incident, delay, or loss. Traditional reports and inspections tend to reveal problems only after the opportunity to intervene has passed.

Everyday operations represent shipping's next performance challenge: to understand how work is actually carried out on board, recognise where risk is building, and give crew and shore teams the ability to change outcomes in real time. Shipping knows a great deal about how a vessel performs technically, but far less about how work is conducted aboard. Closing that gap will not simply require more data; it demands operational visibility.

Procedures alone cannot manage risk

Critical activities – from bridge watchkeeping and mooring to bunkering, from cargo handling to maintenance – are still largely documented through checklists, logbooks, and reports. These remain essential, but the insight they provide is often delayed and lacks context.

Modern vessels already generate vast amounts of data from voyage data recorders, ECDIS, engine monitoring systems, alarms, sensors, and CCTV. The challenge is that these systems typically operate in silos, each answering narrow questions. They can show where a vessel was, what an alarm indicated, or what a camera recorded – but not how people, equipment, and the environment interacted in real time.

Repeated PPE lapses, recurring mobile phone use on the bridge, or consistently missed safety rounds may each appear minor in isolation. Over time, however, these patterns can reveal where procedures are breaking down, where risk is becoming concentrated, and where crews may need additional support. Passive footage rarely makes those trends visible unless someone

reviews it continuously. The issue is not a lack of data, but the inability to convert it into timely, actionable understanding.

Regulators are increasingly focused on the human element. At its 12th session in February 2026, the International Maritime Organization's Sub-Committee on Human Element, Training and Watchkeeping advanced its review of the Convention on Standards of Training, Certification and Watchkeeping for Seafarers and continued work on fatigue and hours of rest. While training and compliance are essential, procedures alone cannot manage risks that remain unseen. Operational visibility is therefore emerging as the missing layer in maritime digitalisation.

From passive records to active intelligence

For decades, on-board video has functioned primarily as a passive record reviewed after incidents such as injuries, collisions, or equipment failures. While valuable for establishing facts, its benefits come too late.

Using computer vision, selected video streams can be continuously interpreted to generate time-stamped operational events and flag conditions that require attention. ShipIn's FleetVision platform applies this approach across the bridge, deck, engine room, and cargo operations. Rather than requiring crews to monitor multiple screens, it directs attention to the moments that matter. The goal isn't more footage; it's converting operational activity into actionable intelligence. In a traditional CCTV model, an unattended bridge or missing PPE becomes evident after the fact. In an active model,

crews can be alerted in time to correct the situation, while shore teams can provide informed support. This shifts safety management from retrospective to preventive.

Serious incidents rarely occur without warning. They are typically preceded by weak signals such as small procedural deviations, repeated shortcuts, or inconsistent watchkeeping. Individually, these may seem manageable, but collectively they reveal deeper patterns in operational risk. Analysis of vessels using FleetVision shows that those with lower performance scores experienced accident rates 5.7 times higher than top-performing ships. This suggests that routine behaviour, observed over time, provides earlier and more reliable indicators of risk than lagging metrics alone.

Most safety systems still prioritise outcomes such as lost-time injuries, detentions, claims, and equipment failures. While necessary, these indicators reflect risks that have already materialised. Operational visibility introduces leading indicators, highlighting whether procedures are followed consistently, where deviations occur, and which vessels or workflows require attention. These indicators can drive measurable improvements. Within months, crews on pilot ships were using the visibility provided by the platform to improve performance without requiring the office to drive each intervention. PPE compliance was the first and fastest area to improve, while Stealth Maritime's FleetVision Score rose from 68 to 96 during the first year. The significance was not simply a higher score, but a shift from investigating safety failures after the fact to helping crews prevent them.

