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“Promoting Industry Understanding of Human Factors and Just Culture”
NZ MARITIME PILOTS ASSOCIATION
The cover photo is Wahine in all her Clyde-built majesty. Significant anniversaries often provoke reflections: Captain John Brown has done a superb job in marking the event, both as witness to the immediate aftermath, and his reflections thereon based upon his subsequent experience and insights. Accident investigators must dig deeply into such events so that all underlying reasons are found, irrespective of the ramifications.

However, any lessons learned in this process must then be shared, discussed and digested. There is little point in discovering the truth if we then fail to act upon it. The MAIB Report into the grounding of “Vasco da Gama” in Southampton sounded a note of frustration that the same mistakes in pilotage waters were being made repeatedly. In the technological age of mass surveillance and data collection, there is nowhere to hide and we need to change the way we work so that we can prove robust enough to withstand the deepest scrutiny post-incident.

The History of Marine Accident Investigations goes back 2,500 years. Admiralty Courts started in India, spread to China and Egypt, then finally to Europe. However, these courts were primarily concerned with whom to blame. It wasn’t until the 1860s that Sir Thomas Farrar explained that investigations ought not to be about establishing liability, but to learn how to prevent future disasters. Such lofty ideals take a long time to percolate, but we are getting closer (Maritime Accident Casebook).

Can we defy Bismarck and learn the lessons of History? 1968 was also a time of students defying the US genocide in Vietnam in which 3.8 million Vietnamese died. 1968 also saw the assassinations of two US leaders who were anti-Vietnam War: Martin Luther King and Robert F. Kennedy. Just as in Accident Investigations, all agencies investigating their own malfeasance never find fault. War is a racket (Smedley Butler): all wars are built and run on falsehood a.k.a. Fake News. Fake News is not a Trump phenomenon: the Greek “gift” of a wooden horse to Troy is a classic case of disinformation. Italian archaeologist, Francesco Tiboni, has recently suggested that the wooden “horse” was in fact a Greek merchant ship (a ‘Hippos’ for its horse carvings at bow and stern) laden with food and drink for the victorious Trojans, but which concealed the cunning Odysseus & Co. Hippos was both ship and horse. Always look a Greek gift horse in the mouth...

Talking of thoroughbreds, Wahine, Glenpark (see p.20) and old Queen Mary were all Clydebuilt. A Pilot’s death in Lisbon (whilst disembarking at night in heavy seas) reminds us of the dangers we face, and the need for constant vigilance (p.16).
The word Progress is often equated with Success, but what do we mean by progress? Dictionary definitions are:

a) Forward or onward movement towards a destination

b) Development towards an improved or more advanced condition

It is the second definition above that we can all relate to from both personal and professional perspectives. Businesses also strive to progress, but progress is not always linear or steady, as sailors well know. Progress is easy with a favourable wind; in anything else you may have to tack or gybe to reach your destination and turbulent conditions will call for a reef or two in the canvas. The key element is to maintain momentum and to change course with a minimum loss of speed. Should you lose momentum, you will be pushed off-track, backwards or onto the rocks.

In metaphor terms, momentum is a clear concept. On a personal level, the concept can be a metaphor for many things - getting that qualification before a change of direction, saving up enough before making a move, learning as much as practicable before making a decision. In business, it can be many things too: securing a line of credit, exploring new opportunities, embracing new technologies. However, be in no doubt that at some time you will need to make a course change. A good sailor can anticipate wind shifts and adapt his course to maximise progress - better at a time of your choosing than to be brought about by a squall, and there is a squall coming.

Technology advances will disrupt the status quo and will require a new tack. Artificial Intelligence, the Internet, advances in automaton and robotics is changing the working landscape and it is predicted that by 2030, 800 million jobs will be lost to automation. If we do not want to be left behind by progress, we need to be part of it. We need to get in the game. A smooth sea never made a skilled sailor.
The 50th Anniversary of the sinking of the Wahine is upon us next month. As an 11 year old I went for a drive with my father the day following the sinking, to look at this once fine vessel lying on her starboard side close to shore inside Wellington Harbour. It is hard for me to imagine something similar happening today, when I consider the technical and non-technical training we receive and the technology and information available to us. Recent events in New Zealand and overseas demonstrate however that we are still not immune to the unexpected happening, even with all the resources available to us now. A significant difference today however, is that with AIS and VDR information it is easier to recreate what happened with great accuracy. For this reason we need to ensure that we have a robust Safety Management System to be able withstand the scrutiny that will surely follow. Although engagement with the ship’s bridge team can be one of our biggest frustrations, we should still conduct a thorough MPX and keep them in the loop throughout. I have adopted the “Thinking Aloud” approach as commonly used on many cruise ships, and I have found this has drawn more engagement from many bridge teams.

As mentioned in my last column, and evident in recent incident reports, what is harder to predict than the weather, is the standard of BRM we will encounter when we arrive on the bridge of each ship. In this issue we have reproduced a report on a presentation by Matt Best of AMC Search in Australia. He sheds new light on bridge operations and how we should look beyond the bridge for resources available to the pilot. For most of us, support from our own port resources are something predictable and reliable, and Matt delves into this in his presentation.

We continue to meet with Maritime NZ, port and shipping company managers, harbour masters and most recently training providers, to discuss proposed improvements to our training and assessment practices. Without a need to change the rules, I am optimistic that we can raise the bar and move away from compliance-based training and focus on ongoing training to ensure competency. As mentioned above, we will be found lacking if we cannot demonstrate we are competent to perform a task, and that we possess the skills to use all available means. This said we also need a far better understanding of human factors and risk management to close the net on all potential threats to a successful operation. In the incidents referred to above, all occurred due to an action of a pilot, where technology at their disposal was not used effectively or not used at all. Like the pilots in those incidents, I am an older pilot with many years of experience, and I now realise that I need to look in the mirror and consider how I undertake my job. The way I was trained to pilot vessels almost 20 years ago has changed dramatically, however I often hear my peers state that we should stop looking at technology too much and look out of the window. I might have agreed a few years ago, however the City of Rotterdam incident on the Humber recently demonstrated that what you think you are seeing out of the window may not actually be a true representation of what is happening, and in that case resulted in a major collision. The Mk1 Eyeball balanced with use of the PPU at the time could have seen the job completed in an unremarkable fashion.

