

NAVÈK Speaks

MARINE INNOVATION PTE. LTD



REDIFINED MISSION : REDUCE MARITIME ACCIDENTS BY 3% OVER THE NEXT 5 YEARS.

As we stand at the helm of a rapidly evolving maritime world, one truth remains unwavering - safety must always come first.

At the "Regulations Matter" seminar, I had the honour of unveiling a mission that reflects not just the ambition of Marine Innovation, but a collective responsibility we all share:

To reduce maritime accidents by 3% over the next 5 years.

This mission is more than a number - it's a commitment to the lives we protect, the oceans we navigate, and the future we shape.

This goal isn't aspirational - it's actionable. But it will take more than ticking regulatory boxes to get there.

Many ships today meet the minimum compliance requirements - and yet, incidents still occur. Why?

Because compliance alone does not equal safety.

Compliance is the starting line, not the finish line.

To truly improve safety at sea, we must:

- Embrace full system integration - not just isolated tools like ECDIS,

but synchronized inputs from RADAR, AIS, VDR, Gyro, and BNWAS.

- Ensure real-time data sharing and decision-making intelligence onboard.
- Prioritize ongoing crew training, situational awareness, and proactive risk prevention.

This mission is a call to shipowners, managers, and regulators alike:

Let's not aim for the bare minimum. Let's aim for better.

Because every percent we improve represents lives saved, losses avoided, and futures protected.

Together, we can build a smarter, safer, and more resilient maritime world.

Let's sail this mission - with purpose, with clarity, and with full alignment.

Together, through collaboration, innovation, and regulation, we can make the next five years the safest yet for global shipping.

Let's navigate this mission - not just with maps, but with purpose.

Capt. Tarun

Marine Innovation

GROUNDBREAKING GOAL: WHY THESE ACCIDENTS DEFINE US (BY MARINE INNOVATION MISSION WATCH 2025)

"A single grounding doesn't just damage a hull - it dents trust in technology, in training, in teamwork. We've studied five such dents. And we're using them as blueprints for change."

Across chemical tankers, dry cargo ships, ro-ros and bulk carriers, a pattern emerged: the machine didn't fail alone — the human-system relationship did.

A chart scale too zoomed in. An alarm turned off to silence distractions. A passage plan copied, but never truly read.

Training assumed, not proven. Fatigue so loud, it drowned out all systems.

We've studied them all — not to blame, but to build better.

That's why Marine Innovation's mission to reduce 3% of navigational accidents by 2025 isn't just a number.

It's a response to every alert that was missed. Every contour line ignored. Every crew member who thought they were covered by tech — until they weren't.

was missed. Every contour line ignored. Every crew member who thought they were covered by tech — until they weren't.

This isn't case study reporting.

It's system intelligence.

Each accident we analyzed:

Refines how we design ECDIS interfaces. Influences how we train shipowners on alert fatigue

.Shapes the AI-driven support tools we're prototyping .Drives our

spoofing-resistant navigation vision And sharpens our push for ergonomic placement and real-time learning

So what are we really doing?

We're not just selling ECDIS.

We're mapping risk patterns before they strike again.

We're translating every mishap into one less failure tomorrow.

We're turning silence into signal alarms into intuition.

By 2025, we won't stop at 3%. But that's where we start.

And to those who ask, "Why tell these stories?"

Because these ships didn't just run aground. They ran into a system gap.

And we at Marine Innovation are here to patch it — with vision, vigilance, and values.



JULY 2025 — COASTAL RO-RO PASSENGER VESSEL GROUNDING

What happened: A Ro-Ro passenger vessel grounded three times in coastal fog due to drift caused by reliance on dead reckoning (DR) mode after GPS loss. The bridge crew failed to perform basic position checks and were unaware of the vessel's deviation from the planned route, even after experiencing



vibrations and speed reduction. **nautinst.org**

Key ECDIS failings: Overreliance on ECDIS in DR mode; lack of double-checks

via radar or visual reference.

