Contributions

Operations

Tech

How tomorrow's ships will operate

Splash

May 30, 2025 ↑ 1,023 ■ 4 minutes read



Thousands of people are making their way to Oslo for next week's Nor-Shipping gathering, a showcase of future technologies. Nick Chubb, founder of UK maritime innovation consultancy Thetius, takes readers into the future, imagining how ships will operate 10 years from now.

May 30, 2035 - 0735 UTC

Captain Khan: Good morning, Proteus.

Proteus: Good morning, Captain. Would you like a report?

Captain Khan: Yes, please.

Proteus: Voyage Day 18. We are 148 nautical miles southwest of Látrabjarg. Ice density is forecast at 8/10ths ahead. A strong lowpressure system is forming in the West.

COG 074°, Heading 078°, SOG 14kts.

ETA Reykjavik: 16:29 UTC, May 30.

4.06.2025 20:59

Propulsion and navigation systems are normal. There was a minor fluctuation in portside coolant pressure at 03:42 UTC, which was within acceptable bounds. I scheduled a diagnostic sweep with Engineering for 09:00.

Chief Engineer Vasquez completed a software patch on the auxiliary power generator, a performance boost of 0.2% confirmed.

No security breaches or fatigue alerts during unmanned bridge hours. Crew wellness indicators are green across the board. Cook Tanaka's sourdough starter is also showing promising yeast activity.

There was a notable event at 02:17 UTC: Automated collision avoidance was triggered. An unmanned container feeder, Arctic Reach II, had a CPA of 6 cables and a TCPA of 48 minutes. Altered course 3° to starboard and broadcast intentions via VHF Data Exchange. Final CPA was 3 nautical miles, within your standing orders. Would you like to review the footage?

Captain Khan: No need, thank you.

Proteus: Very well. Environment report, vessel operating within all environmental compliance parameters. Fuel consumption, 27.3 metric tonnes, slightly below forecast (-1.4%). Scrubber and waste systems are functioning normally. No discharges. Minor pH spike ($7.3 \rightarrow 8.6$) in one washwater sample at 02:40 UTC, within legal limits but approaching threshold. Logged for system review.

Seven-day CII+ rating holding steady at low C, trending upward with current routing, forecast to reach B on arrival at Reykjavik. Our ETA is currently 31 minutes ahead of the scheduled arrival in Reykjavik. Would you like to optimise our speed?

Captain Khan: Yes, let's take a little power out.

Proteus: Very well.

Captain Khan: Are the tanks ready?

Proteus: Yes, Captain. Final tank wash completed at 05:46 UTC. All tanks have undergone methanol-grade wash cycles. Oxygen levels in cargo spaces reduced to below 8% via nitrogen purge.

Captain Khan: And what about the pre-arrival data?

Proteus: Horizon Dawn is scheduled to berth at Reykjavik Terminal 4A, with the assigned berth confirmed as 4A-METH-02.

Remote pilotage is unavailable due to the ice forecast. Pilot boarding has been arranged for 18:30 UTC on May 30, approximately 12 nautical miles north of Faxaflói Bay.

The terminal has indicated an estimated dock readiness no earlier than 19:30 UTC. The berth is equipped with automated A-frame mooring systems and a midships manual override.

All clearance documentation is on track. The Electronic Notice of Arrival has been filed and acknowledged. The pre-arrival crew list, cargo tank certificate, and ESG compliance report have been submitted without issue. The final declaration of ballast water exchange is waiting in your inbox, I will send it as soon as you have signed it.

The harbourmaster has requested real-time tank atmosphere and inert gas status by 12:00 UTC, ahead of the vessel's coastal approach. As we enter the Reykjavik EEZ, environmental regulations prohibit the discharge of scrubber washwater and bilge effluent within 50 nautical miles of the coastline.

The scheduled cargo is green methanol, certified bio-synthetic grade, compliant with Nordic GreenFuel Directive 6.2. The terminal has approved a load of 28,000 cubic metres at a minimum purity of 99.85%, with vapour recovery via closed-loop transfer. Transfer is anticipated to begin late on 28 February, pending final clearance and berth readiness.

Methanol vapour suppression logs and leak detection calibration reports must be submitted prior to the commencement of cargo loading. Sludge offload is registered and has been approved by Quay Services, to be completed alongside cargo operations.

A terminal-to-ship pre-loading conference is scheduled for this morning at 11:30 UTC on Microsoft Teams. The link is in your calendar.

Reykjavik Customs will conduct a passive drone inspection during the approach phase. No boarding is expected unless triggered during the flyover.

Captain Khan: Why is pilot boarding scheduled so late?

Proteus: The delay appears to be due to limited pilot availability following a backlog of inbound traffic yesterday. Reykjavik Control issued a scheduling update at 06:50 UTC confirming revised boarding times for three vessels ahead of us.

Captain Khan: If we slow down for the pilot, we will miss our charterparty window, but if we arrive on our current ETA we will get a Just-in-Time penalty.

Proteus: Yes, that's correct. Would you like me to generate a charterparty Just-In-Time change request?

Captain Khan: Yes, please, and prepare a claim against the port too, in case the change request is rejected.

Proteus: I'm generating the documents now. It will cite current port congestion and confirmed pilot availability as just cause, with supporting data attached.

If approved, this request would reset the arrival time to 18:30 pilot boarding time, allowing you to reduce speed and optimise fuel without incurring performance penalties. Estimated fuel savings: 1.7% over the next 10 hours.

The document is ready and in your inbox, waiting for signature. As soon as you sign it will submit it to the charterer's operations desk and flag it as time-sensitive.

Captain Khan: Signed. Submit it and notify me as soon as they respond.

Proteus: Understood. JIT request now sent via charter operations channel with timestamp and documentation. Acknowledgement expected within 30–45 minutes. In the meantime, maintaining current speed. I will prompt again if no response is received by 08:30 UTC.

Captain Khan: Thank you. If they don't respond by 08:30, send the claim into the port. These just-in-time penalties make me anxious.

Proteus: Understood. In the meantime, would you like me to play your "mindful master mariner" playlist?

Captain Khan: Yes, please.

At Nor-Shipping, delegates will be able to pick up Ship Concept 2035, Splash's brand new magazine identifying how ships will operate and what they will look like 10 years from now.

#United Kingdom