In concluding my column I would like to share my thoughts about training, and how the effectiveness of this can vary with the experience and qualifications held by a pilot. Currently our organisation is challenging the decision of the Director of Maritime NZ, with respect to approval being given for the Port of Otago to train a candidate who could later apply for a Pilot’s Licence while holding less than the required Master Foreign-Going Certificate. Rule 90.41 states that an equivalence in experience, qualifications and competencies can be a substitute for a MFG, but it is our opinion that the candidate does not possess these. This is not to say that he is not a very experienced and competent mariner in his respective area, however he cannot walk aboard a NZ foreign-going ship and act as master, unless of course the next step is to exempt masters from the requirement to hold a MFG certificate. This issue is now with the courts, where a judge will make a ruling on the interpretation of the rule.

Steve Banks, President NZMPA
This year, 50 years after the Wellington Lyttelton ferry Wahine sank in Wellington Harbour, comments on the disaster still circulate. These are often based on media reports, vivid recollections or passionately held views of how and why it happened. This is not helped by the fact that the official report did not answer all the questions.

In 1968 I was one of 8 harbour pilots working in Wellington including the two senior pilots who were the Harbourmaster and Deputy Harbourmaster. I had been a pilot for 4 years after 10 years in the Union Company as a cadet and deck officer.

My involvement with the Wahine started at 0641 on the morning of 10th April when I overheard a VHF message from the signal station at Beacon Hill. I was in the Harbourmasters office having started work at 0530 to shift a ship. After hearing this, I contacted Deputy Harbourmaster Bill Galloway and arranged to take the pilot launch Tiakina and met him at Seatoun wharf. We left Queens Wharf at 6.50am with an engineer and two boatmen. Galloway was picked up about 8.15am and we proceeded to a position about 2 cables south of at Steeple Rock. Wahine was visible on our radar about 0.7 mile South of us, but with nil visibility, heavy rain, hurricane force wind and very high breaking seas, we decided to return to Worser Bay until conditions moderated. Visibility improved slightly from about 1045 and we got our first visual sighting of Wahine. With tug Tapuhi we proceeded to the ship which by this time had drifted to near Steeple Rock. After a towing wire from the tug TAPUHI parted, we went right round the ship. It was riding to 2 anchors, pitching in the heavy southerly swell and rolling slightly. Galloway and I discussed her draft and her movement in the water. Galloway asked if I could get alongside as he wanted to get aboard to give any assistance to the Master. This was achieved shortly after midday when he climbed up a lifeboat ladder on the starboard side.

When the decision was made to abandon ship about an hour later, everyone was taken by surprise. There was only the Tapuhi in the vicinity preparing a second towline and we were off Seatoun wharf having just dropped a technician who had come to replace a fuse in our radar. The plan had been for Wahine to pick up or slip the anchors once the towline was fast and then be towed up the harbour into calmer waters. What changed all this was a very high tide which started to ebb earlier than predicted and managed to push the ship round so it was beam-on to the incoming swells and wind. This started the ship rolling and it soon developed a starboard list. When we arrived 5 minutes later, we witnessed many people jumping off the ship, the launching of the four starboard lifeboats, the attempted launching of many liferafts - which in most cases proved impossible with the gale force winds blowing at the time. In the rough conditions it was dangerous for us to get too close to the many people in the water. We managed to get some survivors from the water, towed one lifeboat to near Seatoun with attached rafts, and got lines around one propeller which immobilised our port engine. We returned to Queens Wharf about 1730.

A formal investigation began on 29 June 1968 and the Report of the Court was published 3 months later. Much of the controversy about Wahine had its beginnings with the Report. It cleared the Master and his Chief Officer of wrongful acts, finding however that they had made serious errors of
judgement under conditions of great difficulty. Three of the Court's four nautical and engineering assessors, whose role was to assist and advise the magistrate hearing the inquiry, issued a fifteen page appendix to the report. They were more critical.

**Some of the comments frequently raised are:**

1. **The ship should not have sailed.**
   The weather forecast issued just after the ship sailed contained a storm warning saying a tropical depression centred east of North Cape would be in the Hawke’s Bay area at noon the next day with winds over 50 knots within 150 miles of the centre. An updated forecast was issued 6 hours later but WAHINE’S radio station was shut down at 2400 and it was not received. At 0500 Wahine called Wellington Harbour Radio on the recently installed VHF radio to receive a reasonably accurate weather report considering that there were no wind speed instruments at the signal station and from the high hill they could not see the sea conditions at night or in poor visibility. The 50-knot winds reported were strong but a common occurrence at Wellington. The court recommended that radio officers should remain on watch when similar ships were at sea but it did not establish or ask why the auto alarm was not activated. If the 0200 forecast had been received it would not have alerted WAHINE as it was inaccurate. It said that strong southerly gales would develop about Cook Strait in the next 6-10 hours. At the inquiry the Met Service Director said "the term hurricane was not used in temperate latitudes". The storm had been a tropical revolving storm named Giselle which moved from the Coral Sea into the temperate latitudes and intensified. If the name Cyclone or Hurricane Giselle had been used more notice may have been taken of the forecast for what it was worth. The court recommended that Met service use Beaufort scale terms in its terminology but this has not happened. Many countries still issue marine forecasts using the Beaufort scale which eliminates the need for wind speed and sea state and the trigger points for issuing gale or storm warning use the Beaufort scale. In recent years, Met Service have drifted further away from international practice and now give the wind speed 5 knot blocks making for long drawn-out forecasts and which trigger gale warning at a lower speed than previously. Showing how remote they are from the maritime scene, they regularly split Sea Area Stephens into areas East and West of Hawera. (Hawera is an inland town with no port, lighthouse, cape or point).

