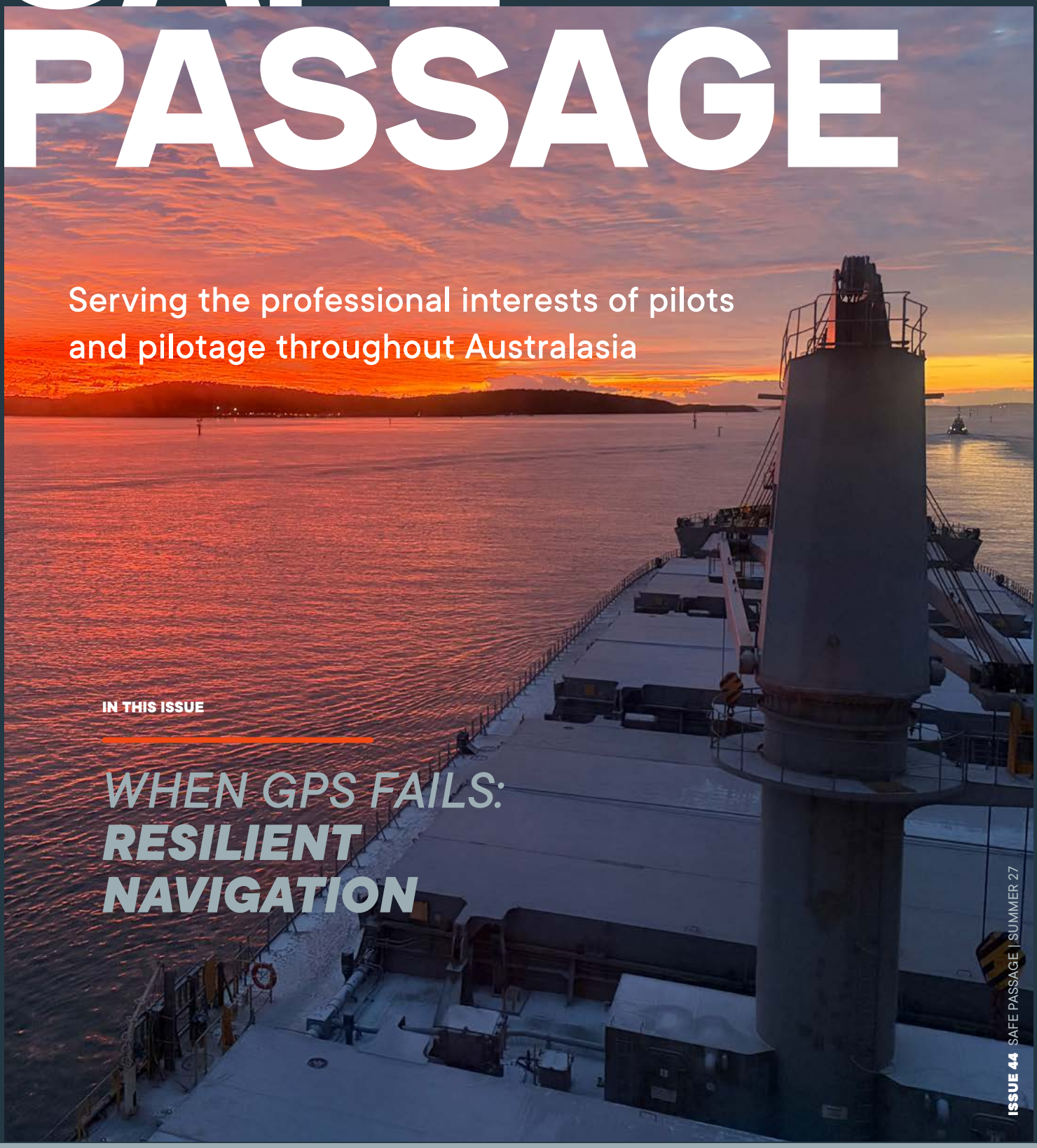
SUMMER 2027

SAFE PASSAGE



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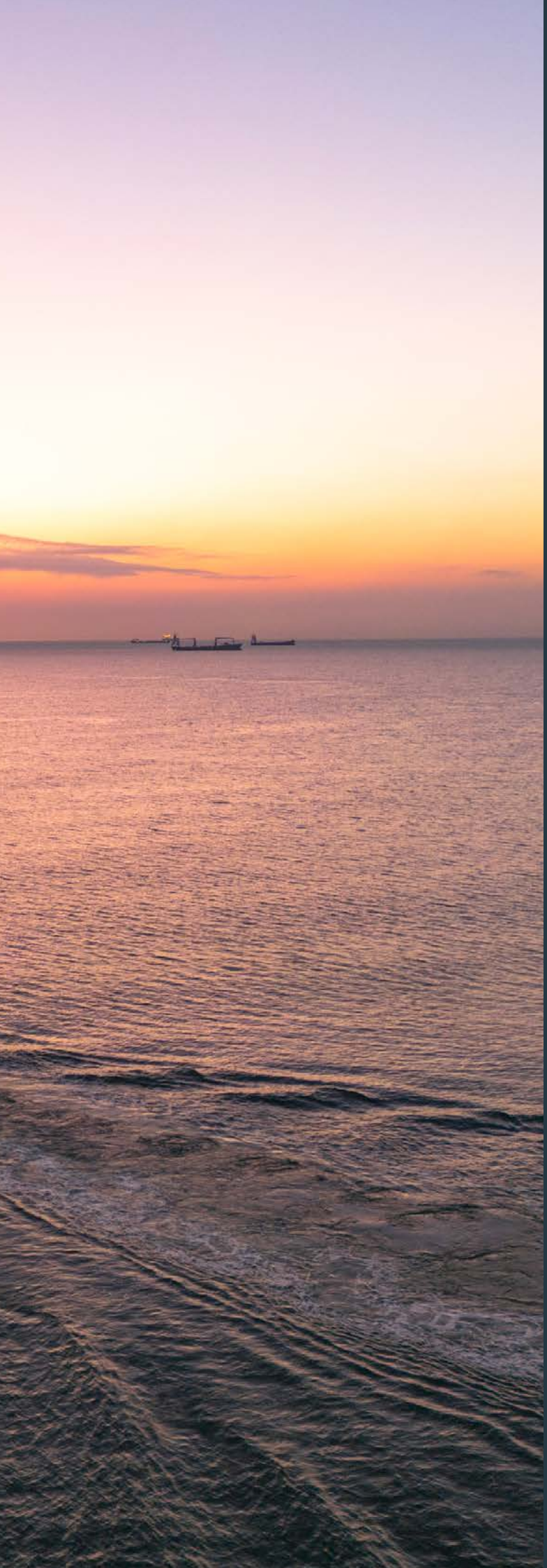
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EDITORS MESSAGE



Tom Hilton | September 2026

Across such a large country with many disparate pilot services, AMPI is run by a small team of volunteers to capture the voice of pilots and to preserve and progress the profession that we've inherited from the Pilots of old.

Thanks again to Pat for his work on the great last edition. Pat is side-stepping to the AMPI treasurer's role going forward. Many thanks to Bernado for his diligence in keeping finances on track.

As usual, it's been a busy 6 months in the industry since the last Safe Passage.

- AMSA has updated revalidation requirements for your Master's CoC for practicing Marine Pilots (it's worth getting your head around this!),
- Two state authorities have undertaken substantial regulatory review – Victoria (licensing), Queensland (PRIP – health standards).
- AMPI released another position paper (Pilotage of Military Ships) for pilot and industry guidance. An interesting note from the Darwin conference about warship pilotage was that it takes 12 – 16 years to 'grow' an unrestricted naval pilot.
- The MIAL conference explored retention and promoting maritime careers – it's a shame that it seems easier to import candidates from overseas, a revitalised marine sector would greatly change the whole industry. This will take time, but it's something we all may be able to have an impact on, through mentoring and leadership in our own ports.
- A very promising move that the strategic fleet now has its first vessel, the ANL Kokoda, due to take crew in October.
- S-100 chart rollout gathering pace.
- Plus, of course the recent AMPI Conference (Darwin) - all the presentations papers are available in the AMPI members area online, with excellent papers on warship pilotage, human factors (stress, incidents, the need for levity!), effective mentoring and an excellent presentation on the two sides of an incident.

Matt Shirley and Dana Goward have contributed an article about creating ports that are resilient to GPS failures or interference. With more and more reliance on high precision positioning, this is an obvious weak point.

Yes, another pilot ladder road to recovery article reprinted from 'The Pilot' magazine, stories about after the accident are so pertinent to really show what a life changing event this can be. Returning to work, dealing with insurance, all things that should be there to assist but instead become another maze to navigate. One of the presentations from Darwin 'How did you get to work today' was an eye-opening and relevant reminder of something we all want to avoid. Also, authorities are recognising that the pilot boat itself is a real hazard – falling onto the railings or angled structures on the boat, falling between the ship and pilot boat. Not easy things to manage. It's in everyone's interests to have consistent, robust checks that protect those climbing ladders.

The tools we use are changing and becoming more important in pilot performance. Specifically, the PPU and the predictor. These tools are now being marketed for shoreside (and tug) use, giving those ashore live feed access to pilots navigating on the water. This 'feedbacks' into higher scrutiny of every movement allowing, of course improvement and efficient gains, training review, and huge insights when incidents happen but also raising performance expectations. This further 'feedbacks' into higher pilot reliance of PPUs to meet tighter parameters. The goal of this technology is to overcome the shortcomings of human nature, but according to Lisanne Bainbridge who said in 1983, we sometimes end up with the very opposite of what was intended. Aviation has been through this journey, are we facing similar issues?

And to wrap it up, articles on Ship simulators (at home), autonomous vessels around the coast, negligence and, with thanks from Wendy Smith, some insight into the pressures employees can feel in less ideal work environments.

Marine Pilotage is a real journey, not just with evolving technology but in personal and professional growth. Sharing stories and lessons keeps us all moving forward.



PRESIDENTS MESSAGE

Josephine Clark | September 2026

At the time of writing, the 27th International Marine Pilotage Association (IMPA) Congress has just concluded in Bali. These international meetings occur only every two years, and as well as technical and knowledge sharing events, consider the operations of IMPA and the election of representatives to the Executive Committee. AMPI was strongly represented by a delegation of 10 pilots from across Australia and Papua New Guinea.

The general assembly re-elected Adam Roberts (AMPI Vice President and Port Authority of NSW pilot, Newcastle), to a 4 year term; a result richly deserved given Adam's significant contributions and dedication in representing pilotage issues at IMO over many years.

Also re-elected for 4 years were Simon Pelletier of Canada to continue as President, Alvaro Moreno of Panama as Deputy President and Ricardo Falcão of Brazil as Vice President. Two new Vice Presidents were also elected to 2 year terms; Kang Bong-Suk of the Republic of Korea and Jason Wiltshire of the UK. We congratulate all on their appointments.

IMPA is the sole non-governmental voice representing the interests of marine pilots at IMO. Our presence there is vital to ensure the practical, real-world needs of pilots are considered during work on technical, operational and human element input in the fields of navigation, nav technology, bridge procedures, port entry, ship-handling, mooring and towing, VTS, AToN's, hydrography and relevant aspects of ship design and construction.

On the home front, it has been a busy few months in regulatory and stakeholder representations.

AMSA – Revalidation of CoC's & Dept of Infrastructure

In June, AMPI spent a day in Canberra meeting with AMSA. In addition to Marine Order 54, the AMSA reporting App and IMO representation, we engaged in on-going discussions as to why Australia views Certificate of Competency (CoC) revalidation differently to other STCW signatory countries, particularly regarding the treatment of sea time for marine pilots. Since that meeting, we are pleased that AMSA has updated their guidance for CoC revalidation. Effectively, marine pilots who have completed at least 30 months of pilotage service within the preceding five years may now revalidate an unrestricted AMSA-issued STCW Certificate of Competency by providing:-

- evidence of qualifying pilotage service;
- a valid AMSA Certificate of Medical Fitness;
- a valid GMDSS certificate (or GMDSS Certificate of Recognition, where applicable); and
- completion of the required Certificate of Competency Continued Competence Refresher Training (CoST)

without the need to complete the Part A and Part B revalidation courses.

This brings revalidation requirements for AMSA Master Unlimited CoC holders into line with other Commonwealth countries, including UK, New Zealand and Canada.

This change is great step forward, and we appreciate the collaborative and practical approach from AMSA that removes an unnecessary regulatory burden on active marine pilots.

Later that day we met with the Dept of Infrastructure, Transport, Regional Development, Communications, Sport and the Arts. Discussions included future workforce needs and skills, and their alignment with the Strategic Fleet, Maritime Skills and Training Initiative (MSTI) and other training initiatives.

Victorian Ministerial & Ports Victoria Meetings

In August AMPI met with Victorian Ports Minister Horne and Ports Victoria. Discussions concerned the future transfer of pilot licensing functions from Safe Transport Victoria to Ports Victoria and issues concerning competition in pilotage in Port Phillip Bay more generally. While the upcoming state election throws uncertainty into the mix, the conversations were encouraging, and we will continue to engage to improve on-water outcomes.

Coastal Pilotage

Also in August, AMPI participated in an AMSA led Navigation Risk Assessment workshop held in Brisbane for pilotage in Torres Strait & Hydrographers Passage. It had been many years since the previous assessment and took a high-level approach involving wide ranging stakeholders from Fisheries, GBRMPA, Geoscience Australia, BOM, AHO, MSQ, pilot service providers amongst others. The summary of outcomes is being worked through, including the lack of resilience in GNSS navigation systems, sparce internet coverage to support applications including DUKC, adequacy of hydrographic information, illegal fishing activity, new fuels and emergency response capability.

AMSA published the revised Marine Order 54-Coastal Pilotage which came into effect on 1st September. A series of Industry Reference Group meetings ran throughout 2025 and the main changes to the revised Marine Order concern check pilot systems, training, CPD, alternate pathways applicants, safety management systems and compliance and enforcement.

Maritime Agencies Forum

On 30th July AMPI had the opportunity to present the concept of a national

professional entrance examination for alternative pathways entrants into pilotage (ie. non Master Unlimited CoC holders) to the Maritime Agencies Forum of State and Commonwealth regulators. The benefits of independent assessment, maintenance of academic knowledge and standards in licensing, a nationally consistent approach, and transparency were key arguments. The response received has been positive, as it is recognised there is a growing need for regulators to clearly define what "equivalence" to Master Unlimited actually means in pilot licensing regulation. To retain robust professional standards, "equivalence" should not remain a subjective assessment by individual licensing bodies, as has been the case, but should be measured/ examined in a robust and nationally consistent way.

AMPI will continue this work and advocacy towards a National Professional Entrance Exam into pilotage and a FAQ on this issue is contained in this edition of Safe Passage.

Finally, the program for AMPI's Escort Towage Workshop to be held in Newcastle on 4 & 5 November is almost finalised. It will be a great opportunity to learn about all aspects of escort towage from a systems perspective – tug integration, lines & ships fittings, forces and tug stability etc. There will be leading practitioners from Denmark, the Netherlands and Canada and registration is free to all AMPI members. Our AGM will take place during the event on 4th November and I look forward to seeing you there.

Safe piloting, Jo



ACROSS THE DITCH



Kia Ora Koutou

The main event for the NZMPA this year was our successful biennial conference, held in Tauranga from 7 to 10 April. The theme for the conference was "Positive Organisational Culture", a timely and important topic for our industry.

Positive organisational culture can be described as a culture where an organisation actively creates an environment in which motivation and safety-conscious behaviour occur naturally. This is built on a psychologically safe workplace, where staff feel included, trusted, and empowered, and are willing to contribute discretionary effort to help lead the organisation to success.

Over the two days of presentations, delegates heard from speakers on a wide range of subjects. These included artificial intelligence, pilot transfer safety, digital navigation, the evolution of safety culture, and proactive learning systems. The final day of the conference was dedicated to workshops, giving delegates the opportunity to explore some of these topics in more detail and take part in practical discussions.

The conference also provided a timely opportunity to hold our AGM. Matt Conyers stepped away from the Executive Committee as Vice-President after six years of valuable service. We thank Matt for his leadership, guidance, and significant contribution to the NZMPA over that time.

For my part, I now have the task of filling his shoes. Matt is a tall chap, so I suspect that is not an inconsiderable size of footwear. Nevertheless, I will do my best to follow his example in the role.

There were also some other changes to the Executive. Travis Welsh, the NZMPA magazine editor and Lyttelton pilot, has joined the committee as an Executive Officer, while Liam Doran has stepped into a non-executive position.

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Paul James | ***Bluff***

Vice President
Richard Hill | ***Wellington***

Executive
Matt Birdsall | ***Tauranga***

Executive
Phil Sweetman | ***Lyttelton***

Executive
Andy Baker | ***Whangarei***

Executive
Matt Dundas | ***Auckland***

Executive
Travis Welsh | ***Lyttelton***

Non-Executive
Laurence Walkinshaw | ***Timaru***

Non-Executive
Liam Doran | ***Picton***

A surprising development took place in June, when DP World and three Ngāi Tahu rūnanga [Councils of the principal Māori iwi of the South Island] put forward an unsolicited proposal to take over the running of Lyttelton Port. Lyttelton Port Company is fully owned by Christchurch City Council through Christchurch City Holdings Limited, the council's investment company.

Lyttelton is the largest port in the South Island and has been performing strongly. The port has recently posted record returns, with dividends paid to the council helping to keep rates lower than they might otherwise be.

The DP World proposal reopened a long-running debate about who should control the gateway through which much of the region's exports and imports flow. Much of the opposition to the proposal centred on the desire to keep the port in public ownership, along with the income it generates.

All eleven of the major ports in New Zealand are majority owned b y councils, with seven fully publicly owned. However, some ports are facing the need to expand and develop infrastructure, which brings with it the challenge of raising capital. The question is whether this can be met by councils already under pressure from rising costs and rates increases, or whether public-private partnership models may become part of the discussion.

Under the proposed model for Lyttelton, the land and wharves would have remained in public ownership, while DP World, the Dubai-based logistics company, would have leased the port operations and provided the required investment.

At the end of July, Christchurch City Holdings Limited decided that the unsolicited proposal did not warrant further consideration, bringing this particular chapter to a close. However, the wider debate around how New Zealand funds port infrastructure and future expansion is unlikely to disappear. It remains to be seen whether similar public-private partnership models will be proposed again in future.

Alongside these wider industry developments, the NZMPA continues to try and engage closely with Maritime NZ on several important matters affecting marine pilotage. These include pilot licensing, minimum entry requirements, and equivalency pathways for trainee pilots, following the release of the Association's position statement on these issues.

The NZMPA has also released a position statement on the development, implementation, and use of IHO S–100 products and services with the aim of promoting and maintaining best-practice standards in marine pilotage across all New Zealand ports.

As we move towards the end of the year, the Executive is looking at ways to work even more closely with members. By strengthening connections, sharing knowledge, and keeping members informed and well represented, we can continue to build a strong and engaged Association across Aotearoa New Zealand.



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Building AMCS Simulations Team

AMC Search is pleased to announce the appointment of Master Mariner Nick Bonser as Commercial Simulation Manager for the Centre for Maritime Simulations.

In the role, Nick will focus on building on the work of James Riley by strengthening engagement with industry and identifying new opportunities to apply the Centre's simulation capability to client training and operational requirements.

Nick brings more than 20 years of maritime experience across seagoing operations, regulation and professional education.

His career includes almost ten years serving onboard international cruise ships, followed by regulatory roles with the Australian Maritime Safety Authority across navigation safety, hydrography and maritime policy.

Since joining AMC Search, Nick has been closely involved in the delivery and development of simulation-based training, autonomous vessel operations, and advanced navigation programs.

In his new role, he will work with clients to identify where simulation can best support training, capability development, operational preparation, and more complex maritime scenarios.

Good news though, James isn't leaving, he's just moving into a new role in the Centre.

James will move into a dedicated practical instructor role within the simulation team, allowing his considerable operational knowledge and practical experience to remain focused on what he does best in delivering high-quality, practical simulator training for our clients.

Greater capability through K-Sim

A second major change since our last update is the recent upgrade of the Centre's Main Bridge Simulator to the latest Kongsberg K-Sim platform.

This is an exciting upgrade that enables both Full Mission Bridges to be joined with the dual Tug Simulators within the same simulation environment, considerably expanding the range and realism of scenarios that can be delivered.