Lesson: Never depend solely on ECDIS positional data when GPS signal is compromised—always validate with radar or visual fixes.

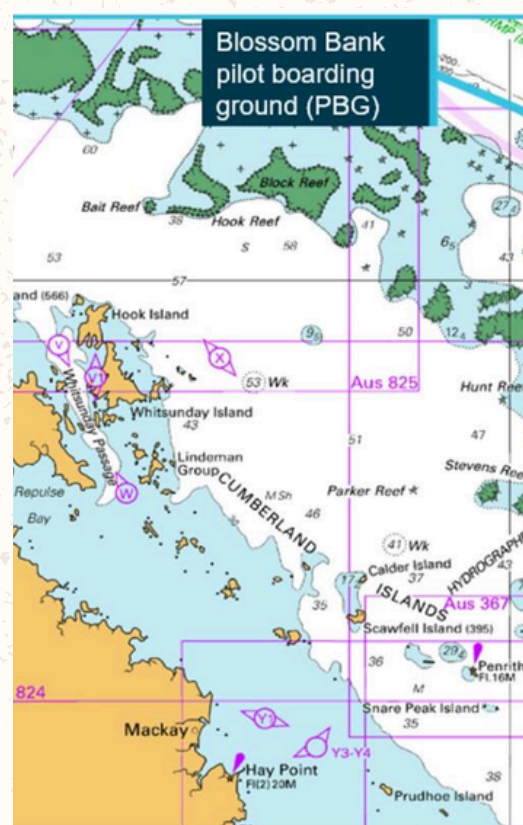


MAY 2024 — GROUNDING LINKED TO INCORRECT CHART DISPLAY & DISTRACTION

What happened: As per a CHIRP safety report, a vessel ran aground due to incorrect chart imagery on the primary ECDIS and distractions onboard. Despite having backups (paper charts and secondary ECDIS), these weren't used in time to prevent the grounding. **CHIRP**

Key ECDIS failings: Malfunctioning chart data; failure to cross-check using alternate navigation sources.

Lesson: Always confirm data consistency across all navigation tools—don't dismiss backup systems as redundant.



2023 — BULKER GROUNDING (PHILIPPINES-AUSTRALIA PASSAGE)



What happened: A bulk carrier ran aground after using an incomplete safe. **SAFETY4SEA+1**

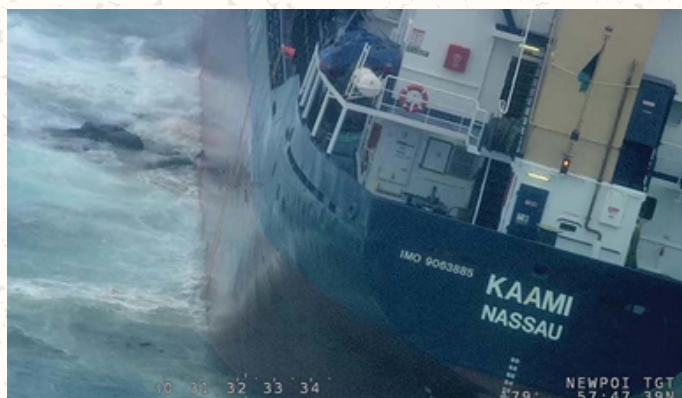
approved passage plan based on a weather routing service. The ECDIS's route check function

was not activated, leading to no warnings as the vessel neared a shoal. The OOW was distracted by administrative tasks

Key ECDIS failings: Disabled safety checks; lack of route monitoring; bridge distraction.

Lesson: Always activate route checking in ECDIS; ensure passage plans are fully approved and stay focused during critical navigation phases.

MARCH 2020 — KAAMI GROUNDING (LITTLE MINCH, SCOTLAND)



What happened: The general cargo vessel Kaami grounded on Steir Graidach shoal.

The voyage plan allowed passage over a danger zone—waypoints had been “dragged” without sufficient analysis or guard settings. The ECDIS safety contour was misaligned with the vessel’s draft, and ECDIS-trained

planning procedures were lacking. ukpandi.comnautilusint.org

- Key ECDIS failings: Incorrect safety contour; navigation based on inadequate route appraisal; poor training & supervision.
- Lesson: Validate passage plans fully; ensure safety parameters are correctly set, and conduct robust training.