2. **The ship should not have entered harbour.**
   Similar weather in the immediate hour before the accident is not uncommon in Cook Strait. There was evidence that the ship was rolling and scending in the hour before entering the harbour. The rolling could have been minimised if the fitted anti-rolling devices had been used. These were not stabilizer fins but a flume tank system and if used would have also improved the steering. Not one witness was asked why the system was not in use. The three nautical assessors said this system should have been used from about 4.15
3. **The ship should or should not have reduced speed.**

   From about 4.15 am speed was progressively reduced. The first reduction was no doubt to adjust the arrival time. A further reduction sometime after 5am which the mate said was "to assist in the steering". The court heard that the helmsman said that "the steering was alright until about 5.30am when it started to get worse". Did the reduction in speed cause this? It was never explored at the inquiry. Speed was reduced to Half-Ahead a few minutes before the ship broached. The Master said that he "reduced speed because it was a practice in southerly weather as some of these ships behave better". Asked if *Wahine* was one of those ships he replied "it is a question of finding out these things as you go along. Only on one previous occasion have I slowed down and it appeared to assist".

   There are two schools of thought about speed in a following sea. One is that you reduce speed and so have some in reserve if a broach occurs, and the other is go as fast as you can without getting in synchronization with the wave speed.

   The three nautical assessors said that the ship should have entered the harbour at full speed. Over many years entering the harbour on similar ships, I have measured the speed of the swells and found it to be about 30 knots - considerably faster than any ferry at full speed. I always found the best speed was full speed. I also always used the stabilisers and found that automatic steering was far superior to manual.

4. **Did radar failure contribute to the accident?**

   The failure of the radar does not feature largely in the report maybe because radar was relatively new on New Zealand merchant ships. The court said the radar failure contributed to the grounding and a recommendation of the 3 nautical assessors was that a second radar scanner should have been placed on the top of the wheelhouse to protect it from the wind and water. One of the probable reasons given for the failure was water in the waveguide.

   I believe the radar did not fail but that those on the bridge did not fully appreciate how to use it nor believed what it showed so it was turned off. The inquiry never established who turned it off. The Radio Officer was called to the bridge at 0620 after being told the radar was unusable. He told the inquiry that after inspection he concluded "that it was in mechanical and electronic order but merely unusable because of the circumstances". I suggest these circumstances were a lack of knowledge by the operators, the incorrect adjustment for rain and sea clutter and the lack of stabilised displayed display because the ship had no gyro compass.

   Others questioned at the inquiry about the radar were the Master who said "it was not working because the bow was pointing towards Barrett Reef". The mate said "The radar had gone wrong. He knew this because the picture had spun round" and the Second Mate said "I could not make any sense of the radar".

   The only other vessel in the vicinity that morning with radar was *Tiakina* and this worked satisfactorily until 1220 when a fuse blew.

5. **It should not have occurred because it was a new ship.**

   There was little comment at the inquiry about the adequacy or not of bridge equipment but some criticism of the completely closed in bridge. Although a new ship which complied with the regulations, similar vessels at the time
such as the rail ferries Aramoana and Aranui were better equipped. Both those vessels had two radar sets (3cm and 10cm) and a gyro compass. A gyro compass would have been of great assistance giving remote compass readouts to bearing and other repeaters and to stabilise the radar picture so that it could display North-up. It would have made steering manually more precise.

6. The sudden increase in wind caused the accident
The sudden and great increase in wind speed described by the Master and mate when the ship broached was accepted by the inquiry as the possible cause.
This sudden increase in the wind speed is not substantiated by the only wind recording made in the vicinity at nearby Wellington Airport. This showed a steady increase from 0500 to 0900.
In my opinion, the reported sudden increase in wind speed was in apparent wind speed after the broach. This was remembered by many on board as the motion of the ship would have changed markedly and by the bridge team as some were thrown across the bridge to the starboard side.

7. What happened between 0610 and 0641
Because of conflicting evidence, the inquiry never established what happened in the time from when the ship broached until 36 minutes later when it hit Barrett reef.
About 10 years ago I carried out an extensive analysis of the engine room telegraph tapes together with evidence given by the Master, 1st mate, 2nd mate, 3rd Mate and the two seamen lookouts who were on the bridge as lookouts. The tapes only recorded the orders as rung on the telegraph. Many of the orders were in quick succession and which it would be impossible to carry out manually. Using my 36 years' experience as harbour pilot and ferry master, and putting myself in the Master's shoes, I concluded that there was no doubt that the broach was to port; the ship stayed with the wind on its port side in the main channel between Barrett Reef and the eastern shore until finally using full ahead power it managed to come up into the wind and started to make its way out of the harbour. Suddenly Barrett's Buoy appeared right ahead and instinctively the engines were put astern. Within minutes it had drifted back onto outer rock. If they had kept going they might have sunk the buoy but the ship would have been saved.

8. Damage Assessment
They did a quick inspection to assess damage about 0745 although the results were never passed ashore. He also calculated the draft later in the morning but this was not passed to the Master nor ashore. When asked why not, he answered "frankly I don't know".
It must be remembered however that there were no computers on board. If some or all the damage information was passed ashore where there were Naval Architects and engineers who had designed the ship they may have been able help or at least tell the ship that their position was serious.
The ship was supplied with Damaged Stability Criteria booklet which listed a couple of scenarios. In Wahine's case, the damage sustained went far beyond the worst case contemplated and therefore the examples were of no assistance to officers on board. The booklet gave no clear guidance upon a quick inspection of it. A typewritten memorandum from the builders was attached to the front which stressed the necessity for draining the vehicle
deck if water sprinklers or spray curtains were used. With hindsight and knowing all the damage that the ship sustained, it is extremely unlikely that any help from ashore could have saved her.