For clients, this creates new possibilities for multi-vessel exercises involving ship-to-ship interaction, pilotage, port operations, traffic management within constrained waterways, and collaborative Human Factors training.

It also provides greater scope to develop scenarios around a client's particular operational environment or training requirement.

AMC Search continues to invest in simulation technology where it adds genuine operational value by creating realistic environments in which people and teams can practise, challenge assumptions and prepare for situations before encountering them at sea.

Developing the next generation of Marine Pilots

The Centre has also expanded its professional development offering through the introduction of the Mentor Pilot Training Program.

Delivered by human factors specialist Associate Professor Ben Brooks, the program has been developed for experienced Marine Pilots who are responsible for supporting and developing trainee pilots.

Combining simulation, coaching techniques and human factors principles, the program helps experienced pilots build the skills required to mentor effectively, support learning and performance, and contribute to a strong organisational safety culture.

The program reflects an increasing focus within AMC Search on supporting not only technical competence, but also the people, leadership and decision-making capabilities that underpin safe maritime operations, such as the Pilot Recruitment Screening Service.

The recruitment screening service allows pilotage groups to assess not just the competency but the cultural fit of an individual to be part of a specific team, where different organisational dynamics can influence the type of pilot best suited to that environment.

Using the screening service helps pilot groups identify and select individuals with the right capabilities, judgement and potential to perform in your specific operating environment.

Working with industry

As maritime operations evolve, so too will the ways in which simulation can support them.

AMC Search is continuing to invest in its facilities, technology, course development, and instructor capability, while also working more closely with clients to understand where simulation can provide practical value beyond established training programs.

We look forward to continuing our work with industry partners over the coming year and further strengthening the Centre for Maritime Simulations as a leading Australian capability for maritime simulation, professional development and operational problem-solving.





AMPI REGIONAL PORTS & PILOTAGE CONFERENCE, DARWIN 2026

Human Capital in a Technical World

Opening Themes: The Changing Nature of Pilotage

Following a sunset welcome event (with the bonus of meeting some scaly locals), the plenary commenced with opening remarks from AMPI President Jo Clark, emphasizing the essence of marine pilotage as a public service. Darwin Port CEO Peter Dummett followed, outlining the significance of Darwin as a gateway to northern Australia and the Indo-Pacific, plus a snapshot of current trade and future investment.

The opening key notes quickly established two recurring themes, re-visited throughout the conference:- the growing influence of digital technology and the continuing importance of human expertise. Chief Commissioner ATSB, Angus Mitchell explored the role of human capital in an increasingly digital and AI-enabled operating environment, while Richard Robinson (R2A) challenged traditional safety thinking through a presentation examining “criticality and control” as alternatives to conventional hazard and risk management frameworks.

Together, these presentations framed a central question:- how can industry safely embrace new technologies while preserving the professional judgement and situational awareness that remain fundamental to safe navigation?

Defence Operations and Military Pilotage

Session 1 focused on military and defence pilotage. CMDR Cal Johnson, LCDR Thomas Ford and LCDR Michael Gordon from the Royal Australian Navy provided insights into naval pilotage operations and the unique challenges associated with warship movements. Presentations covered both Australian naval pilotage practices and the management of foreign warship visiting Australia.

Kate Delisky (Port of Townsville), continued this topic, launching AMPI’s Position Statement “Pilotage of Domestic and Foreign Military Ships in Australian Ports”. She addressed pilotage conducted by

civilians on warships, highlighting the complex operational interfaces between commercial ports and defence activities. With growing naval activity across the Indo-Pacific, the session reinforced the need for robust procedures, legal clarity, interoperability, and clear risk management approaches. Importantly, John Kavanagh (Pacific Maritime Lawyers) joined the Q&A to speak to the legal aspects.

Developing the Next Generation of Pilots

Professional development and succession planning featured prominently throughout the conference.

AMC Search's Ben Brooks and James Riley explored effective mentoring practices and knowledge transfer challenges. Giuseppe Ferretti De Luca and Lisa Hickman (Smartship Australia) examined the practical application of mentoring and BRM, highlighting the transition from classroom theory to operational practice.

Suraj Joshi (AMSA) addressed changes to coastal pilot proficiency assessments in the Great Barrier Reef, introduced under newly revised MO54 – Coastal Pilotage. Ricky Rouse (AMPI Deputy President) outlined proposals for a national professional entrance examination for pilots entering the profession through Alternative Pathways. Collectively, these discussions reflected an industry striving for greater consistency in training, assessment and professional standards while ensuring the next generation develops the practical skills needed for increasingly complex operating environments.

Enhancing Port Resource Management

Port Resource Management and stakeholder interactions (VTS, towage, hydrographic survey, weather forecasting services etc). play an increasingly important role in overall port risk management. John Barker (Port of Auckland) presented his work on pilot and tug visualisation tools, and Damien Laughlin (Port Phillip Sea Pilots) outlined the unique dynamics, challenges and benefits of two-pilot operations.

From there, a sidestep into fast jet aviation, brought RAAF learnings from On Target Teaming as to the benefits and role of storytelling in safety culture development.

All presentations addressed the importance of communication, shared situational awareness and collaborative decision-making in maintaining operational safety and efficiency. Rather than concentrating solely on technical systems, speakers emphasised the importance of human interactions (pilot, Master, tugs)

Ending day one, Mindil Beach Casino was the relaxed venue for the event's gala dinner. An amazing $16,000 was raised on the night via a raffle with generous prizes from conference sponsors. This money was raised directly for use by seafarer welfare services in Darwin.

Managing Disruption and Operational Complexity

Day two opened strongly with a session examining the Port/Pilot interface. Presenters, Andrew Baker, Vikas Bangia and local Darwin pilot Andrew Scott addressed hidden vulnerabilities within trusted systems, strategies for managing operational disruption and the occasional unique workforce and transport challenges in the Top End.

A Strong Focus on Mental Health and Wellbeing

Session 5 explored the relationship between crew welfare, trust and safety outcomes, as well as stress management, and medical standards applicable to maritime pilots.

The prominence of these topics reflects growing recognition that pilot performance cannot be separated from physical health, psychological wellbeing and workplace culture. In a profession characterised by irregular hours, complex decision-making and significant responsibility, human factors continue to represent both a risk and an opportunity for improvement.

Closely linked to wellbeing, Session 6 covered psychological safety, organisational responses following pilotage incidents and legal support. As always, John Kavanagh's advice as to developing a post-incident support plan, including legal resources,, was a key takeaway.

Technology, Hydrography and Environmental Intelligence

The conference concluded its plenary with industry updates. These included developments in the IHO's S–100 data framework, seasonal climate outlooks affecting port operations, and the application of hyper-local weather intelligence to support pilot decision-making. This session highlighted the increasing availability of high-quality environmental and navigational data and the opportunities it provides for enhanced situational awareness and operational planning.

The conference concluded with a full day of workshops covering Continuous Professional Development, crew welfare and a Darwin port tour, providing delegates with practical opportunities to extend learning.

The Darwin 2026 conference was a great success in terms of content, industry engagement, networking and location. We look forward to bringing an even better event to sunny Geelong in Oct 2027.



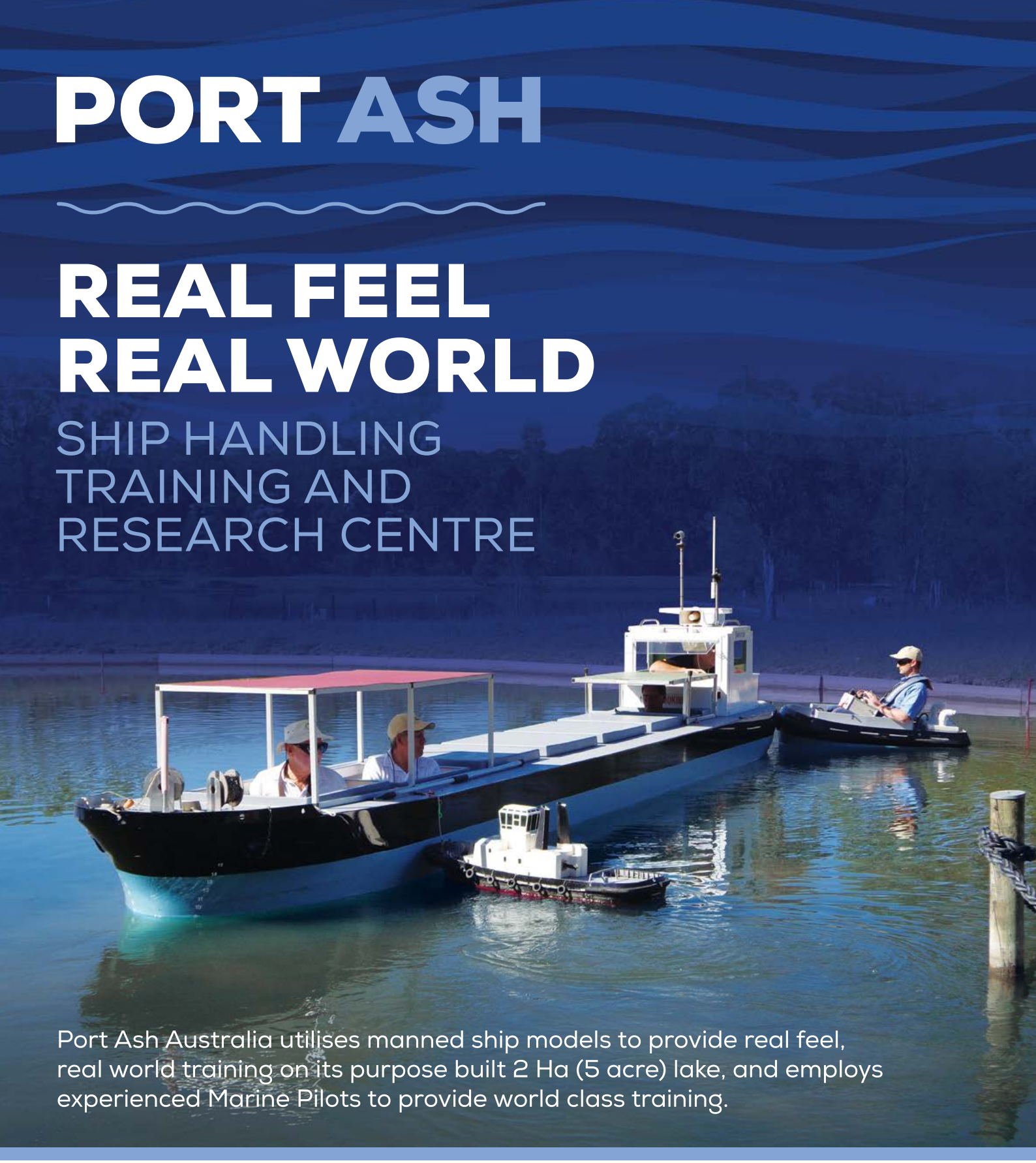




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New Zealand Maritime Pilots' Association

2026 NZMPA CONFERENCE

Positive Organisational Culture

This article is an abridged version of a report written by Phillip Sweetman, (NZMPA Executive Officer & Lyttleton pilot), in the Winter 2026 edition of The New Zealand Pilot magazine. **We thank Phil for his kind permission to republish.**

The 2026 New Zealand Maritime Pilots' Association Conference was held at **Tauranga from 7–10 April** and brought together pilots, regulators, maritime professionals, technology providers and international industry leaders to discuss the future of pilotage and maritime safety.

With the theme of "Positive Organisational Culture", delegates explored how culture, leadership, technology and regulation intersect to influence safety and operational performance. While the subjects ranged from pilot transfer safety to artificial intelligence and digital navigation, a common thread emerged: successful organisations are built on trust, communication, learning and continuous improvement.

Setting the Scene

The conference commenced with a welcome from **Leonard Sampson**, who provided an overview of the Port of Tauranga's strategic direction and significant capital investment programme. Delegates heard about the ongoing Stella Passage Project, including berth extensions, channel deepening and infrastructure upgrades designed to accommodate larger vessels and increasing cargo volumes. Equally significant was the port's commitment to sustainability, with new automated electric stacking cranes expected to deliver substantial emissions reductions.

The opening presentation set the tone for a conference focused on preparing for future challenges while maintaining safe and efficient operations.

Beyond "Just Culture"

One of the strongest themes throughout the conference was the evolution of safety culture.

Antonio Di Lieto challenged delegates to think beyond traditional "just culture" concepts and consider how organisations can develop truly positive cultures. His presentation highlighted the limits of relying solely on procedures and compliance systems. Instead, he advocated for organisations that trust their people to operate within clearly understood safety boundaries while remaining adaptable to changing circumstances.

Antonio emphasised the concept of "drift into failure" and the importance of recognising how normal operational practices can gradually move beyond safe limits.

These ideas were reinforced by Angus Mitchell (ATSB), who explored how safety culture can be measured and influenced. He argued that culture is ultimately shaped by leadership through what organisations choose to measure, reward and prioritise. Drawing on several accident investigations, Angus demonstrated how organisational influences often play a significant role in operational failures.

Similarly, Alan Baker's presentation on psychological safety highlighted the importance of creating environments where people feel confident to speak up, challenge assumptions and contribute openly during high-pressure situations.

His message was clear: psychological safety is not simply a wellbeing issue—it is a critical operational safety tool.

Learning Before Accidents Happen

Several speakers focused on the value of proactive learning systems.

Jimmy Koh, Chief Pilot at PSA Marine Singapore, provided a fascinating insight into one of the world's busiest pilotage operations. With approximately 160,000 pilotage movements each year, Singapore's system relies heavily on effective reporting and learning processes. Jimmy highlighted the well-known relationship between near misses and serious accidents, demonstrating why reporting seemingly minor events remains one of the most valuable tools available to organisations seeking continuous improvement.

This theme was echoed by David Clark of the Transport Accident Investigation Commission. Through case studies involving the Achilles Bulker and Takitimu II, David demonstrated how accidents rarely result from a single failure. Instead, technical, operational and human factors often combine in complex ways. Understanding these interactions allows

organisations to identify underlying vulnerabilities before they contribute to future incidents.

The message throughout these presentations was consistent: organisations that learn effectively from small events are often best positioned to prevent larger ones.

Technology Transforming Pilotage

John Barker from Port of Auckland demonstrated how systematic transit review and digital pilotage tools are enhancing training and operational performance. The increasing use of PPUs, integrated tug data and post-transit analysis allows organisations to better understand vessel movements, identify trends and improve training.

This data focused theme continued with Matt Conyers and Giles Lesser, who explored how data analytics platforms can support both operational oversight and organisational learning. Technology delivers its greatest value when introduced transparently and used to support development rather than punishment.

The future of navigation was explored in detail by Antonio Di Lieto and Adam Greenland, who discussed the transition toward S-100 navigation standards and a more connected maritime environment.

Enhanced bathymetric data, real-time current information and integrated navigation systems have the potential to significantly improve decision-making in confined waters.

Looking further ahead, discussions around AI, predictive analytics and digital twins highlighted how rapidly the maritime sector is evolving. However, presenters consistently emphasised that technology must support human decision-making rather than replace it.

Regulation and the Future of Pilotage

Kirstie Hewlett and John Silberberg from Maritime New Zealand outlined ongoing work to modernise New Zealand's maritime regulatory framework. Reviews of pilot licensing requirements, pilot transfer standards and broader maritime legislation aim to create a more responsive and risk-based system while maintaining strong safety outcomes.

International perspectives were provided by Simon Pelletier, President of the International Maritime Pilots' Association, and Matthew Williams, IMPA Secretary General.

Simon delivered a compelling reminder that pilotage should be viewed first and foremost as a public service. Safe pilotage supports trade, environmental protection and public safety, and these broader benefits must remain central when considering future regulatory and commercial pressures.

Matthew provided an update on IMPA's work regarding remote pilotage. While technological capability continues to advance, the message was clear that any future implementation must be supported by rigorous assessment, validation and safety assurance processes.

Safety at the Waterline

Pilot transfer safety was a recurring topic throughout the conference and generated considerable discussion among delegates.

Steve Banks challenged the common perception that pilot ladders alone are responsible for most transfer-related incidents. While non-compliant ladders remain a concern, many fatalities result from falls, medical emergencies or ineffective recovery arrangements once a person enters the water. His presentation reinforced the importance of viewing pilot transfer as a complete operation involving preparation, training, equipment and emergency response capability.



Captain Damian Laughlin



Captain Ricky Rouse, Captain Damain Laughlin and Captain Josephine Clark

This message was reinforced by Arie Palmers, who delivered a strong call for pilots to reject unsafe transfer arrangements. Through numerous examples of defective ladders and poor rigging practices, Arie highlighted the ongoing need for vigilance and strict adherence to international standards.

Arie also paid tribute to Troy Evans, whose tireless advocacy and practical research have significantly advanced pilot ladder safety worldwide. The presentation was a fitting recognition of Troy's lasting contribution to pilot safety.

Further practical safety insights were provided by Wendy Sullivan, who discussed maritime casualty care and the importance of realistic, scenario-based medical training tailored specifically to maritime operations.

Building Resilience

The conference concluded with several thought-provoking presentations focused on resilience and human performance.

Damian Laughlin explored organisational resilience during critical incidents, highlighting the importance of preparation, communication and support systems.

His presentation emphasised that resilience extends beyond emergency response plans and includes protecting people, maintaining operations and managing stakeholder expectations during challenging situations.

Paul James examined cognitive ergonomics and mental workload, reminding delegates that increasing amounts of information do not automatically improve decision-making. As pilotage systems become more technologically sophisticated, careful attention must be paid to human-centred design to ensure technology reduces workload rather than adding to it.

Key Takeaways

First, positive organisational culture remains fundamental to safety and operational success. Culture is shaped by leadership, trust, communication and the willingness to learn from experience.

Second, technology is creating exciting opportunities to improve navigation, training and operational decision-making. However, human judgement remains central, and successful implementation requires a strong focus on usability and human performance.

Third, pilot transfer safety continues to demand industry attention. Compliance, training, preparation and effective recovery arrangements all remain critical components of reducing risk.

Finally, pilotage itself continues to evolve. Regulatory reform, new technology, competency development and changing operational demands will shape the profession in the years ahead, but the essential role of the pilot remains unchanged.



Captain Ricky Rouse

PACIFIC MARITIME PILOTS CONFERENCE & WORKSHOP

Nuku'alofa, Tonga — 3–6 August 2026

The third Pacific Maritime Pilots Conference & Workshop was held in Nuku'alofa, Tonga between 3rd and 6thAugust 2026. Hosted by the Pacific Pilots Training Group (PPTG) in conjunction with the Ports Authority of Tonga,

the conference attracted pilots and maritime representatives from a broad range of Pacific nations, including Tonga, Western Samoa, Fiji, Solomon Islands, Vanuatu, Tuvalu, American Samoa, and Wallis and Futuna.

The conference was structured around practical professional development for pilots rather than purely theoretical presentations. The programme focused on the three fundamental elements of professional pilotage: Plan, Execute and Review. These principles underpin modern pilotage planning. Developing skills such as effective Master-Pilot Exchange (MPX), navigational execution supported by modern technology, and structured post-pilotage review and organisational learning.

The conference reinforced the pilot's role as a critical component of the wider maritime safety system.

PPTG is a not-for-profit organisation established by a small group of experienced New Zealand and Australian marine pilots who share practical knowledge, professional standards and specialist expertise with Pacific pilotage organisations, port authorities and regulators. PPTG operates on a volunteer basis with support from commercial sponsors to run an annual training conference and workshop.

Spokesman Damian Laughlin said "the vision of the PPTG is to develop a maritime pilot training and education framework



Delegates to the conference in Tonga. Image: Damian Laughlin

for Pacific Island nations. The framework provides pacific island nations with their own forum, conference and training opportunities within and sustainable model."

A consistent message throughout the 2026 conference was the importance of effective preparation before a pilotage commences. Port specific passage plans provide the foundation for a safe pilotage.

The conference reinforced the importance of moving beyond the simple completion of documentation towards an effective process in which the pilot and bridge team establish a shared understanding of the intended passage.

The involvement the Pacific Pilot Training Group as subject-matter experts also provided Pacific delegates with access to current international best practice in pilotage.