SEPTEMBER 2017 — ABFC ROEBUCK BAY GROUNDING (HENRY REEF, GBR)

What happened: The cutter grounded on Henry Reef despite receiving an ECDIS warning. Crew failed to notice the hazard. The ECDIS system was outdated, and training was ineffective at helping crew interpret electronic warnings correctly. maritime-executive.comnautilusint.org

Key ECDIS failings: Misinterpretation of chart symbols; outdated software; insufficient type-specific training.

Lesson: Keep ECDIS current with IHO standards and reinforce effective, model-specific training.



Summary: Seven Recent (or Noteworthy) ECDIS-Related Groundings

Year / Date	Vessel / Incident Location	ECDIS Failure Highlights
2025 (July)	Ro-Ro, coastal waters (MARS report)	GPS loss, DR mode misuse, no radar fixes
2024 (May)	Unknown cargo grounding	Incorrect chart data, ignored backups
2023	Bulker, Philippines–Australia	Missing route checks; bridge distractions
2020 (March)	<i>Kaami</i> , Scotland	Incorrect plan, poor safety contour, training gaps
2017 (Sep)	<i>ABFC Roebuck Bay</i> , GBR	Outdated ECDIS, training gaps, misread warnings

MARINE INDUSTRY TRENDS TO WATCH (2025-26)



- 1. Decarbonization & Alternative Fuels**
 - LNG, methanol, biofuels, and hydrogen are moving from trials to real-world adoption.
 - Wind-assisted propulsion and battery hybrid systems gaining momentum.
- 2. Smarter Navigation & Operations**
 - AI-driven routing tools paired with ECDIS for fuel efficiency and safety.
 - Digital twins being used for fleet performance monitoring and predictive maintenance.
- 3. Autonomous & Remote-Control Shipping**
 - Pilot projects for autonomous vessels expanding in Scandinavia and Asia.
 - Remote operation centers emerging as “virtual bridges.”
- 4. Cybersecurity at Sea**
 - Growing threats from GPS spoofing, AIS manipulation, and ransomware.
 - Stronger IMO guidelines and mandatory crew training coming into play.
- 5. Port & Supply Chain Digitalization**
 - Smart ports using IoT sensors, blockchain, and automation to reduce turnaround times.
 - Integration of shipping data with logistics chains for better transparency.
- 6. Crew Welfare & Training Tech**
 - VR/AR simulators enhancing ECDIS and safety training.
 - More focus on mental health, connectivity, and work-life balance at sea.

UNLEASH YOUR INNER SAILOR: ‘MY CAPTAIN WAS A KRAKEN’ COLORING FUN!



😄 Captain's Log - Jokes from the Bridge

Because even sea monsters need a laugh!

🚫 Q: Why did the ship blush?

A: Because it saw the ocean's bottom!

⚓ Q: How do pirates prefer to communicate?

A: Aye to aye!

🌊 Q: Why don't sailors ever get lost?

A: They follow their “nauti”-cal instincts!

🥬 Q: What's a pirate's least favorite vegetable?

A: Leeks in the boat.

👤 Q: What's a kraken's favorite song?

A: “Under Pressure!”

GALLEY TALK (VESSEL'S GOSSIP — STRAIGHT FROM THE HIGH SEAS)

"Captain Phantom" Strikes Again

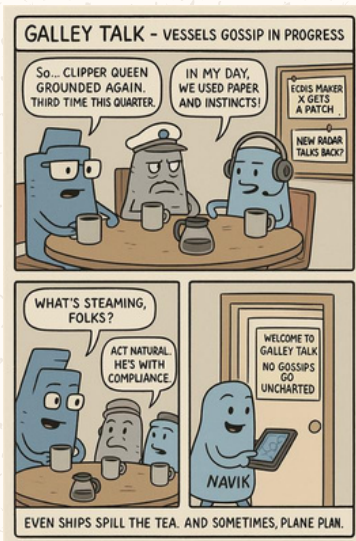
Word's out that a captain from a well-known chemical tanker allegedly disabled his ECDIS alarms permanently—because he found them "annoying." Sources say he even used tape to cover blinking visuals. When the vessel scraped a shallow reef last month near Southeast Asia, he blamed "software lag." The ECDIS? Fully functional. The captain? Quietly reassigned.