The design of the ship complied with the rules but had a serious fault. The vehicle deck was the tonnage deck and considered to be uppermost continuous deck. If that deck had no cargo on it, it was exempt from harbour dues (which never occurred). All vents from tanks and spaces below this deck could be terminated on this deck and drains from this deck went over the side through non-return valves. The problem was if the draft increased and this deck sunk below the outside water level the vents would siphon water from compartments below which were open to the sea and the drains would not work.

It is interesting to note that the rail ferry Aramoana built 4 years before and Aranui built at the same time as Wahine both had similar decks with a tonnage hatch, but all the vents from spaces below the rail deck were extended to the deck above. They also had 4 large drains that could drain water on the vehicle deck into dump tanks below which could be pumped out.

Nearly all the water that ended up on the vehicle deck came from bilged compartments and spaces below that deck. No water entered through the stern door. Tonnage Rules were changed after the Wahine sinking.

9. Was there effective damage control?

Because of the limited effort to assess damage, no real effort was made to try and minimise the effect of the damage. One flooded compartment was pumped out but for some unexplained reason no others, although in hindsight it was probably fruitless because of the damage received. Some of the vents were covered with sacking to reduce the siphoning. There were few instructions given. The chief engineer tried to make holes in the vehicle deck by removing access plates to allow water to drain into spaces below. He was concerned that there was coke, egg shells and other objects in the water on the vehicle deck as it could damage the pumps. Valuable time was spent constructing sieves to catch the debris.

The court recommended that an additional senior officer should be carried on such ships and in an emergency would be the damage control officer.

10. Small rescue craft were not called in until too late

Rescue efforts on the harbour were under the control of the Harbourmaster. He did not give evidence at the inquiry because of sickness and has been subject to criticism over the years over the way the rescue was carried out. Undoubtedly if he had been told just how badly the ship was damaged more effort would have been made to have more craft in the area although this would have been problematic until about the time of abandonment. Communication with the ship was limited. VHF was new to both the shore and ship and in his position at Queens Wharf he was unable to receive the ship transmissions directly and they were passed through the harbour radio station and phoned to him.

11. Tugs

Partly as a result of Wahine Wellington gained two new tugs although the arrival of container ships was also a driver. The tugs now in Wellington are not manned nor have licence to go outside the harbour.
12. Lifeboat and Liferaft Design

The court had no recommendations except that more training using liferafts was required for ship crews. Because of my experience with Wahine, I convinced New Zealand Railways that we should put MES slides on their new ferry Arahura in 1983. I still believe this is a far superior method to use rafts although the NZ authorities insistence on live deployments at regular intervals made it extremely expensive for ship owners. Newer variations of the MES probably solve this problem.

Lifeboats now usually all have motors however I have reservations about the totally enclosed boats for use on ferries in our climate. You do not expect to do a 3-month Bligh mutiny trip and launching from high decks using automatic release hooks has its problems.

13. Could it Happen Again?

I would like to think no, but it could. The cause would be lack of experience or engine failure. I do not think that the Wahine Master was under any pressure from the ship owners but there was tradition that the ferry would always be on time. He was not a person who showed stress. I feel he was let down somewhat by his officers in assessing the amount of damage and that being a new ship the advantages of using the flume tank had not been properly tested. I know when I joined the rail ferries, Chief Engineers complained when we used the stabiliser fins excessively because it was perceived that it slowed the ship down and more fuel would be used. The Wahine system required involvement by engineers as the tank had to be filled and emptied each trip because it caused lists when loading cargo. I presume a time was reached when its presence was forgotten.

A modern ferry with high-lift rudders, an automatic navigation system and operational ECDIS should ensure that a future accident will not occur but the bridge team must be experienced. This may be hard to achieve however as they do not go to sea in rough conditions and they are not permitted to use automatic steering in some New Zealand harbours.

In 1993 John Stevenson who was counsel for the Wellington Harbour Board at the inquiry stated "the inquiry into the loss of the Wahine did not hear all the relevant information because too many of the principal parties had something to hide. Except for the survivors and the police, everyone who took part was at risk of criticism and no one wanted to rock the boat. The proceedings were conducted in a strictly judicial manner and required facts to be proved unlike the inquisitorial approach taken many years later by Justice Mahon at the Erebus inquiry. There was a lack of vigorous cross examination".

Editor's Note: This last comment by counsel, John Stevenson gets to the heart of the matter i.e. how to balance the need to understand what happened with the higher intention of how do we prevent a recurrence? (Liability vs. Safety). The story behind the Erebus Inquiry is worthy of note: Captain Gordon Vette could see that the initial slant was moving towards ‘pilot error’ which he considered incredible. He convinced Justice Mahon that the Inquiry needed to dig deeper. Although crony politics cost both men their careers, they had transformed the culture of air accident investigations, despite the “orchestrated litany of lies”. One result from the Erebus Inquiry is the forward-looking ground-proximity warning-system. (The Erebus case is still a delicate subject). Do our Accident Investigations dig deeply enough, and do we really learn?
Down South, along the verdant banks of Tasmania’s River Tamar, the folks at AMC Search are working on a fundamental re-think of the way pilots are trained. The pilot training program is expanding on just working on parking ships into the non-technical side of the profession. AMC Search “general manager simulations” Matt Best said, with the technical side down pat, he’s looking at expanding in collaboration with Associate Professor Ben Brooks, Research Fellow at AMC’s National Centre for Ports and Shipping.

“We’re looking at social dynamics and the fundamentals of cognition; things that have been touched on in resource management courses, but we’re drilling down more into the science of it all,” he said. “I’ve worked quite closely with Professor Ben Brooks from AMC and we’ve revamped our marine pilot training course. We’re getting away from the traditional, ‘okay this is what you need to do’, looking more at ‘this is why we need to do it this way’, and this is how we as humans operate, and this is how we sometimes don’t operate.”