Angus Mitchell Chief Commissioner of the Australian Transport Safety Board (ATSB) contributed his experience of accident investigation and the role of marine pilots within wider maritime safety systems.

Peter Dawson from Dawson & Associates, provided insights on aspects of maritime and pilotage law of relevance to marine pilots.

Another significant outcome from the Nuku'alofa event was the formal handover of a pilot boat gifted by Port of Auckland Ltd to the Ports Authority Tonga.

The handover was conducted during the conference's ceremonial dinner and involved representatives of the Port of Auckland handing over a symbolic model of the launch to his Royal Highness Crown Prince Tupouto'a Ulukalala. The launch will arrive in Nuku Alofa later in 2026.

The provision of the pilot boat represents a tangible example of regional maritime cooperation. It complements the professional training delivered through PPTG by supporting the practical infrastructure required to deliver a safe pilotage service.

Laughlin said "although Pacific ports operate in different regulatory, geographic and operational environments, many of the underlying pilotage challenges are common. The Tonga conference provided a forum for those challenges to be discussed openly and for participants to learn from the experience of neighbouring pilotage organisations.

For Pacific ports, access to appropriate navigational technology can provide significant benefits, particularly where hydrographic resources, shore-based infrastructure or other navigational support systems may be limited."

PPTG's portable pilot unit (PPU) up-cycling initiative, undertaken with support from Port of Auckland and Navicom Dynamics is particularly relevant to this objective. It provides an opportunity to extend the useful life of specialist equipment and make modern pilotage technology available to Pacific pilots and ports.

The introduction of the PPU must be accompanied by appropriate training. A PPU is only as effective as the pilot's ability to understand the information, limitations and appropriate application within the wider navigation process. David Hedgley from Navicom Dynamics provided training to the attendees.

PPTG with support from OMC International visit a port receiving the units and train in person as they are introduced throughout the year. More support is needed from industry witholder PPU units which can be repurposed in this regard.

Laughlin said "the PPTG initiative provides a structured mechanism for sharing the knowledge, systems and professional standards developed within the New Zealand and Australian pilotage environment.

There are also reciprocal benefits. Engagement with Pacific pilots provides a greater understanding of the operational, geographical and resource challenges faced by neighbouring maritime administrations.

The initiative supports broader regional maritime safety and strengthens professional relationships between New Zealand and Pacific pilotage organisations."

PPTG has committed to holding another conference in 2027 with Fiji firming to the be the host nation. This conference will be proudly supported with existing sponsors Hart Marine, OMC International, Navicom Dynamics, Trelleborg Marine, DHI Seaport, Reid Technology, Damen and AD Navigation all showing strong interest to support the initiative in 2027.



WHEN GPS FAILS: WHY MARITIME NEEDS RESILIENT NAVIGATION

Some nations and ports are already taking action; most remain exposed

Captain Matt Shirley | Captain Dana A. Goward



Every day brings new reports of GPS interference affecting shipping, particularly in regions like the Persian Gulf. Less visible are the collisions, groundings, and near misses that follow when positioning becomes unreliable.

For an industry now built around continuous, high-accuracy satellite navigation, these are not isolated incidents. They're early signals of a much broader vulnerability.

And without navigation and maneuvering solutions that allow safe operations even in the face of interference, maritime is going to see a lot more, and possibly a lot worse.

Chosen and implemented properly, systems to complement and backup GPS will not only make shipping safer, but will enable greater efficiencies and automation moving forward.

Danger at Sea

GPS has made maritime operations of all kinds safer and more efficient. GPS enabled AIS has reduced the number of collisions and improved harbor and near-shore operations. The size and procedures for bridge crews have been modified. Container and other port operations have been streamlined. Over the course of several decades the industry has restructured itself around those benefits.

It only stands to reason that when GPS is not available, things are going to be less safe and less efficient. And we have more than enough examples:

- In June 2025, the 1,100 foot (335m) tanker Front Eagle, carrying approximately 2 million barrels of crude oil in the Gulf of Oman, made a quick and sharp right turn that resulted in a collision with Adalynn, a 900 foot (275m) tanker. GPS was being interfered with in the area and was a likely cause.
- In May, 2025 GPS interference was blamed for the grounding of the 912 foot (278m) container ship MSC Antonia near the port of Jedda. The ship grounded on Eliza Shoals.
- In July 2019 the tanker Stena Imperio was lured into Iranian waters by GPS spoofing and was seized by the Revolutionary Guards in retaliation for seizure of a vessel by UK forces.

Thousands of vessels are impacted by interference with GPS each year. While the Baltic, Black Sea, eastern Mediterranean, Persian Gulf, and other conflict areas are hot spots there is scarcely a region in which it cannot be found. A 2019 German Aerospace Center (DLR) study on an 18 month voyage from the Mediterranean to the far east and back detected interference during every segment of the trip - port, coastal, and even open sea transit.



Figure 5. Vessel route from September 2017 to January 2018 recorded by DLR's GNSS receiver prototype.

The German Aerospace Center (DLR) found GNSS signal interference on every leg of a ship's year-long voyage.

Pirates, Theft, & Smuggling

Interference with weak and easily imitated GPS signals has also been linked to cargo theft. In one well publicized instance celebrity chef Guy Fieri lost $1,000,000 of his branded tequila to hijackers that used GPS spoofing to divert the shipment.

Officials in the U.S. have reported spoofing used to steal pharmaceuticals, and jammers or spoofers are regularly used in the theft and illegal export of luxury vehicles.

Across the globe vessels spoof their own locations to help conceal a broad range of illicit and illegal activity. The Russian "shadow fleet" transporting sanctioned oil is merely one example.

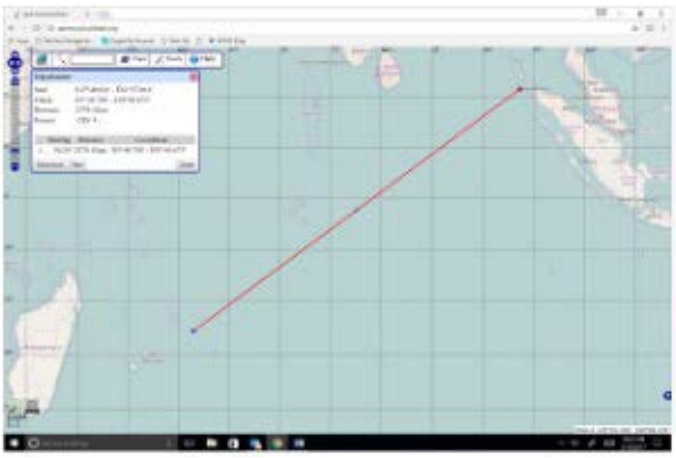
It could even be possible for bad actors to hijack an entire vessel without the crew being aware until their last moments. In 2013 Professor Todd Humphreys and his students at the University of Texas demonstrated just how that could happen on a yacht in the Mediterranean.

A 2017 article in Maritime Executive magazine outlined how this could be done fairly easily to hijack an oil tanker sailing from the Cape of Good Hope to the Straits of Malacca.

Deep Sea Solutions

While much recent focus has, quite understandably, been on interference with GPS and other Global Navigation Satellite Systems (GNSS) in deep sea and conflict affected regions, the maritime industry is not standing still. There's growing recognition that reliance on a single vulnerable positioning source is no longer acceptable, and that more resilient approaches are required.

Maritime authorities and industry bodies, including regulators, classification societies, and organisations such as the IMO, ICS, OCIMF, INTERTANKO, and The Nautical Institute, are increasingly addressing GNSS vulnerability at both





operational and training levels. This includes guidance for operating under degraded GNSS conditions, stronger emphasis on cross checking and situational awareness, and consideration of alternative positioning, navigation and timing architectures.

In parallel, a range of technologies are emerging to detect, augment, or complement established GNSS. Satellite based augmentation such as Iridium STL and systems like PNTGuard provide independent timing and positioning inputs. Terrestrial and hybrid approaches including R mode, eLoran and other radio based systems are already available or moving from concept toward deployment in some regions. At the same time, interference detection systems such as those developed by Calian, Griffin, Viavi, and UHU Technologies are enabling real time awareness of jamming and/or spoofing activity.

Taken together, these developments show that the deep sea challenge is being recognised and progressively addressed through a combination of detection, augmentation, alternative systems, and improved awareness.

However, they also highlight a critical gap. As vessels move from open water into coastal and port environments, the level of positional precision required increases significantly.

The Port Problem

Modern ports have evolved into highly optimised and tightly coupled operational systems.

Vessel size has increased, margins have reduced, and infrastructure from berth design to under keel clearance systems is increasingly built on an assumption of continuous, high accuracy positioning. In this environment, GNSS is no longer simply an aid to navigation. It is an essential input into the way ports function, and this changes the nature of the risk.

Incidents already observed at sea, including collisions, groundings, and loss of control linked to unreliable positioning, offer an indication of what could occur in more constrained port environments. What may be manageable in open water becomes far less forgiving in restricted channels, high traffic approaches, and alongside fixed infrastructure.

In some ports, vessel size and configuration have already moved beyond the limits of traditional visual navigation. Safe pilotage is now heavily dependent on GNSS based positioning, often supported by portable pilot units (PPU's) and integrated bridge systems.

This dependency is most acute where margins are tight. Channel widths have not increased at the same rate as vessel size, under keel clearance is closely managed, and visibility may be limited by weather or vessel configuration. As reliance on GNSS increases, the ability to independently verify position often decreases. In these conditions, small positioning errors can quickly escalate into grounding or contact risk.

The consequence is not only the potential for a single incident, but a broader operational vulnerability. A loss of confidence in positioning, even without an incident, may be enough to prevent vessels from entering or departing a port.

It's also important to note that the impact doesn't stop at the marine interface. Many terminals rely on satellite derived positioning and timing for logistics, security, and equipment control, including automated or remotely operated systems. Disruption to GNSS therefore has the potential to affect both marine and landside operations simultaneously.

In tightly scheduled shipping networks, even a single missed berthing window can have immediate operational consequences beyond the vessel itself.

The scale of this risk is well illustrated by events such as the Ever Given grounding in the Suez Canal, which delayed an estimated 10 billion US dollars of trade per day. While not all of this represents direct economic loss, it highlights the way disruption in a constrained system can have immediate global consequences, with longer term impacts that are harder to quantify.

In this context, GNSS disruption in ports is not simply a navigational issue. It's an operational constraint with the potential to extend far beyond the port itself.



Observed Reality

This is not a hypothetical risk.

GNSS interference in port vicinities are already being recorded across the globe, with detection systems identifying spoofing and jamming events hundreds or thousands of times each day. While many of these incidents are linked to low-level uses such as personal jammers on land, they demonstrate both the accessibility of the technology and the frequency with which positioning signals are disrupted.

The potential for these effects to extend into aviation and port environments is therefore not theoretical. In aviation, the impacts are increasingly visible and well understood. In port environments, they are less well documented, but no less plausible. The conditions that enable disruption already exist.

The question, therefore, is not whether GNSS disruption can affect port operations, but whether ports are prepared, or ready, to operate safely when positioning can no longer be assumed.

A Resilient Port Approach

A resilient port approach is already within reach.

A combination of practical solutions provides a pathway to more robust positioning in port environments. Interference detection systems as mentioned above can deliver real time awareness of jamming and spoofing, enabling operators to identify and respond to disruption early.

At the same time, localised positioning systems, such as Locata, provide an independent terrestrial alternative to satellite based navigation. Using nearby ground based transmitters and stronger signals, these systems are inherently more resistant to jamming and spoofing than distant GNSS signals. When integrated with GNSS and supported by interference detection technologies, they enable operators to identify degraded or unreliable signals, cross check positioning data, and maintain accurate and trusted positioning during what might otherwise become a full scale disruption or loss.

Together, these capabilities represent a shift from passive reliance on GNSS toward deliberately engineered positioning resilience, while also providing ports with greater control over critical navigation infrastructure.

And it's at this interface between sea and shore that positioning resilience becomes essential, where tightly coupled operations mean failures can quickly translate into broader consequences.

The Resilience Dividend

While much of the discussion around positioning resilience is framed in terms of risk reduction, there's also a clear operational upside.

More reliable and assured positioning has the potential to improve efficiency as well as safety. If positioning integrity can be maintained despite interference, poor visibility, or space weather effects, operations are less likely to be delayed, degraded, or halted. This creates greater consistency in vessel movements, berth utilisation, and terminal throughput.

In constrained port environments, where margins are already tightly managed, improved confidence in positioning may also support more precise operations. This has the potential to influence the way under keel clearance is managed, when weather or visibility restrictions are applied, and the enforcement of otherwise conservative buffers set around vessel movements.

Over time, this increased reliability also has the potential to enable ports to operate with greater predictability. Improved confidence in arrival windows and turnaround performance supports more stable scheduling, reduces inefficiencies across terminal and landside operations, and could well contribute to better utilisation of existing infrastructure.

But there's also a longer-term benefit. As positioning becomes more resilient and less dependent on a single system, it may begin to influence the way ports are designed, upgraded, and expanded. Assumptions around navigation margins, channel utilisation, and operational constraints could shift, allowing for more efficient use of available space and capacity.

In this sense, positioning resilience is not only a safeguard against disruption, but a potential enabler of more efficient and reliable port operations. In a world where sustainability and continuity of supply are increasingly critical, ensuring the reliable flow of essential goods is not just an operational objective, but a necessity.

Global Reliance

The implications extend beyond the port. Modern supply chains operate on tightly synchronised, just in time models, where disruption in one location propagates rapidly across shipping schedules, terminals, and inland logistics.

What begins as a positioning issue at the ship or port level can therefore translate into systemic supply chain disruption, with consequences that extend well beyond the maritime domain. Seen in this context, the need for resilient navigation is not only a technical or operational concern, but a fundamentally human one.

Who Acts, Who Pays?

The need to safeguard current operations and lay the groundwork for future efficiencies is clear. Mature technologies are available, and while they are not inexpensive, their cost is small when compared to the potential consequences of major ecological damage, significant trade disruption, and loss of life.

What remains is the question of who takes responsibility for ensuring these solutions are in place. And that is as much, if not more, a political and commercial question as it is a technical one.

Commercial shipping, cargo owners, shippers, and those who insure them have the most to lose in mishaps, and the most to gain by preventing them. Ports have an equally vested interest in maintaining safe and efficient operations, and will greatly benefit from the increased efficiencies truly precise and resilient navigation will bring.

Nations also have a role to play. Governments have long provided aids to navigation such as lighthouses, buoys, daymarks, and a variety of electronic aids as a way of protecting and boosting their nation's economic and national security.

Yet, at the moment, despite the turmoil in the Middle East, few in the industry and governments seem to be concerned about either the open water or port problem.

There are, however, some notable exceptions.

The United Kingdom and France are addressing open water and harbor navigation by establishing eLoran networks similar to those in operation in South Korea, Saudi Arabia, China, and Russia.

At a local level some ports are exploring and implementing the the use of terrestrial positioning systems such as Locata to provide reliable, centimeter-level positioning that can be used in confined waterways and for container operations.

However these examples remain the minority.

Which brings the question back into focus. Who will act, and who will pay? Or, what will it take?

A major failure with lasting economic and political consequences?

Or leadership willing to invest ahead of that moment, and ensure the infrastructure needed to protect and advance the maritime system is in place before it is tested?

As is being demonstrated in different ways right now, nations that have invested in protecting themselves against geopolitical disruption are able to absorb and manage supply chain impacts. Those that have not are left to respond in real time, often at greater cost, and with fewer options.

In a system now built on precision, timing, and continuous positioning, that distinction is no longer theoretical. It is operational. It is human. And it is a choice.

SAFE HARBOURS AUSTRALIA
EXPERT MARINE ADVICE

Captain Matt Shirley *is CEO of Safe Harbours Australia*

Specialising in port operations, pilotage, and operational risk, and an ex-marine pilot and merchant mariner.

RESILIENT NAVIGATION and TIMING FOUNDATION
Speaking Up for GPS/GNSS Users

Captain Dana A. Goward *is President of the Resilient Navigation and Timing Foundation.*

A former senior U.S. government official for maritime navigation policy, and retired USCG officer.

S-100 FRAMEWORK UPDATE

The digital horizon and what it means for Marine Pilots

For decades, marine pilots have relied on the S–57 ENC standard to safely guide ships through restricted waters, narrow channels, and tight port basins. While S–57 revolutionized navigation by moving the bridge away from paper charts, it has long functioned as a rigid, static display. A pilot stepping onto a bridge today often finds an ECDIS cluttered with disparate windows for tides, weather feeds, and port advisories.

The maritime industry is undergoing a structural shift. The IHO has launched the S–100 Universal Hydrographic Data Model. With voluntary implementation underway and a mandatory IMO carriage requirement taking effect for new installations on January 1, 2029, the old way of charting is coming to an end. For marine pilots, this transition changes how critical manoeuvring decisions are made.

01 From Flat Vectors to High-Resolution Bathymetry

The most significant limitation of the old S–57 chart system is its coarse depth contouring. S–57 ENCs typically group depth readings into broad intervals (e.g., 2, 5, or 10 meters). To compensate, pilots must visually cross-reference charts with high-resolution bathymetric surveys provided separately by the port.

Under the S–100 framework, **S–102 Bathymetric Surface** data replaces these flat zones with high-resolution, gridded seabed models. Organizations like Jacobsen Pilots in Long Beach, California, have already integrated S–102 data into their Portable Pilot Units (PPUs), reporting unprecedented precision during transits with minimal under-keel clearance. Pilots will no longer have to guess what lies between the lines; the actual contours of the seafloor will be visible directly on the display.

Feature	Legacy S–57 System	Next-Gen S–100 Framework
Depth Resolution	Coarse intervals (e.g., 2m to 5m)	High-definition gridded models (S–102)
Water Level Integration	Manual calculation / separate text feeds	Real-time dynamic adjustments (S–104)
Environmental Overlays	Visual approximation of currents	Gridded, directional current layers (S–111)
Safety Alarms	Static "Safety Contour" boundaries	Dynamic, automated safety margins

02 Eliminating the Guesswork in Under-Keel Clearance

Navigating a mega-max container ship or a laden capesize bulk carrier into a shallow channel requires precise timing based on tidal windows. In the legacy system, calculating UKC is a multi-step, manual process. Pilots must take the static chart data, pull external tidal forecasts, adjust for squat and roll, and construct a mental map of their safety margin.

S–100 automates and secures this process by pairing **S–104 (Water Level Information)** and **S–111 (Surface Currents)** directly with **S–129 (Under-Keel Clearance Management).** Instead of a static blue-and-white safety contour on the ECDIS screen, the S–100 system adjusts the usable width of the channel in real time based on actual water levels and localized current vectors. This eliminates human error from complex math equations during a high-stress pilotage act.



03 Streamlined Information without Screen Clutter

A persistent complaint among pilots using old ECDIS setups is information fragmentation. Navigational warnings, temporary notices, and weather alerts usually sit on a separate terminal or must be manually plotted by the ship's crew.

The S–100 system utilizes an interoperable "product specification" architecture. It allows multiple data layers to overlay cleanly on top of the base chart (**S–101 ENCs**). For instance, **S–124 (Navigational Warnings)** feeds urgent local notices—such as a newly discovered shoaling or a displaced buoy—straight onto the map display. The system uses intelligent prioritization rules so that critical navigational hazards take visual precedence without burying the pilot in text boxes.

04 Operational Readout: PPUs and Cyber Security

While major commercial vessels will gradually phase in S–100 ECDIS hardware between now and 2029, marine pilots are uniquely positioned to benefit immediately. Because pilots bring their own PPUs on board, they do not have to wait for the host ship to upgrade its bridge infrastructure. PPU software developers are already outputting dual-fuel capabilities that read both old S–57 data and new S–100 layers simultaneously.