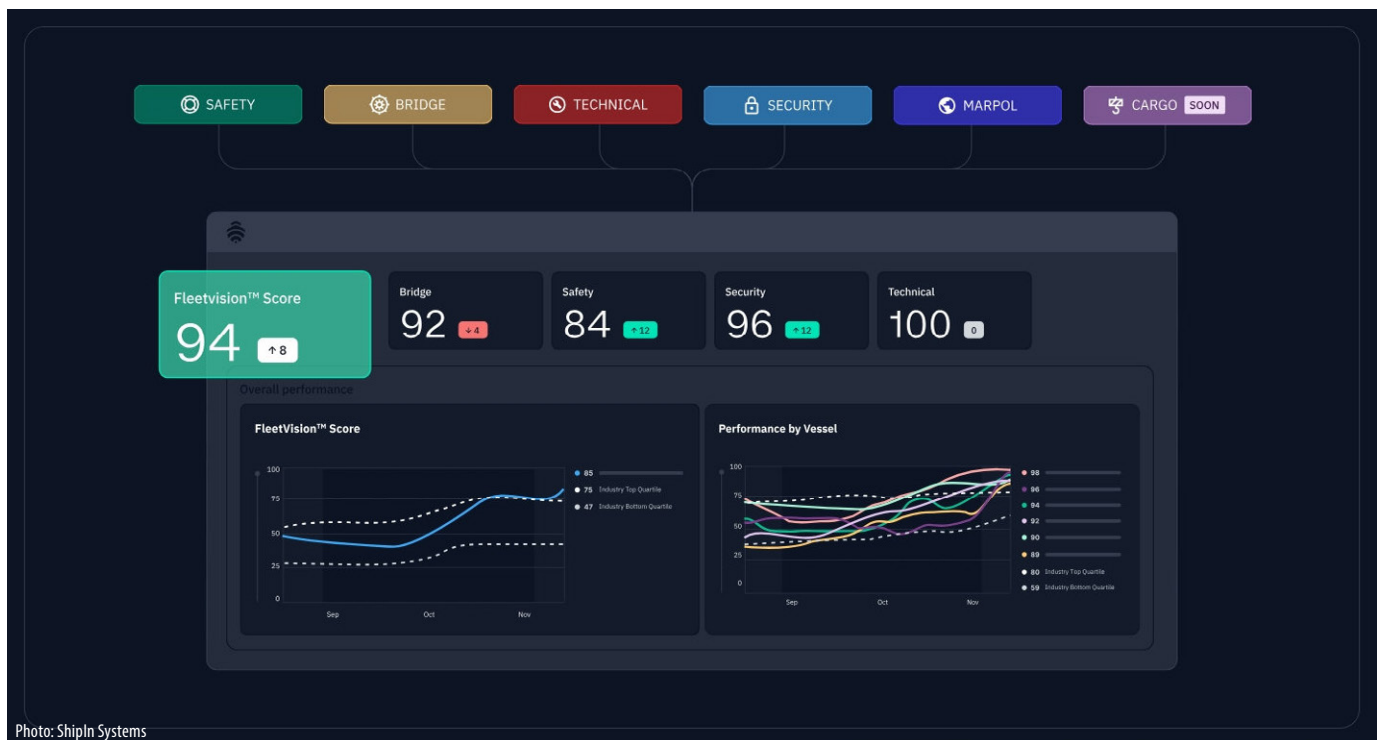


Photo: ShipIn Systems

Trusted support or (AI) surveillance?

Beyond safety, the same operational intelligence can surface inefficiencies such as delays, duplicated tasks, and process friction – all without adding to the crew's administrative workload. The aim is to make operational performance as measurable and transparent as technical performance. Yet, maritime operations remain inherently complex, shaped by professional judgement, and AI should neither override that judgement nor create a false sense of certainty. Positioned correctly, it becomes an enabler: maintaining a continuous watch over defined conditions, linking fragmented data points, and elevating only the events that matter. Masters and crew retain authority, while shore teams gain clearer insight to support decisions. The outcome is faster, more confident responses without constant manual oversight. Meanwhile, automated event capture reduces the administrative burden, allowing crews to focus on operations rather than reporting.

However, operational visibility will only succeed if it is trusted. Without that trust, it risks being seen as surveillance rather than support. Clear governance is essential to cover what is monitored and why, who has access, how long data is kept, and how it may be used. Implementation must begin with the crew. Alerts need appropriate thresholds, and the focus must remain on coaching and improvement, not punitive oversight.

Stealth Maritime illustrates this approach by introducing FleetVision as a tool for crews, not a blame system. Results are shared first with the ship and then with the office, enabling masters and crews to understand emerging patterns, initiate informed conversations, and improve safety on board. Authority and responsibility remain firmly with the people operating the vessel. Far from being a secondary concern, trust determines whether operational visibility strengthens safety culture or becomes an imposed system.

Understand, measure, improve

Shipping has repeatedly demonstrated its ability to transform when driven by regulation, economics, and performance. Fuel efficiency has made vessel performance increasingly transparent. Decarbonisation is accelerating innovation in propulsion and energy management, while predictive maintenance is reshaping engineering practices. Operations should now follow the same path. The objective is to make critical work visible enough to understand, structured enough to measure, and timely enough to improve.

This shift is also influencing the wider assurance ecosystem. NorthStandard has included FleetVision in its Get SET! loss-prevention programme and is collaborating with ShipIn Systems on research into operational risk patterns. This reflects growing insurer interest in complementing historical claims data with real-time operational insights. At Stealth Maritime, continuous operational evidence is strengthening Tanker Management Self Assessment (TMSA) assurance by showing how safety practices are applied between formal audits and vessel visits. The company reports that FleetVision has been recognised as a best practice during its TMSA engagements with oil majors, providing a more representative view of day-to-day safety performance.

Shipping has become highly effective at explaining failure. Investigations are more detailed and root-cause analysis more precise than ever before. But explanation comes after the fact. The next operating standard must be built on earlier visibility and quicker action. We have optimised the vessel as a machine. Now we must bring the way it is operated out of the dark ages and into the modern world. ■



ShipIn Systems is the world's first FleetVision Platform, enabling seamless ship-to-shore collaboration for maritime fleets. By deploying AI-powered cameras and real-time visual analytics, the company's platform proactively alerts shipowners, managers, and seafarers to anomalies, reducing incidents on board by 40% and increasing cargo operations efficiency by 8%. Head to shipin.ai to learn more.