An emerging issue is the fact that human brains don’t operate as well as we get older, and people suffer a degree of cognitive decline. “This is one of the discussion points we throw into our course, especially because pilots have traditionally been of an older generation, and this has the potential to become an issue,” Mr Best said.

“Pilots are at the advantage to a certain extent because part of their job requires them to be pretty aware of their surroundings and responding to situations and maintaining situational awareness, so their brain is more active than it would be in a lot of other roles, but it still is becoming an issue.”

**WHAT IS A TEAM?**

Another new addition to the pilot training course is a change in how a pilot’s team is defined. Mr Best said the fundamental tenet of Bridge Resource Management (BRM) is that the pilot gets onto the bridge, he forms a team and he establishes the culture of the bridge to get the ship through the port safely. “It’s questionable what impact the pilot could have on a team in a 5 or 10-minute master-pilot exchange (MPX). So, if he walks onto a ship that has a dysfunctional culture, can he really fix that within a one hour’s pilotage?” Mr Best asked. The answer? Generally, no. “This is another thing that the pilots need to contend with, and they need to say ‘well, this is what I’ve got to work with and I need to make the best use of what’s available to me’,” he said. “It’s highly impractical for a pilot to turnaround to a master and say, ‘Captain, I don’t quite like the culture of your bridge, can you take your ship away and come back when everyone gets along a little bit better’.”

So, the answer is to redefine the pilot’s bridge team. Mr Best acknowledged his colleague Professor Brooks again as a significant collaborator in this innovation. “Instead of looking at the pilot’s team being the pilot, master, officer of the watch, helmsman, etc. We’re suggesting the pilot’s team is in fact all of the port assets as well: the tugs, the VTS, linesmen on the wharf; anyone who actually belongs to the port,” he said. “Then, you’ve also got the ship’s team: the master, chief officer, the crew, forward and aft for mooring, the guys down in the engine room, and the pilot’s
key role is to get his pilot’s team to interact as best as possible with the master’s ship team.”

This way of looking at the pilot’s team can help a pilot if the bridge team is not as highly functioning as he’d like. If the ship’s team has limitations, he can strengthen them with his own port team.

**VTS DEMYSTIFIED**

Vessel Traffic Services (VTS) is another area the AMS Search folks are zeroing in on for improved training. Mr Best said there is often misunderstanding between VTS operators, pilots and authorities. “From our experience with VTS training, there’s either a tendency to overestimate the authority of VTS, or underestimate the role that VTS plays,” he said. “At its core, VTS is an information source and the VTS has the potential to expand the pilots’ awareness of what’s happening, drawing their attention to things they may have not been aware of, things that have come about in a short amount of time.” Mr Best said a section on VTS has been included in the pilot training program to give a yardstick of common ground. “We go over the level of authority that VTS operators have, with scenarios in which they can exercise that authority, but they’re not someone looking over the pilot’s shoulder with a big stick to hit them over their knuckles at the slightest variation – this is often the misconception.”

He went on to say that VTS operators have some degree of oversight where vessels are behaving in a manner that isn’t standard, they can either provide information or ask a question. “But, VTS is certainly not there to second-guess the pilots or to watch them with an eagle-eye,” he said.

**HUMAN FACTORS TOOLS**

The simulator at AMC Search is an important part of pilot training at the institution, and a series of human factors tools has been added to its functions. “We’ve long been able to provide physical plots of the simulations runs, the passage of the vessel, how they use their engine, but what we’ve developed in the past six months or so is a series of human factors tools, which through the completion, at the end of each run, the participants can measure their own internal performance,” Mr Best said.

Participants can measure how they felt their work-level was, how their situational awareness was, and their stress levels - information that is then captured in a database. “We’ve got the option that we can provide people when they conduct simulations, they can always get their plots of the technical aspect of pilotage. But there is the potential to say: this is how the ship performed, and this is how the person performed,” Mr Best said.

“It adds an additional layer, to our training.” By measuring these human factors, trainers and trainees can monitor progress through the program.

“It’s just another avenue for improvement,” Mr Best said. “If there is somebody who, let’s say, has a certain response to a stimulus in a certain situation, they freeze or they’re not as responsive, we can say, how do we develop this? This is a trait that they’ve exhibited consistently, what tools we can put in place to enable them to better cope?
“To Err is Human, To Forgive Divine”

Robert Long

The fixation of Safety with this little phrase and its misreading by the industry shows so clearly that the safety industry lacks the ability to think critically about error. A recent debate at an SIA conference (https://www.youtube.com/watch?v=PnMLHjrSFJw) illustrates what happens when the assumptions of safety are placed upon this phrase. Without some understanding of social politics, theology, critical theory, cultural theory and literature (all missing from any WHS curriculum) it is no wonder that Safety struggles with its meaning. Search through WHS publications over the last 30 years, and you will find a fixation with ‘human error’ but little discussion or recognition of fallibility. To my knowledge, I think I am the only author in the field who has published both on human fallibility and against the nonsense of zero harm (http://cart.humandymensions.com/product/for-the-love-of-zero/). The notion of fallibility is anathema to the safety discourse.

The phrase ‘to err is human, to forgive divine’ comes from the English poet Alexander Pope. In the poem, An Essay on Criticism, Part II, 1711. Pope’s world was theological i.e. Theology was the lens by which one understood life and living. Whilst Pope is known for the development of the ‘heroic couplet’ his social politic was one of competing forces and a distain for a lack of critical thinking. Pope detested ‘dumb down’ and demonstrated through his couplets that truth was only understood in dialectic between those forces. Pope needs to be understood through the lens of theology, social politics and literary criticism.

Pope’s developing years were affected by the Tests Acts (1661-1678) which upheld the status of the Church of England and banned Catholics from teaching, attending a University, voting or holding public office on pain of imprisonment. Something like a Trump Wall for Mexicans or a Trump Muslim ban. As a Catholic family, the Popes were unable to live within 10 miles of London or Westminster. Pope, a deeply committed Catholic, felt this separation deeply. Anti-Catholic sentiment in England at the time was ‘viral’. So, when we come to understanding the context of this phrase theologically, socially and politically we can better understand Pope’s meaning and purpose.