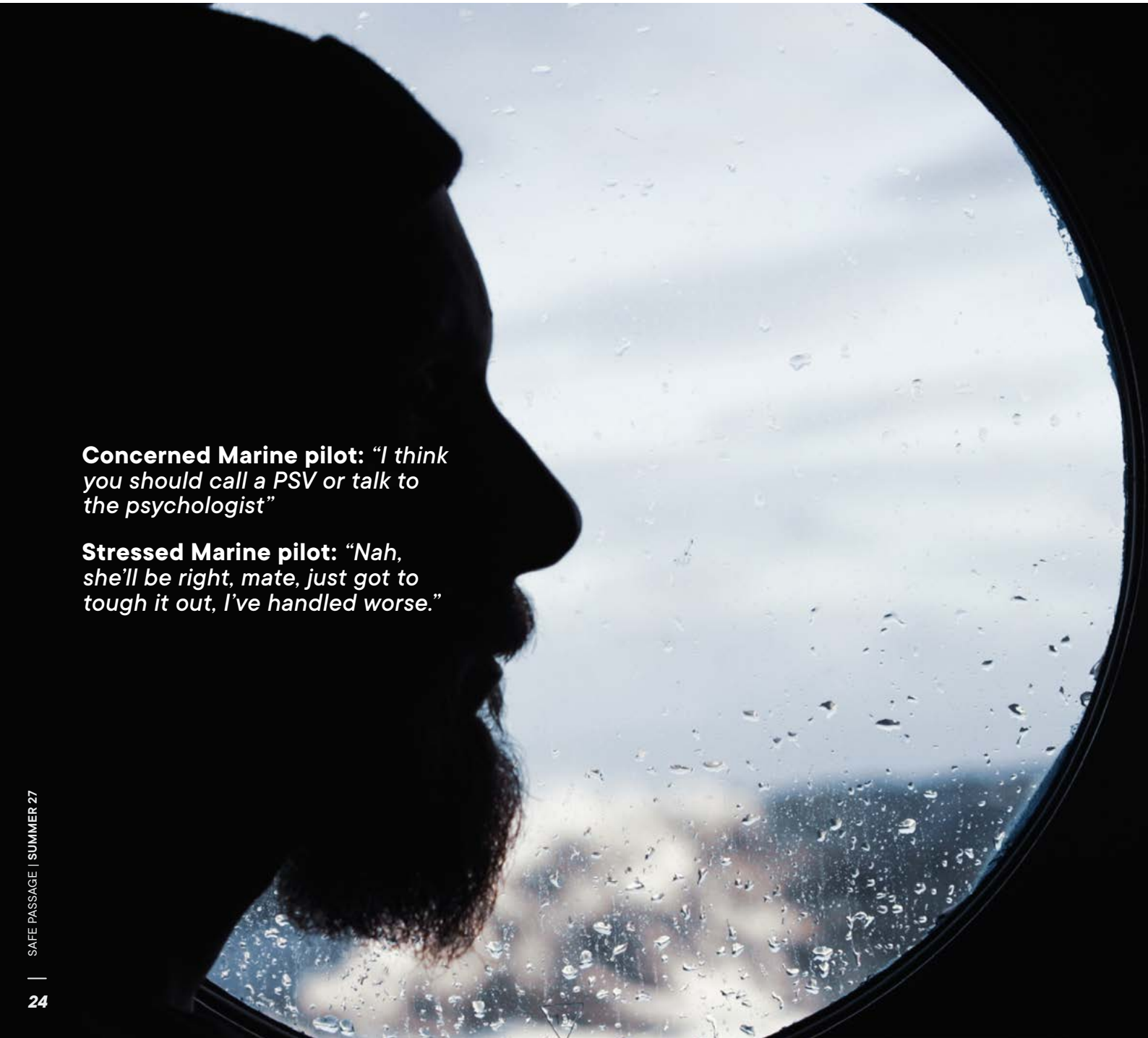
Furthermore, the IHO has built strict encryption and authentication protocols directly into the S–100 structure. This provides robust defence against cyber-spoofing attacks, giving pilots absolute confidence that the charts, depths, and tidal feeds they are looking at are authentic and uncompromised.

Conclusion

The shift to S–100 represents a transition from a digital version of a paper chart to a live, predictive decision-support system. By binding high-def bathymetry, real-time tides, and dynamic UKC calculations into a single interface, S–100 removes the traditional margins of ambiguity. For marine pilots, this means safer transits, optimized cargo loading windows, and a dramatic leap forward in situational awareness.

THE ROLE OF THE AMPI PEER ASSISTANCE NETWORK SUPPORT PSYCHOLOGIST

Keith McGregor | PAN Psychologist / Personnel Psychology NZ



Concerned Marine pilot: *"I think you should call a PSV or talk to the psychologist"*

Stressed Marine pilot: *"Nah, she'll be right, mate, just got to tough it out, I've handled worse."*

I had an interesting start as a psychologist. During my degree in the early 70's I worked in a small factory stripping and cleaning diesel injectors and pumps, machining and welding. When I talked about the psychology stuff I was learning at university the guys told me where I could shove it. That was excellent grounding.

After finishing my degree I spent the next twelve years as a psychologist in the Royal New Zealand Air Force eventually ending up with the rank of squadron leader. In the military we were referred to as 'trick cyclists', to be avoided at all costs. However, we did have a slight advantage, people could be ordered to come and see us, which called for some careful handling.

I left Defence in 1986 to enter private practice. Over the past forty years I have been involved in training, accident investigation, personnel selection (including masters, engineers and deck officers for Toll Shipping and InterIslander) and consulting on a wide range of organisational activities.

I am not a clinical psychologist and do not diagnose or counsel. My interest is on well-being rather than pathology. My focus is on providing the knowledge and skills to help people to resolve problems that are affecting their personal, family or work lives.

My interest in peer support dates back to 1986 when I came across an article on the peer support programme that had been set up by the Los Angeles Police Department to assist officers who had been involved in shootings. I contacted the LAPD and they provided a great deal of material about their programme which is still ongoing and has been very successful. I have since provided peer support training for ambulance officers and aviation peer support volunteers.

Research provides strong evidence that talking with someone about a personal problem versus trying to cope alone has significant mental health benefits. This is especially so when the listener has been trained to listen and question rather than simply reassure. There is also research indicating that talking to a trained peer can often be more effective than an external counsellor. The peer understands the pressures of the job and can relate to the struggles the caller may be experiencing.

Since becoming involved with AMPI two years ago I have had the privilege of working with many pilots. This has included discussions with the Peer Support Volunteers to learn more about the Peer Assistance Network, running training for PSVs and providing direct support for seven AMPI members. The issues we have covered have included berthing incidents, coping with investigation, workplace tensions, dealing with bullying, coping with job loss and managing personal life challenges. I have also spent time on a pilot boat and tug to observe the role first-hand.

When we look at what goes wrong in people's lives one of the root causes is often a skill deficit. If people have the required skills they wouldn't be struggling to cope. We live in a world where a great deal of time is devoted to equipping people with vocational skills. Becoming a marine pilot can take up to 15 years by the time a Master's Unlimited CoC has been obtained and pilot training completed. And yet how much training do we receive on how to manage our emotions, deal with a dysfunctional workplace, cope with traumatic events, manage human behaviour or even be a good partner or parent? Very little. For this reason, my role is to help people acquire the knowledge, skills and tools to enable them to move forward.

What happens if you do reach out to a PSV or the AMPI support psychologist? The call may begin by talking about your education and work history. People often have past life experiences that may be useful in helping to cope with the current issues. Next, is developing an understanding of the current issue and the ideal end point – where do you want to get to and what would help you to get there? The subsequent discussion may explore aspects such as what has been tried already, what has and hasn't worked, coping skills, support needs, barriers to resolution, steps that could be followed. While information or techniques may be offered, the main focus is on helping people to find their own solutions. In many respects the support role is similar to the work of a marine pilot guiding a vessel to a safe place.

Peer support should be a passive model. When a ship or aircraft is involved in an incident they are seldom released back into service without an engineering safety inspection. The same should apply to the people concerned in incidents. However, those involved in professions such as police, military, piloting are generally self-reliant individualists who prefer to sort out their own problems. For many, the idea of seeking help can end up on the low priority list. Peer support volunteers recognise a duty of care and when we become aware that someone has been involved in an incident we will attempt to contact the person to make sure they have the support they need and are coping adequately. Peers look after peers.

So back to our concerned and stressed pilots.

Concerned pilot: *"I need your help. You don't seem your old self anymore. What's the best way for me to suggest you talk to a PSV or our support psych without causing you offence?"*

Stressed pilot; *"Just tell me. I guess I don't hesitate to call on the tugs when I need help so might give it a crack"*

Keith McGregor is the director for AMPI's Peer Assistance Network (PAN), offering guidance and advice to members and Peer Support Volunteers (PSV). If you require assistance from PAN volunteers, please visit **ampi.org.au/pan/**



ChannelPilot X

ChannelPilot X is the next-generation PPU that adapts to every pilotage scenario, giving pilots the flexibility and confidence to navigate any transit.

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FROM WORKFORCE PLANNING TO MARITIME CAPABILITY: WHY COORDINATION MATTERS

Captain Jeanine Drummond | Maritime Careers Australia



Australia's maritime skills have gained fresh national focus with the release of ISA's 2026 Maritime Workforce Planning Update. Launched in July, the update reinforces a clear message for the sector that Australia will only meet its maritime workforce needs if all parties work together for a coordinated national vision.

The update builds on earlier workforce planning and identifies the practical challenges shaping national and local initiatives:

- attracting entrants
- expanding training berths and sea time availability
- strengthening collaboration with training providers, and
- improving pathways across deck, engineering, ratings, port operations, vessel support and emerging autonomous systems.

Those pathways need to recognise both DCV and STCW certifications for seafarers working onboard vessels in Australian waters. Most importantly, programs and initiatives need to be shared, scaled and aligned rather than developed in isolation.

The workforce plan sets the frame for collective action

The Update draws together issues affecting the sector and links them to current projects. ISA positions maritime as central to Australia's productivity, sovereign capability and supply chain resilience. The opportunity now is to use that national frame to build a shared view of what works, where the gaps remain, and how separate initiatives can contribute to common skills and training goals.

The challenge is not simply a shortage of interest; it is a pathway problem that must be solved collectively. No single employer, training provider or government program can deliver that alone.

New entrants (DCV or STCW) need;

- visible career options
- affordable training
- employer support
- access to vessels / sea time
- mentors
- clear progression into certified roles

From planning to delivery: sea time remains central

The Australian Government's Maritime Skills and Training Initiative provides funding to help employers support cadet seafarers for STCW certification. This funding helps remove the biggest barriers for new entrants: access to berths on a limited number of operating vessels, as well as assisting with wages, accommodation, food and transport,

The initiative is expected to support more than 20 trainee and cadet seafarers each year, over four years. The initiative is complemented by additional investment in ISA to tackle training barriers and strengthen maritime career pathways.

ISA's Maritime Skills Pipeline Project is about moving from scattered good examples to a connected national system where shared learnings and investment are coordinated to help programs grow beyond individual organisations or regions.

Australia's first Strategic Ship

ANL Kokoda

Vessel Name: **ANL Kokoda**

Year Built: **2011**

Length Overall (LOA): **175.47 meters**

Beam (Width): **27.67 meters**

Summer Draft: **~10.9 to 11.1 meters**

Gross Tonnage: **18,358 GT**

Deadweight (DWT): **23,314 tonnes**

Container Capacity: **1,740 TEU**



The strategic fleet turns workforce planning into operating capability

The ANL Kokoda will become the first vessel in Australia's Maritime Strategic Fleet. A strategic fleet depends not only on vessels, but on Australian-trained seafarers to operate them in normal trade and times of crisis; creating resilience for Australian supply chains. To meet the challenge of developing sovereign maritime capability, a successful and coordinated pipeline of seafarer trainees must be created to foster the journey from new entrants to certified seafarer.

Industry is building visibility before recruitment

Across the country, the industry is no longer waiting for young people to discover maritime by chance. At the Port of Brisbane, more than 300 students, parents, teachers and career advisers attended the Maritime Careers Open Day, supported by more than 30 industry partners. The event shows how whole-of-industry collaboration can make career pathways visible and credible.

The Australian Maritime College also remains central as Australia's national maritime education, training and research institute, connecting students with seafaring, maritime engineering, logistics and maritime management pathways.

Newcastle and Port Kembla's "Float Your Boat" program provides another example of early engagement, introducing Year 10 students to maritime careers through site visits, and practical exposure.

Cadetships are widening beyond traditional pathways

Cadetship models are also widening.

- NSW's Port Authority cadet program supports STCW seafarer cadets with mentors, salary and vessel placements to obtain qualifying sea time
- SA's One and All Near Coastal Coxswain cadetship offers a 12–month pathway combining accredited training, shipboard safety, maritime radio, first aid, vessel experience and recognised sea time.
- Offshore & Specialist Ships Australia's OSSA Scholarship Fund adds another example, supporting young Australians pursuing professional STCW sea-going careers through financial assistance, mentoring and help with sea time, travel, insurance and training costs. Its focus on vessel placement is especially valuable because sea service remains one of the hardest requirements for future mariners to secure.
- SIERA Marine Management intends to expand existing pathways for cadets and ratings, with more than 50 trainees expected through partnerships with vessel operators.

"We want a genuine, sustainable pipeline of Australian maritime talent reducing reliance on overseas crewing and building local careers that keep skills and knowledge onshore. A strong maritime sector is integral to a strong Australia; over 99% of our international trade by volume moves by sea, so a local, well-skilled, resilient workforce matters to the broader economy, not just our industry."
Sam Coote, Managing Director, SIERA Marine Management

The message is clear: funding helps, but sea-time placements, mentors and cross-industry partnerships are what turn funding into qualified mariners.



What this means for new entrants and industry

Maritime careers are diverse, practical and nationally important, with numerous entry pathways available. The strongest programs share three features: early exposure, structured training and direct access to employers or vessels.

For industry, the opportunity is equally clear. Employers that host trainees, mentor cadets or participate in school and career events are helping address a workforce challenge no single organisation can solve alone. The priority is to turn individual contributions into a coordinated national effort, with ports, towage operators, vessel owners, training providers, government agencies, unions and industry bodies sharing what works and building programs that can be replicated across Australia.

The outlook

The 2026 Maritime Workforce Planning Update gives the sector a timely opportunity to connect policy, funding and practical training activity within a coordinated national vision. Together with the ANL Kokoda announcement, it shows that maritime workforce development is not only about filling vacancies; it is about building the Australian skills base needed for sovereign capability, resilient supply chains and emergency response.

Captain Jeanine Drummond



An experienced maritime industry non-executive director, senior leader, Harbour Master and Master Mariner, with an extensive background across all maritime industry sectors, at sea, in offshore oil and gas, and in the ports sector, in operations, development, and commercial, in both Australia and internationally.

Industry Skills Australia

Industry Skills Australia (ISA) *is the Jobs & Skills Council for the nation's transport supply chain industries.*

Jobs and Skills Australia

Jobs & Skills Councils (JSCs) *are an Australian Government initiative designed to place industry at the centre of workforce planning & skills development.*

THE IRONIES OF AUTOMATION

Editor Introduction:

Concern about the effects of automation started 40 years ago. The widespread use of PPUs and the ever 'accurate' predictor, puts Marine Pilotage now on the same path aviators had with loss of manual skills and over reliance on technology. With increasing direct shore based oversight, pilots need to lean on the PPU more and more to meet these expectations. Ironies 3 & 5 are particularly relevant.

The following is reprinted with permission from; Martin Anderson, Fellow of The Chartered Institute of Ergonomics & Human Factors. Martin is creator of humanfactors101.com, for the full article please see humanfactors101.com/2020/05/24/the-ironies-of-automation/

Irony: combination of circumstances, the result of which is the direct opposite of what might be expected *Lisanne Bainbridge, 1983*



The 'ironies of automation' refers to a set of unintended consequences as a result of automation, that could detrimentally affect human performance on critical tasks. Automation might increase human performance issues, rather than eliminate them.

When working as a human factors consultant on the implementation of human performance aspects in the European railway system in the late 90's, I was first made aware of a scientific paper called 'Ironies of Automation' by psychologist Lisanne Bainbridge. This work was published in 1983, although Bainbridge had published on this topic previously.

The thoughts of Bainbridge on the topic of automation from nearly forty years ago are just as relevant today, if not more so. As well as applications to aviation and process control, I'll discuss automation in vehicles such as the Tesla Autopilot.

In aiming to prevent human performance issues, it is often more effective to 'design out' the potential for human failure at the start, rather than address it later with softer controls such as competence or procedures. The discipline of Human Factors Engineering (HFE) provides a suite of tools and guidance to align designs with

the capabilities and limitations of humans. There has been a significant increase in the application of Human Factors Engineering in many industries in recent years – particularly nuclear, rail, aviation, healthcare and oil/gas/chemicals. This interest in 'designing for humans' partly stems from significant incidents in these industries highlighting failures in previous designs that 'set people up to fail'.

In the aviation industry, automated flight systems have been used successfully for many years and have contributed to significant improvements in safety and efficiency.

However, incidents show that pilots may rely too much on these automated systems and are often reluctant to intervene; and that errors in the programming of flight management systems continue to occur.

The incident statistics certainty show that, across most industries, human actions and decisions play a key role. In an attempt to reduce human failures in the operation of a system (such as the control of a railway system, power network or chemical process), some designers may remove the human from the system, as far as possible. Automation can be seen as the solution to human failure – replace human planning, actions and decisions with automatic devices, computer control or artificial intelligence.

One of the ironies of designers attempting to eliminate humans from the system, is that operating problems may occur due to errors introduced by designers. This is sometimes referred to as design-induced error, and may be due to a lack of human factors expertise on design teams. These latent errors may lie dormant for many years ('mistakes waiting to happen').

"Rather than being the main instigators of an accident, operators tend to be the inheritors of system defects created by poor design, incorrect installation, faulty maintenance and bad management decisions. Their part is usually that of adding the final garnish to a lethal brew whose ingredients have already been long in the cooking"

James Reason, 'Human error', 1990

Irony 2: Tasks that are not automated rely on humans

Once people are eliminated as much as possible in the design, the human operator is left with an arbitrary collection of tasks that the designer could not eliminate. Whatever human tasks remain may not comprise a cohesive, meaningful or satisfying job role. Decisions tend to only consider allocating a task to a human or an automated system; when in fact, a more dynamic allocation of function may be more appropriate (i.e. allocation depending upon the scenario).

"By taking away the easy parts of the task, automation can make the difficult parts of the human operator's task more difficult"

Lisanne Bainbridge, 1983

Irony 3: The human may have to 'take over' if the system fails

When a process has been highly automated, the role of the human often becomes more of a monitoring role. People may have less executive actions to take, but instead oversee that the automated system is performing as intended. If the system is not performing, and the human is required to intervene, there are some concerns:

- It takes time for a person to shift between activity 'modes', such as switching from monitoring to controlling activities.
- Physical skills deteriorate when they are not used, and so when a person takes over from the automated system or autopilot, their actions may not be as refined as previously.
- People may be required to take over from the automated system at short notice, and without sufficient time to gain the full context (having been 'out of the loop'). The person taking control may not have complete or accurate Situation Awareness.
- When the human has to intervene, there is likely to be something wrong or degraded with the process and so the human may need to be as skilled, experienced and aware as possible.
- If the personnel monitoring the system did not have practical hands-on experience of the system or this particular scenario prior to automation, they may not have the understanding required to successfully take control.
- If automation increases the reliability of the system, then those monitoring the system may pay less attention to it.
- We know that it is impossible for even highly motivated people to maintain vigilance and so people will not be effective at monitoring automated systems for long periods. It is for this reason that Air Traffic Controllers may only work for short shifts at a time.

The Air France AF447 example below outlines what can happen when people are required to intervene when the automatic system fails. In this case, the autopilot was disabled by a minor system failure and the crew were unable to gain control of the aircraft, which crashed following an aerodynamic stall. The cockpit voice recording highlights the crews' confusion as they try to fly the aircraft manually (something that they rarely did mid-flight).

Irony 4: Retrofitting automation can add complexity

From aircraft cockpits to process control rooms, the addition of new automated features or retrofits can introduce complexity and confusion. This is particularly the case where a human-centred design process has not been adopted.

Irony 5: Competent, but in what?

As the nature of human activities changes due to automation, the competencies that were required for manual human control may not be the same competencies that are required to work with highly-automated systems. With the introduction of more technology, Non-Technical Skills such as decision-making and communications become more important, and yet many organisations do not help staff to develop these competencies.

In summary – if we fully automate a system, then the human in the system has two key functions:

1. monitoring an automated system that is designed not to fail, and
2. taking over control if the system fails.