Lesson: If your alarms annoy you more than a reef strike, it might be time for retraining.

Sailing by WhatsApp

In a container vessel in route to Rotterdam, an OOW was reportedly taking navigation tips via WhatsApp from a retired captain. When questioned why he ignored the ECDIS warning for shallow waters, he replied, "Sir told me this shortcut works every time." The grounding caused a 2-day delay. The chat screenshots? Apparently hilarious—and damning.

Lesson: WhatsApp is not a substitute for ENC charts.



The Auto-Pilot Romance

During a routine crossing in the Baltic Sea, the second mate and a junior engineer allegedly spent more time in the ship's gym (and sauna) than on the bridge. Meanwhile, ECDIS followed a "safe" route... right into a TSS violation. The authorities boarded after radar monitoring caught a bizarre drift. The report? "Fatigue." The gossip? "A romantic detour."

Lesson: Even ECDIS needs a human supervisor, not just a steamy subplot.

ECDIS "Hack Job"

Rumors swirl that a junior officer on a cruise ship tried installing Netflix on the ECDIS terminal while at port. The system crashed and had to be rebooted by the IT officer during departure. Thankfully, no one was harmed—but the Captain allegedly said, "The only plot twist I want is on paper charts."

Lesson: ECDIS is for navigation, not your movie marathon.

Want to feature more juicy scoops next month? Send your anonymous tips to:
(We promise—no AIS tracking involved)



1. Ships Transport 90% of Global Trade
– Almost everything around you has, at some point, traveled by sea.
2. A Modern Container Ship Is Longer Than the Eiffel Tower
– Some ships stretch over 400 meters — that's longer than the Empire State Building is tall!
3. Maritime GPS is Not Foolproof
– That's why systems like ECDIS must be combined with manual position fixing and radar.
4. Sea Pirates Still Exist
– Areas like the Gulf of Guinea and parts of Southeast Asia still report piracy attacks each year.

5. ECDIS = Employment
– New ECDIS training and compliance requirements have created an entire industry of trainers and inspectors.
6. Big Brother is Watching Ships
– Vessels are now trackable from space using AIS (Automatic Identification System) — often integrated with ECDIS.
7. The Deepest Shipwreck Ever Found Was Over 6,000m Down
– That's almost as deep as Mount Fuji is tall — and ships still navigate safely above such trenches thanks to digital charts.
8. Mariners Have Their Own Language
– Ever heard of "donkey's breakfast"? It's sailor slang for a mattress!

SEA MYTHS & PIRATE TALES: TRUTH OR TIDE?

1. The Bermuda Triangle: Sea's Black Hole?
Ships disappear. Compasses spin. Radios die. But is it cursed?
! Truth: The Triangle has heavy traffic, unpredictable weather, and magnetic anomalies — science explains most incidents.
🔍 Tale Rating: ★★★★★
2. Mermaids: Sirens or Sea Stories?
Sailors swore they saw half-woman, half-fish creatures singing near rocks. But guess what?
! Truth: Most "sightings" were manatees, viewed from a rocking deck after weeks without fresh food.
🔍 Tale Rating: ★★★★★
3. Blackbeard's Flaming Beard
Blackbeard, the most feared pirate, was said to tie burning fuses under his hat to terrify enemies.
! Truth: It's real. He lit slow-burning cords soaked in saltpeter — giving him a smoke-filled demonic appearance.
🔍 Tale Rating: ★★★★★ (and scary!)