Pope wrote his Essay on Criticism in 1709, assembled over 3 years. Pope explains that, while human fallibility is without question normal, forgiveness is divine. The couplet appears towards the end of Part 2 of 3 Parts as follows:

Ah ne'er so dire a Thirst of Glory boast,
Nor in the Critick let the Man be lost!
Good Nature and Good Sense must ever join;
To err is Humane; to Forgive, Divine.

The scene is set for part 2 with the following:

Of all the causes which conspire to blind
Man's erring judgment and misguide the mind,
What the weak head with strongest bias rules,
Is pride, the never-failing vice of fools.

Pope didn’t suffer fools gladly and saw great foolishness in the State fear of Catholics and Catholicism. At the start of the next stanza Pope states:

A little learning is a dangerous thing
Drink deep, or taste not the Pierian Spring
There shallow draughts intoxicate the brain,
And drinking largely sobers us again.
Perhaps Pope here foretells the ignorance of several archetypes, including I would suggest the current archetype of Safety. The *Pierian Spring* refers to the quest for knowledge and the satisfaction with ignorance. And so, a little learning (a cert 4 in regulation-thinking) is a dangerous thing. A little learning as a dangerous thing is so evident in the compulsory mis-education of the WHS industry (https://safetyrisk.net/isnt-it-time-we-reformed-the-whs-curriculum/). No wonder Safety comes out with the evil of eugenics in its formulations about what to do about Risk (https://safetyrisk.net/cutting-corners-safety-regresses-to-the-dark-ages/, https://safetyrisk.net/safety-eugenics-and-the-engineering-of-risk-aversion/).

The idea of fallibility is a deeply theological idea, just as the notion of infallibility (e.g. perfection/zero) is an absurd idea if applied to humans. This is why Pope emphasizes the second part of the couplet, the absurdity and delusion of seeking to be divine. For Pope and all religions (except the safety religion), fallibility is the bedrock for understanding Self. For Pope, the idea of aspiration for divinity is essentially the mark of delusion and the nature of sin. From the stories of Adam and Eve, Abraham (see Kierkegaard), Job (see Jung) and Jonah (see Ellul) we learn that the seeking of divinity (perfection/zero) is the breaking of relationship with God.

For Pope, these stories are not some kind of binary trap but rather form a dialectical struggle to make intelligent the meaning of being human. Accepting fallibility is not a position of fatalism but rather is understood as a liberation to be truly human. For Pope, fighting against fallibility is a stupidity. Understood theologically Pope makes it clear that whilst humans seek blame, the Divine offers grace and forgiveness. It is Pope’s theology to not see fallibility as a penalty but rather as a driver of humans to grace.

So, at risk of losing the reader in theology, lets return to the preoccupation of Safety with error. It is clear that Safety doesn’t understand fallibility; how could it without a trans-disciplinary approach to knowledge? The language and discourse of zero and the silly nonsense of ‘safety is a choice you make’ seeks a denial of fallibility and the quest for perfection. The idea that human error is about ‘a taxonomy’ or ‘safety science’ is the impost of an engineering bias on the nature of being human. Apparently, Safety doesn’t need anthropology, theology, social politics, social psychology or cultural theory to understand humans, just bundle up some behaviourist and mechanistic disciplines and bingo, humans are objects and mechanical aspect of systems.

We have the legacy of [James] Reason to thank for the idea that human error is the sum of unsafe acts and unsafe conditions and the model accepted in all WHS texts as a model of human error:

![Diagram of human error types](image.png)

Amazing how this binary model has been normalized in the safety industry in such a short time without question. Reason frames the subject so: ‘We cannot change the human
condition, but we can change the conditions under which Humans work’ and ‘The basic premise in the system approach is that humans are fallible and errors are to be expected, even in the best organisations’. So, there we have it: the use of the ‘f’ word framed by Reason in the context of ‘the human error problem’. I wonder if Reason understands fallibility theologically, at the source? Unfortunately, Reason proposes a binary construct for this so called ‘human error problem’ and so plays into the binary assumptions of the Safety Industry, no wonder the Safety Industry loves Reason so much.

Reason doesn’t deem human error theory a ‘wicked problem’ or as open-ended but rather just a matter of ‘a person approach’ or a ‘systems approach’. Nice to have a binary construct to frame for ‘human error management’ (unfortunately excluding a host of other ways of understanding human fallibility). Somewhat like the binary construct that Kahneman offers safety, framing the mind as just a matter of fast or slow. Unfortunately for the safety industry, Reason and Kahneman lead us into binary constructs that don’t serve the industry well, more foundations for the Ideology of Zero.

Reason frames safety as the activity of error management, the plugging of holes in the reductionist Swiss-cheese, managing acts and conditions. Within this frame humans are understood as a ‘factor’ in a system. (The ‘human factors’ school unfortunately thinks it is somehow close to the Social Psychology of Risk, which it isn’t). Where does this leave us?

The challenge of Pope’s couplet is a call to dialectic between the fallible and infallible, a dance on the pinhead of a wicked problem. What Pope calls us to is a rejection of binary discourse and the associated delusions of ignorance in the denial of fallibility. By coupling the impossible (infallible) after the fallible we can see that fallibility is not an evil but rather what liberates humans to accept their humanity. If we accept Pope’s call to the dance, we will better step beyond the seduction of reductionist and binary constructs imposed on a model of what safety imagines it means to be human and how it understands error.