Unfortunately, humans are not so good at prolonged monitoring tasks (especially if the system rarely fails) and will have difficulty if called to intervene in a demanding situation at short notice.

Tesla Autopilot and ironies of automation

Let's review the Tesla Autopilot system in relation to these ironies of automation. The system is currently (May 2020) available in two flavours: Autopilot and Full Self-Driving Capability.

Tesla promises that the Autopilot features 'assist you with the most burdensome parts of driving'

The basic Autopilot system automatically controls acceleration and braking, as well as autosteer to keep the car within the current lane. The Full Self-Driving Capability, with auto navigate and auto lane change, enables fully automatic driving on highways (with city driving a future upgrade). When you step out of the car it will find itself a parking space nearby – and then when summoned later, it will come and find you.

However, these Autopilot functions do not make the vehicle autonomous – and still require the 'driver' to be in control:

"Autopilot and Full Self-Driving Capability are intended for use with a fully attentive driver, who has their hands on the wheel and is prepared to take over at any moment. The currently enabled features require active driver supervision and do not make the vehicle autonomous".

tesla.com/support/autopilot

The Tesla Autopilot system has been implicated in several high-profile crashes. The US National Highway Traffic Safety Administration (NHTSA) has a special team to investigate crashes that potentially involve the Autopilot system.

In some fatal crashes involving Tesla vehicles, the NHTSA concluded that a key factor was driver inattention, linked to overconfidence in such systems. The US National Transportation Safety Board (NTSB) raises similar concerns – for example, in its report into the March 2018 crash of an Uber self-driving test vehicle which killed a pedestrian, the NTSB uses the phrase 'automation complacency'. Although there is a focus on the vehicle operator (who was distracted on her mobile phone), the NTSB state the underlying issue to be inadequate safety culture within Uber's Advanced Technologies Group.

The NTSB report of a Tesla vehicle crashing into a stationary fire truck on the highway (California, 22 January 2018) provided the following probable causes:

- "The Tesla driver's lack of response to the stationary fire truck due to his inattention and over-reliance on the vehicle's advanced driver assistance system"
- "The Tesla Autopilot design, which permitted the driver to disengage from the driving task"
- "The driver's use of the system in ways inconsistent with guidance and warnings from the manufacturer".

In several cases, the issue appears not to be the automated system itself (whether provided by Tesla or other manufacturers), but either (1) the perception by drivers that the system is more capable than it actually is, or (2) the driver's application of the automated system in conditions that the designer did not intend. For example, Tesla's Autopilot system is intended to be used on highways with a central divider – however, the Tesla firmware does not restrict use of the system to highways. The driver can choose to operate this system on city streets, or roads with crossing traffic, for which it was not designed.

Despite the use of significant technology and automation in these vehicles, the ironies of automation include that (1) the driver chooses under what conditions to engage certain automated functions – and these conditions may be outside the design envelope; (2) the driver must remain in control of the vehicle and monitor the environment at all times; (3) some of the automated features are not always reliable.

Tesla provides an Autopilot function called 'Traffic Light and Stop Sign Control (Beta)'. This system identifies stop signs and traffic lights, automatically controlling the speed of the vehicle so that it stops at the intersection. However, Tesla warns that "As with all Autopilot features, you must be in control of your vehicle, pay attention to its surroundings and be ready to take immediate action including braking. This feature is in Beta and may not stop for all traffic controls".

The more we rely on technology, the more crucial it is that we understand human factors. The challenge for designers is to strike a balance between available automation technologies, whilst continuing to consider the changing role of the human within the system.

I'll finish with a quote from Peter F. Drucker, often described as the founder of modern management:

> **"We are becoming aware that the major questions regarding technology are not technical but human questions"**
>
> *Peter F. Drucker, 1967*



OPERATIONAL LINGUISTICS - *ARE YOU TALKING TO ME?*

Tom Hilton | Editor

If we were to distil Marine Pilotage down to one key element, it would be 'effective communication'. The pilot is the conductor of ship's crew, tugs and port services to safely move a large ship in / out of port. Without clear, consistent communication, pilotage becomes very inefficient, and in high stress situations, potentially unworkable.

The IMO introduced Standard Marine Communication Phrases (SMCP) primarily aimed at radio communications. However, SMCP offers limited guidance for the dynamic, more personal communication required between pilot and Captain during manoeuvring. There is the more specific concept of 'Maritime English' which is a sub-genre of English for Specific Purposes (ESP) but may only apply with academic and investigation uses. Beyond terminology, however, there is a deeper layer: the science of how people process communication under load.

According to IMO, "a staggering 80% of maritime incidents stem from human error, with nearly half of these incidents directly linked to communication failures" (Ziarati 2006). Further study shows that language errors were not significantly related to whether English was the speaker's native language (Peter John 2019). This suggests that how we structure communication may be more significant than language proficiency alone.

How the Brain Receives an Order

When someone speaks to you, your brain processes the message in stages:

1. Are they talking to me? (Do I need to pay attention?)
2. What is the instruction? (What do 'I' need to do?)

Only after these are resolved can an appropriate action be processed.

At the same time, we are constrained by working memory—our ability to hold and process information for a few seconds. According to Miller's Law ('The magical number 7'), we can remember 5 to 9 discrete items. This limited capacity reduces under stress and fatigue. If information is delivered in a sequence the brain naturally processes, reliance on working memory is reduced – minimising confusion and lowering workload.

And, when an instruction is misunderstood or not clear, this creates a moment of confusion. The priority shifts to resolving that immediate confusion. Essentially, this creates distraction and time lost, further elevating workload and stress.

The Problem with "Standard" Orders

Consider the familiar order:

"Let go the..."

Even before the sentence is complete, the listener's brain (Captain) tries to predict the ending – with 'anchor' maybe filling the gap. This is natural: the brain looks for patterns and tries to complete them automatically. Also, clearly addressing who the receiver is removes ambiguity about who needs to pay attention. You can be strategic about this, generally it is assumed the pilot will be addressing the Captain, so saying 'Captain' with every instruction might become tedious, saving the direct 'Captain' (or 'Helmsman') for more critical instructions.

Start with WHO the information is for	Captain	Immediately clarifies who needs to act, grabs their attention.
Give the WHAT	Starboard Tug	Provides context. The Captain is already thinking of possibilities here.
Give the DETAIL	Let go the tug line	Specifies the required action

WHO > WHAT > DETAIL

"Captain, starboard tug, let go the tug line"

Giving instructions in this order preserves the short-term memory. If instead we said, *"Let go the starboard tug line, Captain"*, the information is received backward to how the brain will process it. Without early identification of the recipient, the brain must temporarily hold and process information until ownership and meaning are clarified. On a bright sunny day, coffee in hand, this is rarely an issue. However, by preserving mental capacity with every order, we are building robust communication habits for when it might matter.

There is also a line of thought that avoids using terms like 'let go' and uses 'cast off' instead (when referring to tug lines). This removes terminology that may be mis-heard and lead to an incorrect assumption. However, terms such as 'cast off' may be less familiar to some non-native English-speakers and may be another source of confusion.

Keeping a shared mental model during the pilotage

BRM emphasises maintaining a shared mental model between the pilot and bridge team. During pilotage, there needs to be 2 information flows;

- First, the immediate directive information – commands that make the pilotage happen. Rudder, engine and tug orders.
- Second, information to keep the Captain and crew 'present', preserving and building the shared mental model during the pilotage.

This second information flow is essential in today's environment of accountability. The challenge is maintaining a shared mental model without disrupting the orders needed to manoeuvre the ship. Traditionally, that shared model may have been considered complete once the Master Pilot Exchange (MPX) was finished. However, observing ex-Navy trainee pilots and comparing their approach with my own has highlighted the need to balance too much information against too little. Rather than overwhelming the bridge team with a continuous stream of commentary, shared understanding can be maintained through brief, well-timed updates that keep the Captain oriented without distracting from the immediate demands of pilotage. Each passage is likely to have natural points where a short update can prepare the bridge team for the section ahead.

Robust Habits

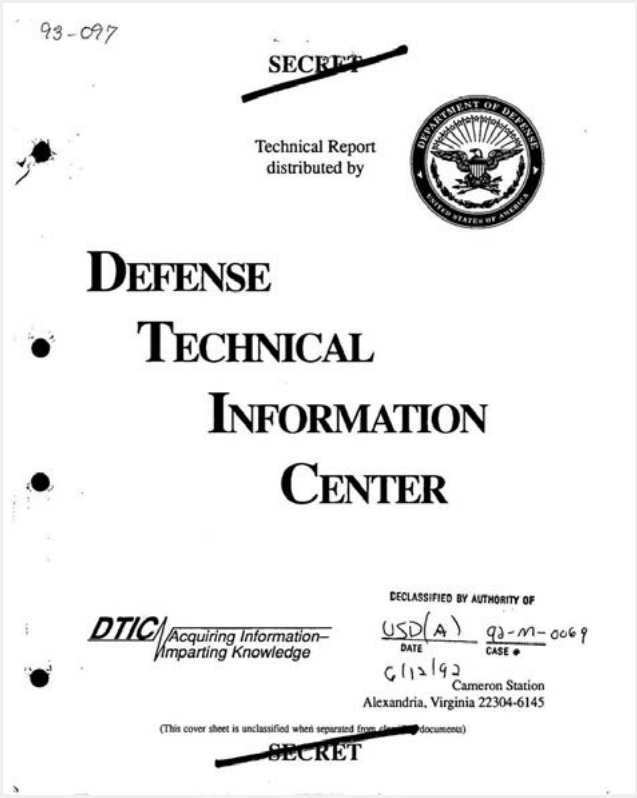
Building robust habits is essential to effective pilotage. While it is difficult to replicate and train for real operational pressure, we can influence how we perform in those moments by deliberately shaping behaviours so they may become automatic. We need to avoid confusion which will hinder what the pilot needs to do. In a time-critical situations, distraction and confusion create a delay (which will probably increase stress).

By structuring communication in a way that aligns with how the brain naturally processes information—identifying the recipient, then the context, then the action—we reduce ambiguity, lower cognitive workload, and improve the speed and accuracy of response.

It also needs to be appreciated that Marine Pilots do not have the luxury of working with familiar crew (like airline pilots in the same company operating under same procedures). All efforts should be made to remove ambiguity or doubt.

These techniques are small, and in isolation may seem insignificant. But modern pilotage operates on fine margins. Demands from Marine Pilots are increasing – larger ships, tighter schedules, wider weather parameters and digital performance expectations. As the operating environment becomes more complex, these beneficial 'one percents' can add up and hopefully shift the needle in your favour.

In the end, effective pilotage depends not only on what we say—but on how clearly and consistently it is understood when it matters most.


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SECRET

Project Red Baron

During the Vietnam War, the United States Air Force conducted an exhaustive investigation called The Red Baron Project to understand why U.S. aircraft were frequently shot down by what were, on paper, technologically inferior North Vietnamese fighters. The study found that while American jets and training was ill suited to the close in dogfighting that actually occurred — human factors was a big contributor to combat losses. Many losses began with missed cues, late warnings, task saturation, or breakdowns in mutual support. Pilots often entered the fight with an inaccurate mental model, or never detected the threat in time to respond. The project's core conclusion was that communication clarity, timing, and shared situational awareness mattered more than hardware. For marine pilots, the parallel is clear: in dynamic, high risk environments, the first words exchanged can shape the entire trajectory of understanding and action.

WHEN EMPLOYEES BECOME SILENT

Sometimes, it can be hard to say ‘no’.

Wendy Smith | Let’s talk about people and business | linkedin.com/in/wendy-smith-77453a79 | Published Jul 29, 2025



Editor Introduction:

Standing on the wharf looking at the white caps, wondering if you really want to come alongside in THAT. The linesman are booked, tugs lurking (or NO tugs, I’m looking at you Port Alma!), if you don’t do it now, you’ll likely just get it on the next tide. Add in a power gradient, ‘fuzzy’ rules, commercial pressure, peer position, personality traits and saying ‘no’ becomes a hard line to step over.

There is wide body of research behind the challenges in saying ‘no’ with lots of long papers to read. Marine pilots start work at the last checkpoint before the ship moves, it’s pilots that have that final yes or no decision to make, and these (often subtle) pressures add up.

Wendy Smith’s article below about Silence, while not a direct fit about saying ‘no’, discusses the pressures that exist on employees where it’s sometimes easier to stay silent and to not rock the boat.

Employee silence, the withholding of meaningful input, concerns, or ideas, is a pervasive issue in many organizations. When employees feel psychologically disempowered, they are less likely to speak up, leading to reduced innovation, poor decision-making, and even organizational failure. Leaders play a crucial role in either fostering an environment of open communication or perpetuating silence through their actions (or inactions).

Employee silence refers to the intentional withholding of work-related opinions, concerns, or suggestions from those in positions of authority (Morrison & Milliken, 2000). It can be categorized into:

1. **Defensive Silence** – Defensive silence occurs when employees choose not to speak up because they anticipate negative consequences, such as punishment, ostracism, or career setbacks (Milliken et al., 2003).
2. **Acquiescent Silence** – Acquiescent silence arises when employees disengage because they believe their input will not be valued or lead to any meaningful change (Van Dyne et al., 2003)
3. **Prosocial Silence** – Unlike defensive and acquiescent silence, prosocial silence is not self-protective but motivated by concern for others or the organization (Van Dyne et al., 2003)

Silence is often a symptom of deeper organizational issues and rarely just an individual problem. It typically reflects systemic flaws in organizational culture, leadership, and structures. When employees consistently withhold input, it signals:

1. **Poor Psychological Safety** – Employees fear repercussions for speaking up, indicating a culture of blame rather than learning (Edmondson, 1999).
2. **Ineffective Leadership** – Authoritarian or dismissive leaders discourage open communication, reinforcing silence (Morrison & Milliken, 2000).
3. **Lack of Trust** – If employees believe their voices don’t matter or won’t lead to change, they disengage (Detert & Burris, 2007).
4. **Unrewarded Voice** – Organizations that ignore or punish feedback teach employees that silence is safer.
5. **Structural Barriers** – Rigid hierarchies, lack of feedback channels, or bureaucratic processes stifle open dialogue.

Silence, therefore, acts as a warning sign, revealing deeper dysfunctions that, if unaddressed, can harm innovation, morale, and long-term success.

Leadership's Role in Perpetuating Silence and Disempowerment

Leaders significantly influence whether employees feel safe and motivated to speak up. Poor leadership behaviors that contribute to silence include:

1. **Authoritarian Leadership** – Leaders who enforce strict control, discourage questioning, and punish disagreement. Employees fear retaliation (e.g., being sidelined, denied promotions, or publicly criticized). Critical feedback is withheld, allowing problems to fester and innovation declines because employees avoid challenging the status quo.
2. **Lack of Psychological Safety** – A work environment where employees do not feel safe taking interpersonal risks (Edmondson, 1999). Employees avoid admitting mistakes, leading to unresolved errors. Constructive criticism is suppressed, hindering growth and team members hesitate to share unconventional ideas.
3. **Ignoring Employee Input** – Leaders who solicit feedback but never act on it or acknowledge it. Employees develop learned helplessness, believing their input doesn't matter. Surveys and suggestion boxes become "performative" rather than useful, while high performers disengage, feeling their expertise is undervalued.
4. **Inconsistent Communication** – Mixed signals from leadership create confusion and distrust. Employees struggle to predict leadership reactions, leading to self-censorship. Trust erodes because employees cannot rely on leadership's word and uncertainty breeds risk aversion where employees rather stick to "safe" topics or no discussion at all.

Conclusion

Employee silence is often symptoms of poor leadership. When leaders fail to create an environment where employees feel valued and safe, silence becomes the default response. Organizations must train leaders to adopt empowering behaviors that promote open dialogue, psychological safety, and active engagement. By addressing leadership deficiencies, companies can unlock employee potential and drive sustainable success. When employees consistently choose silence over speaking up, it reveals fundamental breakdowns in leadership effectiveness and organizational culture.

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MSC 111 SESSION SUMMARY

International Maritime Organization Headquarters Visit

Captain Kate Delisky



Over four days in May, I had the privilege of observing the IMO's 111th session of the Maritime Safety Committee as part of the Australian delegation, which included three representatives from AMSA.

The experience was both enriching and eye-opening. The Committee's work highlighted the breadth of challenges facing the maritime sector today, from evolving regulations and new technologies to the continued focus on safeguarding seafarers, especially those operating near conflict zones. These discussions reinforced how dynamic maritime safety has become and how vital it is for regulation to adapt accordingly.

Watching the way international decisions are shaped, how ideas are tested, debated, and refined into formal standards was invaluable. Connecting with delegates from across the globe and gaining a deeper understanding of the machinery behind international maritime governance has significantly expanded my perspective and strengthened my capacity to contribute to our industry.

Updates to mandatory instruments

The Committee considered and adopted a wide range of amendments to mandatory IMO instruments. These included updates to:

- International Code of Safety for Ships Using Gases or Other Low Flashpoint Fuels (IGF Code). Adoption of amendments aimed at strengthening safety requirements for vessels using alternative fuels.
- International Gas Carrier Code (IGC Code). Adoption of amendments including a new three-date approach for determining when the Code applies, based on contract signing, keel laying, or delivery of gas carriers. Alongside this, the Committee endorsed guidelines for using ammonia cargo as fuel on gas carriers and developed new training guidance for crews working with alternative fuels such as ethyl and methyl alcohol.
- SOLAS Chapter V and the High-Speed Craft (HSC) Codes. Amendments were approved to allow the use of VHF Data Exchange Systems.

- Life-Saving Appliances (LSA) Code. Revisions focused on design and testing standards for free-fall lifeboats.
- Industrial Personnel (IP) Code. A key change was the increase in the assumed mass of an industrial worker from 75 kg to 90 kg for stability calculations.
- Development of a safety regulatory framework to support the reduction of greenhouse gas emissions from ships through the use of emerging technologies and alternative fuels.
- IAMSAR Manual, Load Line Convention, and IMDG Code. Various updates were adopted across these instruments, along with several other codes, guidelines, and explanatory notes related to ship systems, equipment, and aspects of ship design and construction, all aimed at enhancing maritime safety.

A full report of MSC 111 will be available soon from the IMO website.

LRIT

The Committee also examined the financial structure underpinning the Long-Range Identification and Tracking (LRIT) system, with several Member States highlighting the significant cost pressures associated with its operation. Although LRIT was originally established to enhance maritime safety and security, many administrations explained that the expenses of utilising LRIT capabilities are beyond their financial capacity. These States emphasised that access to LRIT data for vessels up to 1,000 nautical miles from their coasts would greatly strengthen their ability to detect potential illegal activity earlier, yet the current cost model limits their participation.

Other delegations noted that their search and rescue regions are extremely large, making continuous LRIT monitoring financially unrealistic. As a result, some States are only able to access LRIT information for free once an incident has already occurred, reducing the system's preventative value.

In response to these concerns, the Committee agreed on draft amendments that would introduce a no-cost policy for LRIT information provided to entitled coastal States. If these amendments are adopted at MSC 112, the new arrangements are expected to enter into force on 1 January 2032.

Mandatory Ship Reporting

A further resolution adopted under SOLAS Chapter V concerned amendments to the mandatory ship-reporting systems in both the SOUNDREP area between Denmark and Sweden and the Storebælt (Great Belt) traffic separation schemes. While the update may appear administrative at first glance, it introduces a significant new requirement: vessels must now include their insurance details in the pre-entry report. Although an inability to provide this information does not impede the right of free passage under UNCLOS, the data is transmitted to the vessel's flag State for follow-up.

The intention behind this change is to close long-standing gaps that have allowed uninsured or substandard vessels to move through these waters with minimal scrutiny. The enhanced reporting framework strengthens the preparedness of coastal States and shifts the system from a passive monitoring tool to a more proactive risk-management mechanism. Beyond administrative compliance, the measure supports broader objectives related to maritime security, environmental protection, and operational oversight; particularly relevant at a time when certain segments of global shipping operate with limited visibility and heightened risk profiles.



Autonomous shipping

A major development of MSC 111 was that the non-mandatory Maritime Autonomous Surface Ships (MASS) Code has progressed to the point where the Organization is transitioning into the Experience-Building Phase (EBP). The Code, which applies to cargo vessels, establishes safety expectations for remotely operated and autonomous ship functions. It is intended to form the foundation of an international regulatory framework that supports the safe, secure, and environmentally responsible operation of MASS.