4. The Ghost Ship: Flying Dutchman
An eerie, glowing ship doomed to sail forever. Seen from afar but never reached.
! Truth: Sailors may have witnessed Fata Morgana — a mirage over the horizon caused by light bending.
🔍 Tale Rating: ★★★★★
5. Sea Monsters & Kraken
Tentacles as big as ships. Eyes the size of sails.
! Truth: Giant squids do exist — some up to 13 meters! But they don't attack ships (yet).
🔍 Tale Rating: ★★★★★ (based on real creatures!)
- 🎁 Bonus Pirate Fact:
The real pirates didn't say "Arrr!" — that was made up by Hollywood. They were more likely yelling "Heave!" or swearing in multiple languages.



SPOT-THE-MYTH: MARITIME EDITION



ANSWER KEY:
 1. B - TITANIC ONLY USED PAPER CHARTS. | 2. A - TRUE! MOST "MERMAID" SIGHTINGS WERE MANATEES. | 3. B - FALSE! VERY FEW PIRATES ACTUALLY BURIED TREASURE.
 4. A - TRUE! THE KRACKEN MYTH LIKELY ORIGINATED FROM REAL SQUID. | 5. A - YES, BLACKBEARD REALLY DID IT! | 6. B - FALSE. MOST RELY ON GPS; LOSING IT CAN BE DANGEROUS.

CAN YOU TELL FACT FROM FICTION? CIRCLE YOUR ANSWERS, AND CHECK THE KEY AT THE END OF THE PAGE!

- The Titanic used electronic navigation charts.
A. True B. False
- Mermaids were likely just manatees mistaken by tired sailors.
A. True B. False
- Pirates buried most of their treasure on remote islands.
A. True B. False
- The Kraken is based on real giant squid sightings.
A. True B. False
- Blackbeard tied flaming fuses under his hat to scare his enemies.
A. True B. False
- All modern ships are GPS-independent and can navigate fine without it.
A. True B. False

CROSSWORD

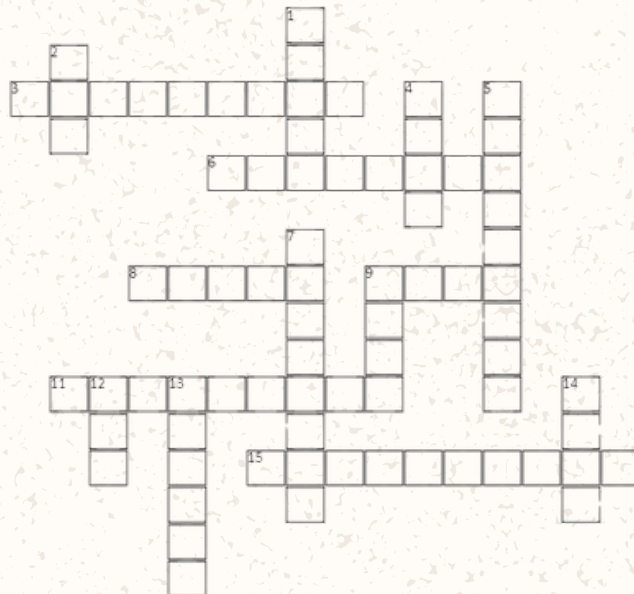
PUZZLE

Horizontal

- The person to whom cargo is consigned as stated on the bills of lading.
- A list of cargo being carried by a ship as declared by the shipper.
- A person who is qualified to assist the master of a ship to navigate when entering or leaving a port.
- The main body of the ship.
- The right side of the ship.
- The science of the measurement of marine depths.

Vertical

- The after end of the ship.
- The front of the ship.
- The structure to which a vessel is secured for the purpose of loading and unloading cargo.
- The line where the hull of a ship meets the water's surface.
- A person illegally aboard on a ship and in hiding.
- The part of the ship that carries the cargo.
- A small vessel designed to tow or push large ships.
- A vessel designed to carry goods requiring refrigeration, such as meat and fruit.
- The left side of a ship.



MARINE MEME OF THE MONTH



FIND FIVE DIFFERENCES