**Pilot Event Online Reporting Tool**

*NZMPA Webmaster Troy Evans*

The online tool has been running for nearly 2 years, not all pilots / ports are using the tool. Some two thirds of NZ pilots are using the form. One port formally uses it to notify MNZ and other parties that are required to be informed – we can tailor actions pilotage area by pilotage area if needed – just contact the webmaster. Some stats:

Total number of report filed is 217, giving an average of a touch over 9 per month. The last 12 months have seen an increase in reporting of over 20% on the previous year. Of the 217 reports filed MNZ received 116 of them as pilots elected to notify MNZ using the reporting tool. I asked for comment from MNZ: “The Pilot reporting is showing value to MNZ – this is feeding into intelligence-led decision-making. Pilot ladder faults, propulsion / system failures are areas of most interest at this time. It is early days in analysing the data. Please keep reporting”

The most common vessel type involved is Containerships – followed closely by bulk carriers (includes log carriers), disappointingly tankers feature in third place. The most common type of report is on Pilot Ladders. Some 50% of reports involve incorrectly or poorly rigged pilot ladders / arrangements.

Some recent changes to the form:

- Default vessel is now “other” this is to prevent one type of vessel being selected by mistake.

- There is also an option “Vessel not involved” this is to allow pilots to use the form to report other issues that may have an impact on Piloting – an example is where a PPU update causes faults to occur with PPU operation.

- When Vessel Issue is checked under “Type of Report” a list of options will come up.

Any suggestions for improvement are appreciated. Keep Reporting
The East Coast region has been experiencing very hot and settled conditions for many weeks resulting in stable conditions for ship handling and a heap of relatively dry low density timber crossing the wharf at rates up to 400 JAS/crane hour. A couple of days of SE’ly slop just after Christmas was the only notable exception with one heavy laden logger delayed on departure. The dry conditions are also enabling a good harvest of squash for the Japanese market resulting in our annual flurry of mid-size reefer boats which we shoe horn in astern of the log ship berth. We had our first MOSS audit mid-December with an outstanding result. The audit is not only confined to a deep dig into the usual suspects such as floating plant SOP’s and documentation, record keeping, etc. It also looks further into organisational operating culture, empowerment of staff, employee engagement and the like. Ultimately we were found to be operating at or above expectation in all areas which was a very pleasing result. On a similar vein we have now completed a full revision of our pilotage SOP’s and the Port Safety Management System (SMS). This has been a somewhat tortuous process over many months but well worth the effort. Our ideology is to have all Port staff fully engaged in the SMS, its related risk assessment process and the resultant SOP’s. Page 58 of the Port & Harbour Safety Code provides the key piece of guidance in that pursuit, to wit: The SMS should be kept as simple as possible so that it can be easily understood by all employees.

Gisborne is a surge port with shore mooring operations rating highly in the Port hazard risk ranking. Once the ship is all fast the shore moorings are very effective through a moderate range of surge however that initial hazard when rigging the moorings remains challenging to isolate or eliminate. We intend to trial a hydraulic ship motion dampening device in the coming months which if successful will see us move away from the traditional, and highly man power intensive, shore based moorings the port has used for several decades. Early in 2017 we recorded the passing of former Gisborne Pilot and Harbourmaster Ian Cook. Last month we were given the honour of assisting Ian’s family in spreading his ashes at sea and recognising his passing. Nature provided a fantastic day and as if on cue the sea erupted with wide spread pods of dolphins. As I write this missive we have one eye on the approaching low pressure system ex TC Gita. Having earlier looked like impacting the eastern North Island sea areas the latest projections have it tracking toward Nelson/Buller with minimal impact on the NI East Coast. Looks like the settled conditions in Gizzy will prevail a bit longer.

WELLINGTON
Sick of ugly troopships this summer? How about Asuka II to soothe the eyes:
Cruise season aside the summer months have been quite busy. One particular 3-day period in January recorded 28 pilotage tasks, roughly three times the annual daily average! Gainfully employed again!

The post-earthquake deconstruction of Thorndon Container Wharf’s berth No.1 continues apace: the wharf decking has been removed, cut-up into large concrete slabs weighing up to 22 tonnes each and recycled for further use on the port. The remaining pile stumps will be cut off at sea floor level.

The once familiar red-hulled container ships of Hamburg-Sud made a one-off return to Wellington in January with the very tidy Polar Ecuador substituting on the Maersk service.

PORT OTAGO

I was a bit weary in the small hours of the other morning as we headed out to the awaiting 4-metre post-Gita swell and my next inward job, having had only just over 4 hours’ rest from the previous job. I thought I might have a little whinge (you can’t take the Pom out of the boy…) about it to anyone interested in listening, until I realised that the other occupants of the pilot launch only had half as much sleep in the bank as me. Which is odd since everyone on board was working a 1:1 work ratio, so one would tend to assume that fatigue wouldn’t be an issue, but it evidently sometimes can be.

POL company policy regarding servicing marine customers is, like most or all non-tidal constrained ports in New Zealand, to provide a 24/7/365 service and that is what both management and marine department workers have come to expect. Also, most workers realise that a 1:1 work ratio, albeit 24-hour on-call, is not at face value all that onerous, but in the case mentioned, had he known the circumstances, the master of the inbound vessel that my colleague was about to pilot would likely have had have serious reservations as to his pilot’s ability to do the job safely. It probably would not have complied with many shipping company Hours of Rest Regulations. Port Otago has a self-regulating but rather ad hoc system for fatigue management and company management probably assumes that it works well since no ships are delayed and apart from the odd gripe, everyone gets on with the job. Other than having a whinge, which on the morning in question, was to be my preferred method, the way to indicate fatigue via this system is to decline to do a job when one deems oneself too fatigued; the worker should walk away from the job and a replacement should be found. This is also in-keeping with company Health and Safety policy whereby, “no job is too important that it can’t be done safely”. Nice idea, but in practice it involves the admission that one cannot cope and a background fear of sanction for delaying shipping. These fears and ideas are less rational in today’s “less blame” culture, but still exist and have not been completely expunged from the worker’s psyche. Moreover, there’s that
early hours decision-making process, and we’re all subject to the normal human behavioural practices; declining a job, especially in the wee small hours involves calling out an off-duty colleague often at short notice, and even that assumes that they are available as there is no specific call-out roster. Failing that, it’s a case of delaying a shipping movement or two, and whereas this would instantly focus management minds on the issue, it’s not done because it is anathema to our embedded culture which, despite the exhortations of BRM, thankfully in my opinion, remains that which embraces the “can do” attitude. There’s much merit in the “can do” approach but it does need managing.