A key purpose of the Code is to address operational and safety considerations that are not yet fully covered by existing instruments such as SOLAS, while remaining technology-neutral to allow continued innovation within the commercial maritime sector. The non-mandatory MASS Code has now been adopted and is scheduled to take effect in July 2026.

During the EBP, work will continue on developing the mandatory version of the Code. Current timelines anticipate its mandatory entry into force on 1 January 2032; however, a later date, potentially 2036, may ultimately be more appropriate. This timeline will be reviewed and adjusted as necessary based on the outcomes and insights gained during the EBP.

Maritime security concerns

The discussion on security, piracy, and unsafe migration underscored the rapidly deteriorating maritime security environment in the Middle East. Delegations examined the severe consequences of ongoing regional conflict for seafarers and commercial vessels, particularly those caught in active hostilities or deliberately targeted in the Strait of Hormuz and the Arabian Sea. The scale of the humanitarian and operational crisis was made clear: around 20,000 seafarers remain stranded near the Strait of Hormuz, and 39 seafarers have been killed, despite having no connection to the conflict. These figures highlight an unacceptable level of risk for civilian mariners simply carrying out their duties.

The Maritime Safety Committee assessed measures to strengthen the protection of merchant shipping. This included consideration of designated safe-transit corridors and direct engagement with Member States on the political and operational feasibility of implementing such mechanisms. The gravity of the situation made clear that enhanced, coordinated action is essential to safeguard seafarers' lives and uphold the security of global maritime trade.

Lunchtime Seminars – hydrogen fuels and autonomous tugs

The lunchtime seminars proved quite interesting. One seminar featured the official launch of the Global Liquid Hydrogen Alliance (GLHA), supported by three expert speakers who outlined the current state and future potential of liquid hydrogen as a maritime fuel. While hydrogen-powered systems are already

emphasised that the remaining barrier to large-scale adoption is the absence of a coordinated global supply chain for liquid hydrogen.

Corinna Nones of Chart Industries outlined the operation of onboard liquid-hydrogen propulsion systems, drawing on a four-year Horizon Europe project conducted with Viking Ocean Cruises and Fincantieri. She highlighted the development of modular, swappable liquid-hydrogen units certified for both marine and road use, designed to eliminate traditional bunkering equipment and streamline refuelling.

Didier Bouix then examined the practical deployment of liquid hydrogen on larger commercial vessels, using the 1,100–TEU Energy Observer 2 as an example. He described its advanced energy architecture, 14–day operating profile, and compliant bunkering procedures, emphasising that liquid-hydrogen propulsion has moved beyond theory and is now technically ready for commercial application.

Closing the session, Bart Biebuyck, Founder and CEO of Hybart BV, argued for a global platform to support liquid-hydrogen adoption. He reviewed current and future supply capabilities, the shift toward industrial-scale production, and the need for resilient midstream logistics. With liquid hydrogen expected to reach cost parity with diesel by 2030, he stressed that integrated supply and bunkering infrastructure will be essential to secure energy supply and enable a zero-emission maritime transition.

Another lunch time seminar, presented by the Russian Federation was on its autonomous tug development project. The proposed tugs measure 19 metres in length, 9.5 metres in beam, and operate at a draft of 1.93 metres. They are designed with electric propulsion and equipped with two fixed-pitch propellers, one positioned forward and one aft. The vessels would connect to the assisted ship using a specialised hull-coupling system incorporating a rotary mooring device capable of operating with either magnetic or mechanical towing mechanisms, and functional in sea states up to two metres.

According to the proposal, pilotage could be conducted from shore, from the tug itself, from the assisted vessel, or, at a later stage, by an AI-based pilot. The Russian Federation suggested that this technology would reduce human-factor risks and ultimately decrease the number of maritime incidents. In their concluding remarks, they presented the concept as a potential solution for future pilotage and MASS-related mooring operations in port environments. As expected, Simon Pelletier, President of IMPA, raised several questions during the discussion period.



International Day for Women in Maritime at the IMO Headquarters

My final day at the IMO culminated in celebrating the International Day for Women in Maritime. This year's theme, From Policy to Practice: Advancing Gender Equality for Maritime Excellence, framed a thoughtful and forward-looking discussion on the progress and remaining challenges in achieving gender equity across the maritime sector.

The afternoon session opened with remarks from Mr Arsenio Dominguez, Secretary-General of the IMO, followed by the first keynote speaker, Professor Anna Petrig of the University of Basel (Switzerland). Professor Petrig presented an expert analysis on the importance of gender mainstreaming and the persistent gaps within the maritime industry. She described gender mainstreaming as the act of "putting on gender glasses" a deliberate, systematic examination of how policies, equipment, and operational practices affect people of different genders in distinct ways. Her examples highlighted practical issues such as ill-fitting overalls and gloves for women, and the safety implications that follow.

From my own experience at sea, I would note that some of these challenges also stem from physiological diversity more broadly. I have sailed with many male colleagues who struggled with firefighting suits designed for smaller body types, and others who could not fully close overalls due to insufficient sizing. Nonetheless, Professor Petrig's central message was clear: gender equality is not solely about increasing the number of women in maritime roles, but ensuring that all women whether ashore or at sea, work in environments that are safe, fair, and equitable.

Professor Petrig's presentation was followed by the launch of the Handbook on Gender Mainstreaming, introduced by Professor Momoko Kitada of the World Maritime University. This handbook serves as a practical guide for maritime administrations, shipping companies, ports, and training institutions, offering tools to embed gender perspectives into policies, procedures, and day-to-day operations.

The second keynote speaker, Mia Krogslund Jørgensen, Vice President and Head of People and Culture at Hafnia, shared insights on translating commitment into action. She outlined Hafnia's approach to gender mainstreaming,

noting that women currently represent 12% of their seafaring workforce. Their initiatives include targeted recruitment, a zero-tolerance anti-harassment framework, unconscious-bias training for all crew, and specialised welfare programs. Hafnia also provides up to 18 weeks of paid maternity leave, along with safe repatriation and structured return-to-work pathways.

A particularly innovative initiative is Hafnia's Maritime DEI Culture Lab, where five vessels operate with crews composed of at least 50% women. The aim is to gather data on how a more balanced gender mix influences onboard culture and to identify strategies for creating safer, more respectful, and inclusive working environments. The company also supplies PPE designed specifically for women, essential hygiene products, and access to a "women's desk" for confidential peer support.

The impact of these efforts is evident: Hafnia increased its proportion of women at sea from 4% in 2022 to 12% in 2026. Similarly, Swire Shipping has doubled its percentage of women seafarers, rising from 5% in 2024 to 10% in 2025. I recently saw this progress firsthand when boarding a vessel where the captain informed me that seven women were serving onboard, a number I initially thought I had misheard.

The final highlight of the day was the presentation of the International Maritime Organization's 2026 Gender Equality Award to Professor Momoko Kitada of Japan, celebrated for her leadership in championing diversity, inclusion and equal opportunity across maritime education and professional growth. As she accepted the award, Professor Kitada spoke about her early life, her experiences as a seafarer, and how those moments shaped her eventual move into academia.

I am sincerely thankful for the opportunity to participate as an observer, made possible through the support of AMSA, as well as the financial assistance provided by AMPI and Port Phillip Sea Pilots. Their commitment to advancing women in maritime and nurturing the next generation of professionals is genuinely impactful. I greatly value their dedication to strengthening our industry, and I am eager to put the insights gained to practical use for the benefit of the sector.





THE PILOTAGE ENTRANCE EXAMINATION

Maintaining Standards in a Changing Profession

Captain Ricky Rouse | *Deputy President, Australasian Marine Pilots Institute*



Over the past years the AMPI Board has had countless conversations with marine pilots, regulators, pilotage providers and maritime educators about alternative pathways into pilotage. It has become obvious that while people often disagree on the solution, most actually agree on the problem.

Before discussing the proposal for a National Professional Entrance Examination, I think it's important to make AMPI's position absolutely clear.

In 2023, AMPI published Position Statement PS–01, Alternative Training Pathways for Marine Pilotage. That position has not changed.

AMPI continues to support the STCW Master Unlimited Certificate of Competency as the benchmark entry qualification for marine pilotage.

That benchmark exists for good reason. A Master Unlimited certificate represents far more than an academic qualification. It combines years of vocational experience operating large commercial ships around the world with an internationally recognised academic syllabus established by the International Maritime Organization through the STCW Convention. It represents a depth of knowledge and operational judgement that has served the pilotage profession well for decades.

The question has never been whether that standard is appropriate. The question is how we maintain that standard as the industry around us changes.

The reality is that alternative pathways already exist throughout Australia. They have been introduced by regulators responding to workforce pressures and changing demographics within the maritime industry. Those decisions are matters for Commonwealth and State regulators. AMPI neither determines nor approves how individual jurisdictions establish their licensing requirements, but we do engage and provide contributions wherever we are invited into the consultation processes (if such a process occurs).

Some of these pathways have been developed thoughtfully. They involve significant Recognition of Prior Learning, large ship seagoing experience and carefully designed academic gap training. Others have been developed much more quickly in response to workforce shortages.

Almost every jurisdiction in Australia still legislates that the entry point for marine pilotage is a Master Unlimited certificate, or an equivalent qualification. The difficulty lies in those two words: equivalent qualification. At present there is no nationally agreed answer. There is no transparent national benchmark.

AMPI is not proposing a new qualification. We are not proposing that the Master Unlimited standard be replaced. We are not proposing that pilotage providers change how they train pilots. We are trying to preserve the existing benchmark.

The proposal addresses one part of the pathway into pilotage: the academic knowledge expected before practical pilot training begins. Everything that follows; local knowledge, ship handling, simulator training, supervised acts of pilotage and competency assessment, remains with regulators and pilotage providers.

The examination simply asks whether every candidate, regardless of how they arrived there, can demonstrate academic knowledge equivalent to the internationally recognised STCW II/2 Master Unlimited syllabus.

The standard should stay the same, even if the pathways change. Australia's traditional recruitment pool is becoming smaller, regulators are exploring broader pathways, and Recognition of Prior Learning, maritime colleges and the STCW syllabus already exist. What has been missing is an independent method of confirming that a candidate has genuinely achieved knowledge equivalent to the Master Unlimited academic standard.

One principle that became increasingly important during our discussions was independence. The organisations responsible for educating candidates should not also determine whether those candidates have met the required academic standard. Likewise, pilotage providers should not verify the equivalence of qualifications for people they may ultimately employ, that's a straightforward conflict of interest.

For that reason, AMPI proposes an examination independently developed by the Australian Maritime College and independently administered and delivered by ASPEQ. ASPEQ already delivers high-security examinations across several safety-critical industries, including all CASA theoretical examinations for commercial and airline pilots, in addition to health, construction and finance industry bodies. If Australia's aviation industry trusts ASPEQ to assess the academic knowledge of airline pilots, there is every reason to have confidence in the same examination integrity for marine pilotage.

Candidates attend authorised examination centres where identity is verified, examinations are conducted under strict supervision, electronic devices are prohibited, questions are drawn randomly from a validated question bank and every candidate is assessed under identical conditions. AMPI would not write the questions, supervise candidates or mark examinations. The integrity of the assessment depends upon that independence.

It is equally important to understand what this examination is not. It is not designed to identify whether someone will become a good marine pilot. No written examination can assess judgement, communication, leadership or practical ship handling. Those attributes must continue to be assessed through psychometric testing, simulator exercises, interviews, supervised training and competency assessment. Many pilotage providers already do this well, and AMPI expects those practical assessments to be an essential part of the selection process.

The examination simply determines whether someone possesses the academic knowledge required to become a trainee marine pilot.

The syllabus focuses on six core areas: navigation and passage planning; ship handling and applied hydrodynamics; shipboard knowledge; bridge resource management and human factors; emergency response and applied seamanship; and maritime legislation and regulation. These subjects already exist within the STCW framework and are already taught by Australian maritime education providers.

Ultimately, the alternative pathways themselves remain a matter for regulators. AMPI's recommendations remain those contained in Position Statement PS–01.

One possible pathway might see a candidate complete the Bachelor of Applied Science (Nautical Science) at the Australian Maritime College, gain practical experience as an Officer of the Watch, complete any required Recognition of Prior Learning or gap training, and then sit the National Professional Entrance Examination. Having demonstrated academic equivalence to the Master Unlimited standard, they could enter a pilotage training programme. Naturally, with less command experience than a traditional Master Unlimited candidate, the practical training programme would likely be significantly longer and more intensive.

6.1. Theoretical Examination Blueprint

The proposed exam will be a computer-based assessment that maintains AQF Level 7 difficulty.[4] Items will be weighted according to their criticality to safety and the depth of knowledge required.

Exam Module	Weighting	Item Type	No of Questions	Duration
Navigational Theory	20%	MCQ	30	20 mins
Ship Handling Physics	30%			
Shipboard Knowledge	10%			
BRM & Human Factors	15%	Calculation / Logic / Short Answer	10	40 mins
Emergency Procedures	15%			
Maritime Law & Regulation	10%	Scenario Analysis / Case Study	3	60 mins

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9. Strategic Alignment of AMC Curricula with STCW II/2 Standards and Advanced Cognitive Requirements for Marine Piloting

Competency Domain	STCW II/2 Reference	AMC Curriculum Mapping (Units)	Key Knowledge Areas	Skills and Application	AQF Level 7 Cognitive Level
Navigation, Meteorology, and Passage Planning	Table A-II/2 (Voyage planning and navigation for all conditions, restricted waters, VTS areas, tidal effects)	JND281, JND292, JND320, JND321, JVD504	GPS/GNSS, radar, AIS data integrity, IALA buoyage, blind pilotage theory, ECDIS/PPU accuracy, dynamic UKC, meteorological phenomena.	Executing blind pilotage, developing pilotage-specific passage plans, synthesising synoptic charts for port entry decisions, accurate draught/squat calculations.	Evaluation – Ability to evaluate vessel position to remain in the safe sector and vector, concerning all available means
Ship Handling, Stability, and Vessel Dynamics	Table A-II/2 (Manoeuvring in shallow water, interaction between ships and banks, use of tugs)	JND292, JND319, JVD324, JND318	Advanced physics of manoeuvring (pivot points, transverse thrust, bank effect), mathematical squat calculation, tug physics (bollard pull/indirect towing).	Recognise the shallow water effects and apply the strategies to determine safety of the vessel and verify the tug pushing points	Synthesis – Combining static vessel data with dynamic external forces to formulate and execute safe manoeuvres.
Shipboard Knowledge	Table A-II/2 (Control of trim, stability, and stress; comprehensive knowledge of ship construction and damage control)	JND318, JVD183	Hull forms and block coefficients, specialized propulsion (Azipods), structural windage areas, structural stresses (shear forces/bending moments).	Modifying strategies based on construction limits, assessing watertight integrity post-incident, predicting how hull forms alter pivot points.	Analysis and Evaluation – Analysing complex structural data to evaluate operational limits and survivability during emergencies.
BRM and Human Factors	Table A-II/2 (System errors, navigational data appreciation, shipboard personnel management, task/workload management)	JVD325, JND280, JVD225, JND323	Situational awareness, decision-making, impact of fatigue/stress on cognitive performance, legal Master-Pilot relationship.	Closed-loop communication (SMCP), conducting Master-Pilot Information Exchange (MPX), rapid integration into bridge teams, situational awareness.	Analysis – Proactively identifying cognitive tunnelling or expectation bias to prevent navigational error.
Emergency Response and Applied Seamanship	Table A-II/2 (Precautions when beaching, damage control, emergency steering/towing)	JVD322, JND281, JND319, JVD183	Contingency planning for grounding/collision/fire, UKC policies, anchor handling, and damage control limitations.	Applied seamanship for emergency intervention (e.g. anchor use during steering failure), assessing structural limits post-collision.	Evaluation – Rapidly evaluating compounding system failures in narrow channels to select interventions in seconds.
Regulatory Frameworks, Load Lines, and Port Operations	Table A-II/2 (International maritime law: SOLAS, MARPOL, COLREGs, and national legislation)	JND317, JND312, JND322	Navigation Act 2012, Marine Order 54, local port procedures, load line regulations, state-specific pilotage codes (e.g. NSW Code).	Ensuring draft compliance with seasonal Load Lines, coordinating complex mooring operations, managing tug positioning for berthing.	Application and Analysis – Translating static legal requirements into dynamic, compliant operational boundaries.

Similar apprentice pilot models have existed in the United Kingdom for many years and variations operate in Europe, Asia and North America.

There is still considerable work to do. Questions such as how long examination results should remain valid, what recent sea service should be required and how Recognition of Prior Learning should be applied consistently will need to be worked through collaboratively with regulators.



The encouraging news is that funding has now been secured for the next stage of development and we expect the project to commence during Q3 or Q4 this year. We have also received formal support in principle from one major Australian regulator. With eight regulators across Australia this will never be a simple process, but the discussions have been constructive and encouraging.

It is also important to mention that in 2024 there was separation of the Marine Pilot occupation from Ship's Master which consequently created a gap in the immigration skills verification process. Previously under the Ship's Master category a migrant would have gone through a thorough skills assessment process with AMSA and completed a Master Oral exam, this is no longer the case. There is now no skills assessment process for the new occupation category. AMPI is not advocating for changes to immigration policy and is not a union. Decisions regarding skilled migration sit firmly with government, industry and unions. Our focus is solely on professional standards. If the migration pathway for the new Marine Pilot category is opened in the future, Australia should have a fair, transparent and technically credible process for verifying competency. The proposed entrance examination provides a practical solution.

We've deliberately presented this proposal early because we don't believe professional standards should ever be developed behind closed doors. Marine pilots deserve the opportunity to challenge it, improve it and help shape it. We won't get every detail right on the first attempt, and there are still many questions to answer. But if this work results in a fairer, more transparent and nationally consistent approach to competency, then we believe it will have been worthwhile.

Ultimately, if Australia is going to have multiple pathways into marine pilotage, every pathway should arrive at exactly the same professional standard. Not higher. Not lower. Equivalent. The pathway into pilotage may evolve over time. The benchmark should not.



Questions & Answers

Is AMPI opening a migration pathway for Marine Pilots?

No, we are looking to become an authorised skills assessing authority for migration pathways that now exist, as other professional associations do for their occupations. This will ensure that if the migration pathway is opened for the Marine Pilot category there is a fair and transparent process to ensure candidate meet the Australian standard.

Is AMPI creating an alternative pathway?

No, alternative pathways have already been approved in some Australian jurisdictions, we are proposing a method to ensure that the academic competency of potential trainee marine pilots is maintained at the same Master Unlimited standard.

Will the exam cover all the STCW Master Unlimited syllabus?

No, it will cover the significant majority, but will exclude some components totally unrelated for pilotage, i.e. cargo work or demurrage calculations.

Is AMPI going to gatekeep who becomes a Marine Pilot?

No, the exam will be developed using independent providers with AMPI providing high level oversight and governance.

Is AMPI going to provide training for those requiring RPL?

No, the exam is mapped to the Master Unlimited syllabus already taught at educational establishments across Australia. Candidates will be able to obtain training through existing providers. AMC will be providing a comprehensive mapping of the required competencies against the VET and University system.

How can it be equivalent to a Master Unlimited qualification without the sea time?

The examination is a measure of academic equivalence only, whereas regulators in most jurisdictions have already determined the sea time and maritime qualifications they are willing to accept as alternatives.

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27TH INTERNATIONAL MARITIME PILOTS ASSOCIATION CONGRESS



Captain Max Stoessel

The international marine pilotage community came together in Bali from 23–28 August for the 27th International Maritime Pilots' Association (IMPA) Congress, hosted by the Indonesian Maritime Pilots' Association (INAMPA).

Held at The Apurva Kempinski Bali, the Congress brought together pilots, pilotage associations, maritime organisations, researchers and industry representatives from around the world for five days of professional exchange, technical discussion and international collaboration.

AMPI was proud to be strongly represented, both among the Australian and Papua New Guinean delegation and within the Congress speaking program. Three AMPI members (Captain Max Stoessel, Captain Damian Laughlin and Captain Riley Oxenbridge) contributed to the international program, sharing knowledge and operational perspectives from our region.

Day 1 Setting the International Context

The Congress officially opened on Monday 24 August, with a lively cultural display before INAMPA President Pasoroan Herman Harianja welcomed delegates to Indonesia, alongside addresses from Bali Governor Wayan Koster, IMPA President Captain Simon Pelletier and a video message from IMO Secretary-General

Arsenio Dominguez. Dr Agus Harimurti Yudhoyono, Indonesia's Coordinating Minister for Infrastructure and Regional Development, delivered the keynote address and officially opened the Congress.

The opening Wider Perspectives session broadened the conversation beyond pilotage, with representatives from IALA, Pelindo, INTERTANKO, INTERCARGO and the International Group of P&I Clubs considering the relationships between pilots, ports, shipowners, regulators and other maritime stakeholders. The afternoon was dedicated to the IMPA General Assembly, including reports and elections.

Day 2 Sharing Operational Experience

Tuesday's program brought the discussion back to pilots themselves, drawing on personal and operational experiences from a diverse range of pilotage environments.

A sombre reminder of the dangers involved with Marine Pilotage came from Captain Mario Chong of the Panama Canal Pilots' Association as he asked the room to stand for a moment's silence to remember the lives of Marine Pilots lost while working in recent years. He then went on to present on the importance of appropriate PPE for pilots. Further support in this session was provided by Wendy Sullivan of Marine Medical Solutions, Captain André Gaillard, France and Huitong 'Kelly' Mao of Shanghai Port Pilot Station.

Session two focused on pivot points and ultra-large vessels and AMPI was proud to see Captain Max Stoessel, Director of Nuigini Pilots Ltd, contribute to the international program with his presentation Ultra-Large ships in Papua New Guinea. Captain Stoessel was supported in this session by Captain Hugues Cauvier from the St Lawrence River, Captain Tarik Dourasse from Morrocco and Captain Kim Sung-min from the Republic of Korea.

Session three was opened by UKMPA Chair, Chris Hoyle, who shared a personal experience from his own career where he drew on two separate incidents where vessels he was piloting suffered a loss of power. We thank Captain Hoyle for his presentation, The True Cost of the Save, which was an important lesson to help strengthen safety and decision making across the profession. Further contributors to this session included Captain Ricardo Falcao from Brazil and Captain Jorge J. Viso from USA.



Captain Riley Oxenbridge

Day 3 Cultural Day

Wednesday saw the formal technical program pause for the Congress Cultural Day, providing delegates with an opportunity to experience more of Bali and continue conversations with international colleagues in a less formal environment.

The professional relationships and exchange of experience that take place outside the conference room remain an important part of IMPA Congresses, connecting pilots and pilotage organisations from around the world.

Day 4 Data, Technology and the Future of Pilotage

Thursday delivered a forward-looking program, examining the relationship between technology, information and human decision-making.

A session on the role of data in safe and efficient pilotage featured Warren Wood of OMC International discussing S–100–based services, before AMPI Vice President Captain Damian Laughlin presented Maximising Situational Awareness for Pilot Service Providers. Mikaela McDonald of MarineLabs completed the session with a presentation on hyper-localised weather information.

The program then looked further ahead, with Matthew Williams, Dr Kate Preston and Dr John Molloy examining IMPA's international R-Pilot remote pilotage study and pilotage through the lens of complexity science.

Artificial intelligence was also on the agenda, with Katherine Howell, Namrata Nadkarni, Captain Alain Arseneault and Pavel Skournik considering AI in maritime, pilotage and other safety-critical environments.

The day concluded by returning to the human element with Captain John Barker, Captain Bruce Chun and Captain John-Paul Pantin shared international perspectives on training, assessment and capacity building. This session reinforcing that, as technology develops, investment in people, competency and professional judgement remains fundamental. After a day that had explored data, remote pilotage and artificial intelligence, it was a fitting place to finish.

Day 5 Keeping the Pilot at the Centre

The final day began with Supporting Effective Human Alert Response on the Bridge, moderated by Captain Paul Schoneveld.

AMPI member and Port of Newcastle Marine Pilot Captain Riley Oxenbridge opened the discussion with Bridge Alarm Management - From the User's Perspective, alongside Richard Doherty of CIRM representing equipment manufacturers and Asger Schliemann Haug of Lloyd's Register examining potential solutions.

The final technical session examined threats and opportunities facing systems of pilotage, with Captain André Gaillard, Captain Nildeniz Sütçü Şen and Clay Diamond sharing perspectives from France, Türkiye and the United States respectively.

The Congress concluded with the final General Assembly, presentation of the 28th IMPA Congress in 2028, the traditional flag handover and closing celebrations.

Congratulations to Captain Adam Roberts

The Congress also delivered an important outcome for AMPI and the wider Australasian region, with Captain Adam Roberts re-elected to the IMPA Executive Committee as Vice President.

Adam's continued position ensures Australia and our region retain a strong voice within the international organisation representing marine pilots. AMPI warmly congratulates Adam on his re-election and looks forward to his continued contribution to IMPA and the international pilotage community.

Conclusion

Across five days in Bali, the Congress demonstrated the value of bringing the global pilotage community together to exchange knowledge, challenge thinking and learn from experiences across different jurisdictions.

AMPI was particularly proud to see Max, Damian and Riley contribute to those conversations, each bringing a different perspective from our region to the international stage.

AMPI extends its sincere thanks to the International Maritime Pilots' Association (IMPA) and particularly to the Indonesian Maritime Pilots' Association (INAMPA) for hosting the international pilotage community in Bali and delivering a valuable week of learning, knowledge sharing and professional connection.

aptain Damian Laughlin



Captain Adam Roberts



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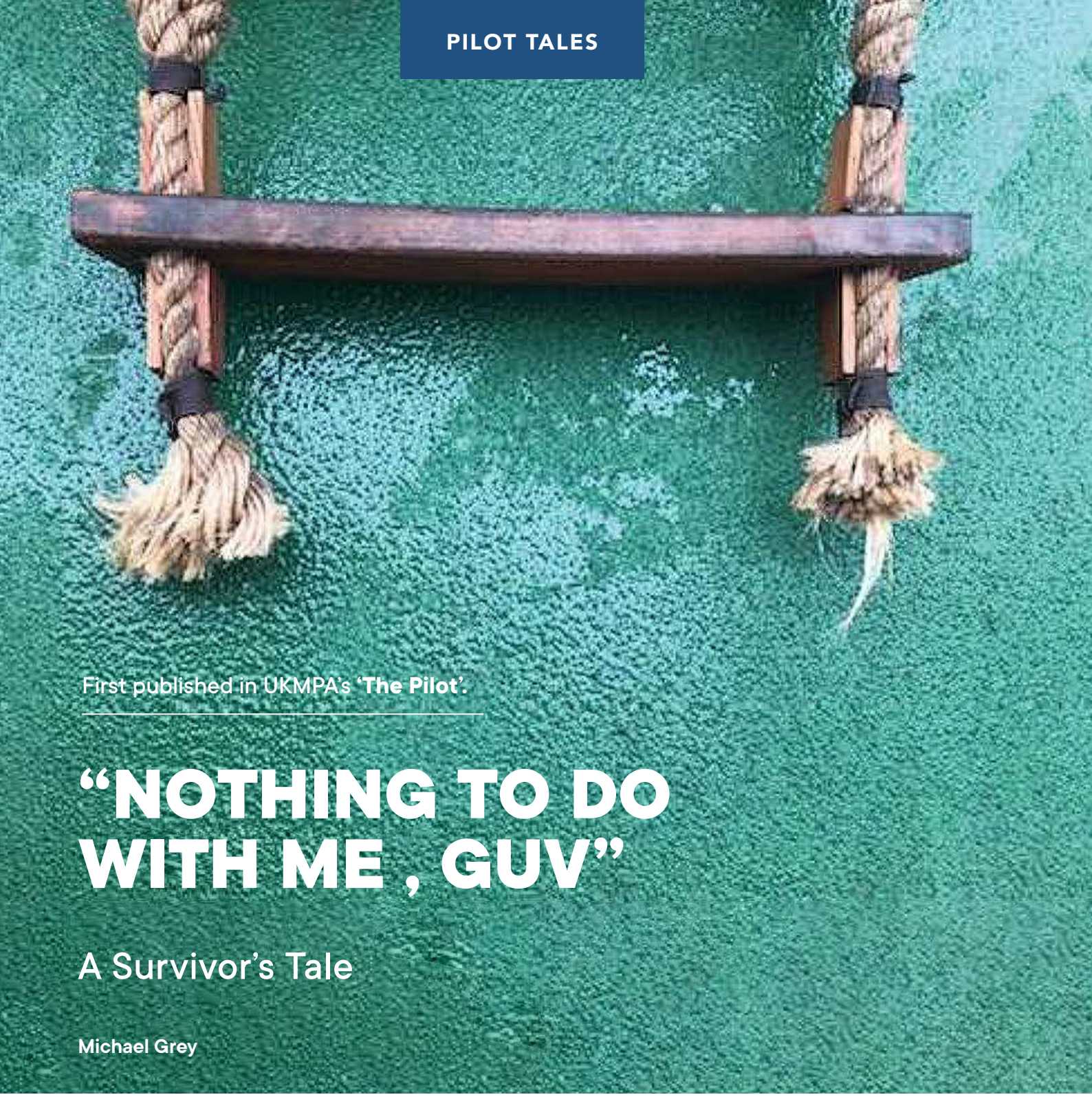
The flexibility of the new Kratos securing ropes means that unlike polypropylene rope, rather than slipping, our Kratos securing ropes will always grip tighter when weight is applied to the pilot ladder.
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"NOTHING TO DO WITH ME , GUV"

A Survivor's Tale

Michael Grey

Itwas a perfect summer day with sunshine and smooth seas in Liverpool Bay in August 2018 as the Liverpool pilot boat, with pilot Iain Baird embarked, approached the inbound container ship.

It was a large vessel, with a high freeboard and he could see that a combination ladder arrangement was in place, with the pilot ladder giving access to the lowered gangway.

The boat slid alongside and Iain, a fit 6ft 2in marathon runner, put his weight on the pilot ladder tread two or three steps above the boat and prepared to climb. He had climbed no more than one further step, taking him a metre or so above the deck of the launch, when the ladder parted at the ship's sheer strake and cascaded on top of him. He fell heavily with his back across the pilot launch rail. He was immediately conscious of severe back pain, while he had suffered head injuries from the falling ladder.

It was not, as he recounts today, the most spectacular fall and he acknowledges just how lucky he had been. Another few steps up, before the ladder had parted and the consequences could have been infinitely worse, while a fall into the water, with some 225kilos of tangled pilot ladder on top of him, was not something you wanted to even think about. The ladder itself, subsequently retrieved from the sea by another pilot launch, appeared to be in good condition, but the even break gave



the appearance of having been sliced with a knife.

In some considerable pain, Iain was taken ashore at once, where he managed to walk into the Accident and Emergency department of the local hospital, where swelling and muscle damage was identified after examination and X-rays. The back pain persisted, although subsequent visits to his GP saw rest and exercise prescribed. As it transpired, when in the hands of a competent physiotherapist, he learned that the exercise had not been the correct treatment for such an injury.

It is good to report that Iain's accident resulted in support and many good wishes from the pilot community in the UK and in other parts of the world. He was anxious to get back to work, needing to prove that he could still do the job and to counter any fears about "whether I can go back up the ladder". Still in some pain, he was back at work a month after the accident and indeed, three and a half years after the incident, he still suffers from nagging pains in his back. He confesses that facing a climb up a long ladder, he feels a certain apprehension that was never the case before the accident. On a recent climb up the side of a ship, one of the magnetic clamps on the ladder came adrift, and the ladder twisted and jerked, he recalls reaching the deck of the ship "with my heart racing".

But it is what happened in the months and even years after the accident, that demonstrated to Ian that in such cases, the victim, who in no conceivable way can be held responsible for what had happened to him, will be effectively on their own, with as he points out, "doors slammed against them". Accordingly; he feels strongly that there is a need for far more awareness among his fellow pilots about just what they may be up against in the case of such an accident.

The accident, of course, was reported to the Maritime & Coastguard Agency, which asked for the ladder to be stored at the pilot launch station to aid their investigation, although it was never subsequently examined, while the launch crew were never interviewed, and no clarification was sought from Iain Baird. The master of the ship was interviewed by the MCA and statements, which were never verified, claimed that the launch itself had "pulled down the ladder': as it ran alongside.

Iain, who was, of course, the closest witness to the incident, states that this was not the case, but it was clear that the MCA inspector accepted the ship's version of events and looked no further. The pilot launch operator refused permission for their own crew to make statements about the accident to Iain's solicitor. The Marine Accident Investigation Branch, which would have been obliged to investigate had this been a fatality, clearly concluded that it was not sufficiently serious to require their intervention.

What about the pilot's own insurance scheme -surely they would be active on their member's behalf?

Sadly, as Iain discovered as he gradually started to learn things that he had never really appreciated, the scheme provided only for compensation ifhe was unable to work as a pilot again, or in the event of a fatality. It was as he describes it, "all or nothing" and in his case it was the latter.

For insurance covering loss of earnings, and pilots may not know this, you need to buy full cover.

Iain is a Unite member and the union provided him with a solicitor to progress his claim for compensation. For him, it was never about the money and the sums were modest, but as the victim, completely blameless in these proceedings, he does not see why he should be out of pocket. His solicitor was not a maritime specialist, but found that the claim was resisted by one of the major London law firms acting for the shipping company and represented by a master mariner. It seemed something of a "David & Goliath" action, as the opposition endeavoured to minimise the severity of his injuries, suggesting that this was proved by his swift return to work and the limited extent of his seeking help from the GP. Iain reflects that in his efforts to get back to work he had not been "doing myself any favours".

In the event, the action was settled in the week before it was due in court, three and a half years on from the accident. This left Iain feeling rather flat, as he felt that his "day in court" might have enabled him to air so many of the issues that his experience had demonstrated. On reflection, settlement might have turned out to have been the better course.

He still suffers from nagging back pains, but hopefully will, as time passes, be less apprehensive, as he puts his weight on a ladder.

But for the individual pilots, who might find themselves in a similar situation, there are surely lessons to be learned from Iain's experience. For a start, the odds are stacked against the victim, with all the other interests fiercely intent on avoiding any liability for what might have happened. Indeed, the prevailing attitude might be summed up as "nothing to do with me, Guv!" Big companies will also employ heavy legal firepower to minimise the extent of their liabilities. For anyone taking the sort of risks routinely taken by a pilot, who finds it unavoidable to risk life and limb just getting to and from work, the most comprehensive insurance ought to be considered. Working pilots ought to perhaps better understand the role of the MCA, the MAIB and their limitations and that of their own association the UKMPA.

Meanwhile, Iain is back at the day job. He is cautious about the standard of seamanship he sometimes sees aboard ship with sharpened awareness of the limitations of people who need tuition on how to tie a rolling hitch. But his experience, of somebody who finds that he is "on his own" after an accident not of his making, deserves a bigger audience.



The ladder weighed in at 225 kilos



First published in UKMPA's **'The Pilot'.**

MODERN NEGLIGENCE

By Captain Jason Wiltshire | *UKMPA Insurance Portfolio*

As the Section Committee member responsible for the UKMPA insurance portfolio, I must attest that my past vocation is neither in insurance nor law.

Nevertheless, the role means that I have regular conversations with Pilots, Brokers, Underwriters, and Lawyers, on incidents and claims that impact us. As 'just a Pilot', the real-world knowledge of the job is invaluable when appraising insurance concerns with these respective specialists in their areas of expertise.

As Maritime Pilots, we are entrusted with conduct of vessels during some of the most perilous parts of their voyages.

Our duty is to safeguard the vessel, port infrastructure, and environment from damage and pollution, while ensuring 95% (by volume) of the country's imports and exports move safely and efficiently. This is a task we undertake daily, to the best of our abilities, and often without recognition unless an unfortunate incident occurs.

The responsibility on pilots is onerous and Competent Harbour Authorities (CHAs) define areas where pilotage is compulsory, and are responsible for the authorisation of Pilots. Whilst on board, the Pilot becomes a servant of the vessel, whilst also being subject to the compulsory duties under the Pilotage Act, and the obligations resulting from the CHA authorisation. Combined, these factors therefore call for the highest possible standards to be exercised by both the CHA and the Pilot.

On March 13th 2022, the container vessel

"Ever Forward", grounded in Chesapeake Bay, USA, where it remained stranded for over a month before being reftoated.

The Pilot's lack of situational awareness was determined in the subsequent investigations to be the cause. He solely relied on the PPU and did not use any of the ship's equipment.

He used his mobile telephone throughout the Act, making five calls totalling 61 minutes of the 126–minute voyage. Finally, he had dismissed interventions from the bridge team in the attempts to warn him when the vessel was standing into danger.

The UKMPA designated counsel presented this unfortunate incident to us through our regular discussions on the group insurance policies. Could a comparable incident occur in the UK, and what would be the consequences for a Pilot, or our profession?

The subject of over-reliance on technology, both internal and external, is a frequent topic of accident investigations, and not just in Pilotage.

In this particular case, the investigating authorities obtained the Pilot's PPU and mobile phone records, with the Pilot's authorising body later pursuing a civil action against him for the negligent operation of the vessel.

This case is a cautionary tale and does remind us to go back to basics and be guided by the traditional and long held tenets of navigation in which we cross check the accuracy of the electronic navigation aids by visual observations, whilst using the technology at hand to improve situational awareness.

The co-operation with the ship's crew and the importance of the MPEX, as a continuous process, cannot be over emphasised. Experience has shown that due to time constraints owing to the immediate focus on navigation required in constrained waters, the pressures on Pilots are intense.

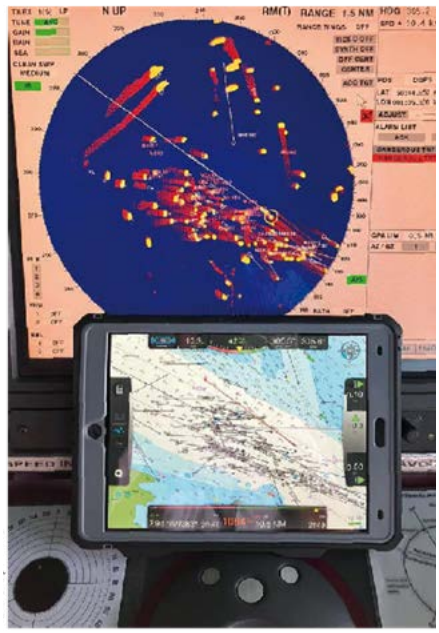
Involvement of the ship's crew and agreement to a proposed passage plan which the Pilot intends to follow, will ensure that the bridge team is fully conversant with the intentions of the Pilot.

The use of electronic evidence is not new, and UK authorities now regularly demand the release of digital communications, with English courts subsequently issuing orders to that effect.

The Ever Forward incident and the associated United States Coastguard (USCG) finding, drive home the fact that Pilots and districts should consider the importance of having robust policies and procedures in place to guard against the potential for distraction and the over-reliance on mobile, and other smart devices.

Section 22 of the Pilotage Act, limits a Pilots' liability for any loss or damage, caused by any act or omission, to £1,000 and the amount of the pilotage charges associated with the voyage. It is a statutory limitation of liability that allows individuals to do their job while avoiding the burden of substantial claims stemming from their acts or omissions.

A case of negligence can be characterised by the failure to exercise the level of caution and/or care, that an average person in comparable circumstances would, resulting in loss, damage or injury. Section 21 of the Pilotage Act, reads that if a Pilot of a ship, does an act, or omits to do anything required to preserve a ship from loss or damage, or to preserve any person from injury, and the act or omission is either deliberate or amounts to a breach or neglect of duty, the Pilot shall be guilty of an offence, and liable to fine and/or imprisonment.

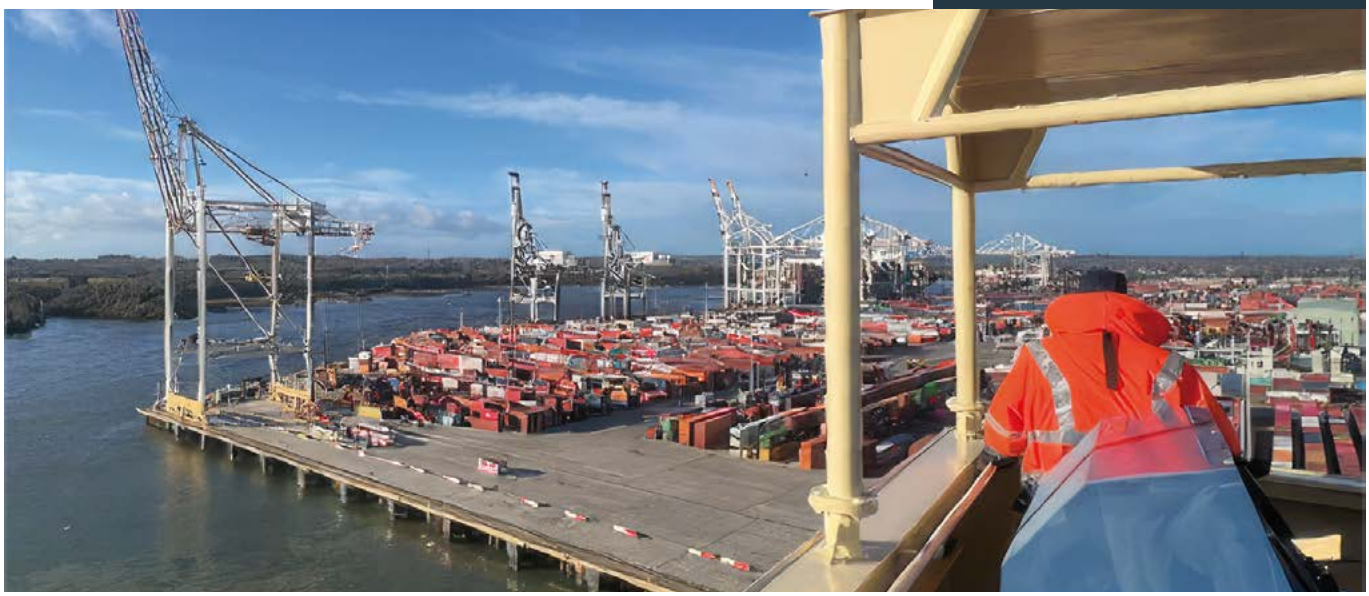


As a group of independent professionals, we should use the 'Ever Forward' incident as an opportunity to consider how our own actions relate to what is expected of us, both in our own districts and by the general public, given our role under statute.

To err is human and none of us are infallible, but as Pilots, we are held to a higher standard in the execution of our duty, due to the uniquely hazardous nature of our work.

Conclusion

In circumstances such as these, could what have may once have been deemed negligence, now be considered criminal negligence? The Ever Forward incident report has been uploaded to the members section of the website,



SECURING PILOT LADDERS AT INTERMEDIATE LENGTHS

Joris J. Stuip | *Vice President (Global), PTR Holland group.*

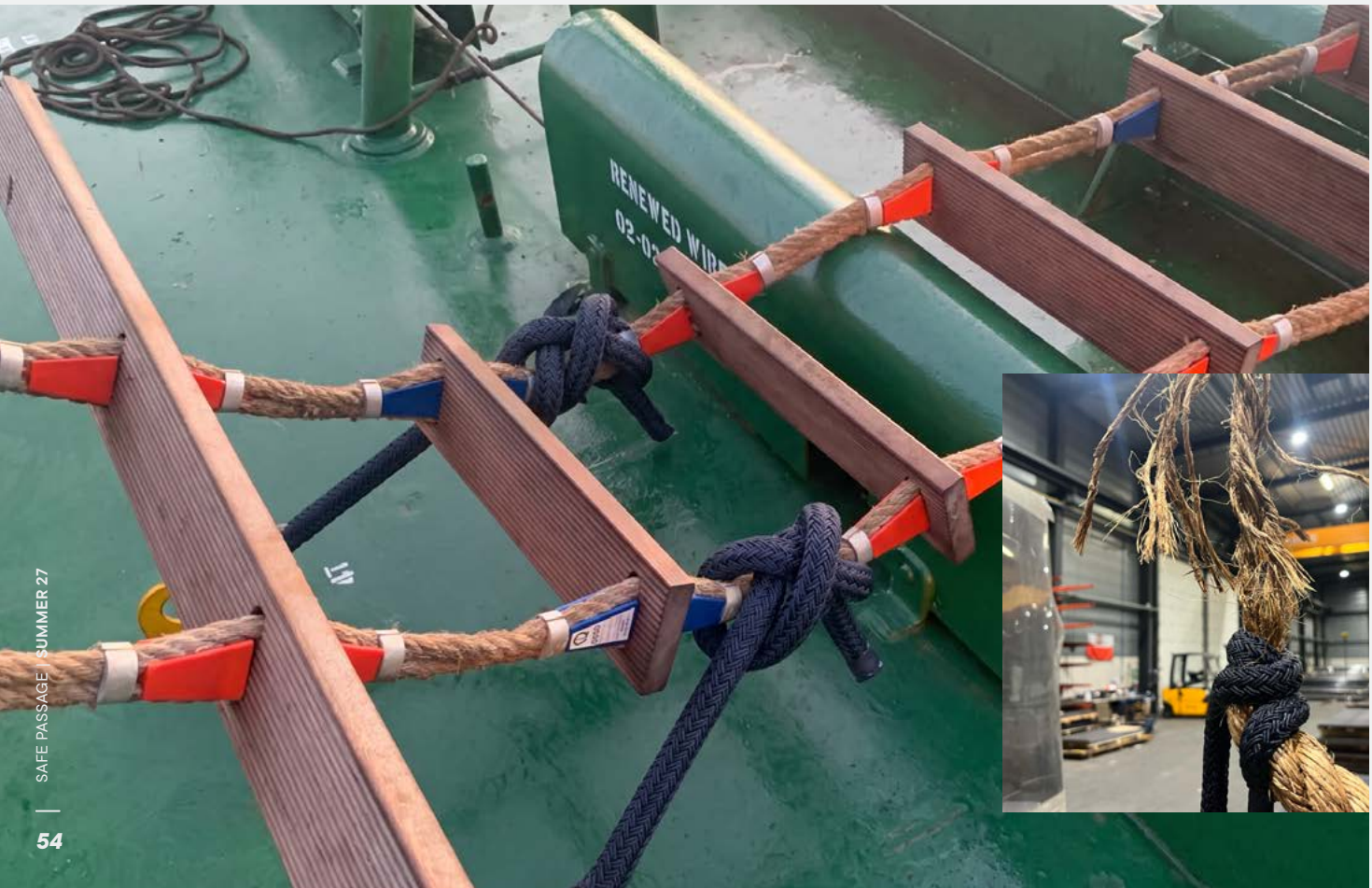
Over the past few years, a great deal of effort has been expended on ensuring ships secure pilot ladders correctly at intermediate lengths.

It is rare for a cargo vessel to have a perfectly sized ladder that can simply be shackled through the top thimbles to the deck. As the vessel will normally use the same ladder in both loaded, part loaded and ballasted conditions there is invariably a need to secure the ladder at an intermediate length.

The first task was for ship's crew to understand that shackles over sideropes, bars and deck tongue arrangements were definitely not compliant, nor was simply bracing the spreader against the stanchions or rails! This seemed like an easy learning point but even this took several years campaigning from the likes of Arie Palmers, Kevin Valance, Jesus Señeriz and Adam Roberts and is still not completely eradicated from the maritime consciousness.

Once this was completed we now needed to explain how the ladder should actually be secured with adequate securing ropes. IMO Resolution A.1045(27) only stated that the ropes used to secure the pilot ladder at an intermediate length were of 'at least as strong as the pilot ladder side ropes. Since each side of the ladder is made from two 20mm manila ropes with a minimum breaking load of 24kN per rope, the total strength of each side of the ladder is 48kN, and therefore the securing ropes need to be not less than 48kN.

In determining the best method of securing the ladder New Zealand pilot, the late, great Troy Evans was a pioneer. Working in his barn Troy had conducted numerous tests using a variety of securing methods including ropes and lifting slings to try and



find the sweet spot of both simplicity and holding power. Following Troy's untimely death his work was taken up by IMPA who, in partnership with Southampton University, conducted scientific trials to determine the best solution.

Their detailed analysis demonstrated that the most effective combination was the use of a polypropylene rope secured using a rolling hitch. Now it may seem intuitive that manila rope would be the best material for a securing rope since the friction co-efficient of manila on manila would naturally out perform polypropylene on manila. However the issue with this is minimum breaking load. In order to comply with the minimum 48kN MBL a manila rope would need to be a minimum of 28mm in diameter and at this size it becomes impractical to tie a functioning rolling hitch around the pilot ladder side ropes. All that happens is the ladder side ropes slip through the oversized rolling hitch and the weight of the ladder (and the pilot!) is taken up by the chocks, securings and steps. These items are not designed to be load bearing in this manner and can become damaged or fail should this happen.

For several years at PTR Holland we had manufactured 20mm polypropylene securing ropes for use on vessels. However with the advent of MSC.576(110) this had to change. Whilst the polypropylene securing ropes were good the new standards increased the performance requirements of such ropes.

"6.3 There shall be a means of securing a pilot ladder at intermediate lengths which shall be capable of securing the pilot ladder to strong points described in paragraph 6.1 by gripping each set of side ropes of the pilot ladder. The means of securing, shall have a breaking strength of not less than 48 kN and be designed to prevent any slippage of the side ropes under the conditions of the ladder and step attachment strength test and unrolling tests described in a standard acceptable to the Organization."

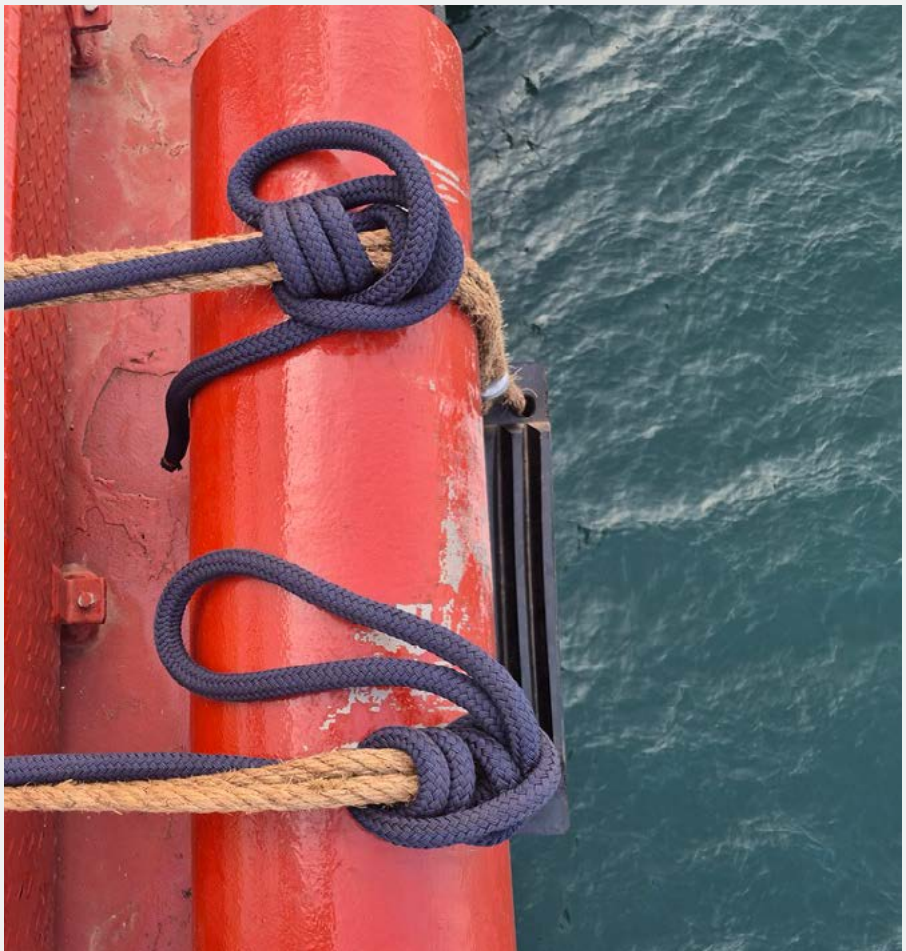
The issue for securing rope design was the requirement that they must prevent any slippage of the side ropes under the conditions of the ladder and step attachment strength test. This test is defined in ISO799 and requires a weight of 880Kg being applied to the ladder steps.

The tests conducted by IMPA and Southampton University had demonstrated that polypropylene slipped on average at 2.2kN. It was clear that if a securing rope had to meet the new standard we were going to have to rethink our securing ropes.

Working in conjunction with the guys at Fathom Safety we developed a new securing rope that combined the key requirements of

- Adequate strength (Min 48kN MBL)
- Flexible enough to tie an effective rolling hitch
- A friction co-efficient against manila that prevented slippage under the step strength test

Our new KRATOS securing ropes ticked all of these boxes. The braid-on-braid design





gives a super flexible rope that makes tying an effective rolling hitch much easier than with pretty much every other alternative (including polyprop and manila). The ropes have a MBL of 58kN and grip the manila ropes tightly without damaging them.

Destructive testing carried out in our Rotterdam factory demonstrated just how good these ropes were. The rolling hitch did not slip and ultimately the manila rope parted at 52kN and, upon removing the rolling hitch, the manila rope beneath showed no visible signs of damage.

The final element we considered was the look of the finished ropes. It is important that these ropes are properly looked after, stored correctly and most importantly of all, not be used for any other purpose. To ensure the crew respected the ropes we gave them a premium look and feel with a dark blue finish on the rope and a contrasting, bright orange, powder coated thimble!

Our KRATOS ropes come with permanent metal disc tags through the thimbles and DNV backed certification to allow for simplified checking by pilots or port state control officials.

Whilst the new performance standards do not explicitly specify a lifespan for intermediate securing ropes this rope in accordance with paragraph 36 of the Performance Standards, it is considered a component included in the type approval of the pilot ladder; therefore, it should be replaced at least the same interval as the pilot ladder.

Our new KRATOS ropes are already being used on vessels worldwide so it won't be long before you encounter them. We hope they will continue to keep pilots safe and once again demonstrate that PTR remain both innovative and committed to the highest standards of pilot transfer safety.

MASS VESSELS OPERATING IN AUSTRALIA

There are between 30 and 50 autonomous and remotely operate vessels operating in Australia now. A lot of development is for military and patrol use, but also industrial, research, oceanography, hydrography and even surf rescue uses; are advancing rapidly. It is possible Autonomous vessels could be operated from anywhere in the world which may bring interesting legal issues. Some of the current systems are as follows.



Ocius Technology
The 'Bluebottle' | Or satellites of the sea.

The Bluebottle ® uncrewed surface vessel (USV) is a groundbreaking Australian designed USV powered by solar, wind and wave energy enabling long-endurance operations while maintaining an acoustically quiet environment for superior acoustic surveillance.

Length: **7.4m** | Operating: **up to sea state 8**

Record deployment: **6 months continuous**

In service with RAN since July 2024



Hyperion Systems — ASTRA 460 USV
The 'Blackfin'

Traditional construction of vessels takes weeks to months. Astra prints in approx. 40 hours. Scalable range of Autonomous Surface Vessels.

Astra 460, Astra 500, Astra 800, Astra 840 Platform.

Top Speed: **40kts** | Cruising speed: **20–30kts** | Range: **up to 200kms**

Sea trials commencing 'later this month' May 2026.



Anduril Industries
Ghost Shark XL

The Ghost Shark XL-AUV is an extra-large autonomous undersea vehicle co-developed by Anduril Industries and the Royal Australian Navy (RAN) alongside the Defence Science and Technology Group. Designed for persistent intelligence, surveillance, reconnaissance (ISR), and strike missions, it transitioned to a A$1.7 billion (US$1.12 billion) program of record in September 2025



SHIP SIMULATORS AT HOME

VSTEP have over 600 simulators worldwide and have released a simulator for use at home, based on their Nautis professional software.

I've spent a short bit of time with the 'Nautis HOME' simulator. Any current PC (with dedicated graphics card and at least 16GB ram) should run Nautis home fine. You can hook up extra monitors and external throttle controls which would make the experience more immersive, my little 15" laptop ran the software fine but didn't do it justice. Currently available by subscription (€30 for 6 months – special offer during early access).

There are 27 different vessel types (tugs, barges, container, LNG, bulk) and 16 environments (Sydney, Antwerp, New York, the Bosphorus Strait to name a few). With more being added.

There are the expected usual features;

- Wind, weather, currents can all be adjusted.
- Anchoring, mooring, emergencies, autopilot, radar, ECDIS
- Panels can be moved to another screen or hidden.

It's not going to replace proper bridge sims for training but there could be some creative professional uses, or just at home curiosity.

Other simulator platforms also offer Professional cloud-based versions using Software as a Service solutions to access cloud-hosted software, and training content. It enables users to access classroom-quality training materials and scenarios from anywhere in the world using laptops, tablets, or any mobile devices. Instructors also benefit from continuous remote access. Currently include,

- Wärtsilä Cloud simulation
- SimFlex XR remote simulator for maritime training

I only scratched the surface of Nautis HOME as my setup wasn't appropriate for anything more in-depth. I can only imagine more products like this will appear and develop further.

AMPI NEW MARINE PILOT MEMBERS 2026

February

Michael Aucello | Darwin Ports, NT
Chris Chridland | Darwin Ports, NT
Brent Hills | Darwin Ports, NT
Thomas Moran | Fremantle Ports, WA
Gerrard van der Merwe | MWPA, WA
Scott Pitts | PANSW-Newcastle, NSW
Karl Kabo | PNG Ports, PNG

March

Kleven Hogberg | PPA, WA
Michael Johansson | PPA, WA

April

Divya Bharati | Shell Australia Pty. Ltd., WA
Stephen Fant | Shell Australia Pty. Ltd., WA
Rahul Manglu | Chevron, WA
Ian Marthick | Port of Portland, VIC

May

Stephen Morgan | Flinders Ports, SA

June

Claminda Manikdewela | Auriga, QLD
Colin McGrath | Auriga, QLD

July

Callum MacAdie | Southern Ports - Bunbury, WA



Thank you for sharing the harbour safely

INPEX is committed to sharing Darwin Harbour safely with all recreational and commercial users.

We thank the Darwin community for its ongoing cooperation and support in helping maintain a safe and accessible harbour for everyone.

Ichthys LNG is a joint venture between INPEX group companies (the Operator), major partner TotalEnergies and the Australian subsidiaries of CPC Corporation Taiwan, Osaka Gas, Kansai Electric Power, JERA and Toho Gas.



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Vale

Captain Peter Hay

1940 - 2026

The Australasian Marine Pilots Institute mourns the passing of Captain Peter Hay, a respected mariner, Reef Pilot, author and longstanding member whose contribution to the profession extended well beyond the bridge.

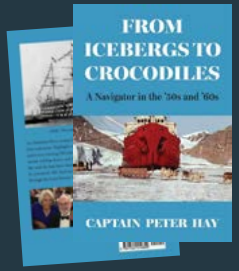
Peter dedicated a lifetime to the sea, bringing to marine pilotage not only exceptional practical experience but also a deep appreciation of maritime history and the traditions of the profession. Throughout many years of involvement with both the Australian Marine Pilots Association (AMPA), which later became the Australasian Marine Pilots Institute (AMPI), he was a valued colleague, generous mentor and trusted friend to many.

Readers of Safe Passage will remember Peter's engaging articles, in which he combined technical knowledge with remarkable storytelling. His writing preserved an important part of our maritime heritage, reminding us that the experiences of one generation of pilots and mariners become the lessons of the next. His recently published memoir, From Icebergs to Crocodiles: A Navigator in the '50s and '60s, reflected the same wit, insight and passion for the sea that characterised his contributions to our magazine.

Peter will be remembered not only for his distinguished career but also for his enduring commitment to the pilotage profession, his willingness to share knowledge, and his quiet support of those who followed in his wake.

On behalf of the members of the Australasian Marine Pilots Institute, we extend our sincere condolences to Peter's family and friends.

Fair winds and following seas, Captain Peter Hay. May you cross the bar in peace.



From Icebergs to Crocodiles: A Navigator in the '50s and '60s

Written by Captain Peter Hay, this book captures some of the remarkable adventures and experiences from his early life at sea — from the Antarctic to the remote waters of Papua New Guinea, and ultimately a career piloting more than 1,000 ships through the Great Barrier Reef.









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