It could be argued that management abrogate responsibility by having workers self-manage their fatigue, but then if management try to micro-manage they are often then accused of excessive interference, but fatigue management plans (FMP’s) have been around for many years and give both management and workers a template to work from and specify actions to take when FMP alarms are activated.

Like many professionals, pilots often find that they are subject to criticism by people who can’t actually do the job; it’s well known that some of the best ship-handlers are standing on the quayside. Likewise, managers are too frequently derided by workers who would fare dismally if placed in a management position.

However, if company policy is to provide a 24/7/365 service then manning for the peaks and enduring the over-manning of the troughs is inevitable. In small ports, the big shipping companies seem to dictate that this full service is required, so it’s up to port management to manage and workers to assist in implementing safety management policy & practice on fatigue. On such important safety issues, no-one should lose sight of the fact that working together, walking the walk as well as talking the talk is the way forward.

Tired of reading about fatigue? Then get this: we had a visit from Royalty at the end of February as the Queen Mary II, having bypassed us last year, decided to call in this season, having seen the Ovation of the Seas do it a few times already. “What a beautiful ship!” I heard a lot of people say as she transited the harbour. So, is it just me that thinks she’s as ugly as a bulldog licking piss off a nettle? The freeboard, designed to make her extra stable during her North Atlantic ferry duties, and the charcoal, so dark blue it’s black, paint, make her look like a pot-bellied old codger with his trousers pulled right up into his crotch. And the stern? What happened there? I know she’s been designed with more than just a nod to the old Queen Mary with a couple of azipods slipped in where hopefully no-one notices, but the referendum as whether to fit a cruiser or transom stern must have been closer than Brexit because it’s resulted in a 50-50 split with a cruiser stern hanging off a transom. Ugly as…but that’s what you get when you build a Cunarder in France, and they base the design on a Citroen 2CV. The original, launched in 1934 at John Brown’s yard on the River Clyde, would never have been allowed out the naval architects’ office looking like that.

22 years later in 1956 - and just upstream from John Brown’s - Charles Connell & Co.’s men would have been building the original Glenpark for J&J Denholm Limited, the Glasgow-based family firm with whom both your esteemed editor and I served our time.
Ed went on to sail as Cadet Training Officer on the sister ship *Wellpark* (built 1977) where I did two trips as cadet, although our paths never crossed. Having sailed as cadet on the previous *Glenpark*, imagine Ed’s paroxysms of delight as he piloted the latest *Glenpark’s* into Port Chalmers. Later, in the office - much to the bemusement of those present - we spontaneously broke into verse commissioned by J&J Denholms’ spirtle-whittler and penned by Bardy McBardie, an under-appreciated and often under-the-influence prodigy of Robert Burns…

“As Doon the Glen came Denholms’ men
   - A shower of ballet dancers
Two in ten were time-served men
The rest were fucking chancers!”

(Time-served, non-Balletic, Craig Holmes)

**TAURANGA**

Greetings from the Bay of Plenty. It’s been non-stop here at Tauranga with the traditionally quiet period of Christmas and January now the same as any other period – busy! Our arrival numbers have increase 15% on the same period last year to 890 arrivals for the last 6 months. An order has been placed for a new container crane due for delivery this time next year. It can’t come soon enough as we need cranes with longer reach and high enough to work above the 9-high stacks on the “S-Class” Maersk ships.

The cruise ships have run like clockwork with only one cancellation due to bad weather further down the coast, the town certainly buzzing when *Diamond Princess* and *Emerald Princess* in together. Cruise ship numbers are forecast to increase dramatically from 85 this year to 114 next year. The *Queen Mary II* visit went off without a hitch, and was initially going to berth at No.8 berth which would have given the well-heeled passengers a panoramic view of log loading operations and even better, the lovely smell of dusty palm kernel. We have now disappointed the passengers, and the ship berthed at our regular Cruise Ship Berth. Phil and Lars are off to the Carnival Csmart Simulator at Almere in April; it’s a long way, but the stress of travel will surely be lessened as their seats will be in the forward end of the plane!

*(Tony Hepburn)*

**AUCKLAND**

As far as Februaries go, I think we have a pretty good case here for a full refund. This summer has been one of the most underwhelming I can recall. It’s been a steady serving of rain, high humidity and strong gales, all combining with our peak passenger ship period. Some of our marine team have however managed to avoid some of this weather by heading off to Romania (currently its -12°C, so could be a bit of an over-reaction) to check out a Damen RSD2513 as a replacement for the *Daldy*. It is an electric hybrid with some innovative design features so our resident Tug whisperer Jamie Macgregor has gone over with the boss and Rob Willighagen to put one through its paces.

We’ve had quite a reshuffle within our marine teams with a few resignations and internal transfers, so we have hired two new Marine officers, Holly Clayton who was previously with coastal tankers, and Blair Campbell from the Rail Ferries. They are currently training up on our floating plant, and depending on how many banana skins they throw around the Pilot Hut door, could be looking at climbing ladders in a few years.

In my previous missive (brutally edited…just because I missed the deadline by 10 days and it was already at the printers) I made mention of the America’s Cup plans for the base at Wynyard. I pessimistically predicted they would be lucky to have the time to build a sandcastle on Takapuna beach…Turns out that was overly optimistic, I now fear they will not even have the time to get the bucket and spade out the back of the station wagon. It is an inevitable problem, by being the most populous city in the land, that we have the most idiots. I would like to think that on a percentage basis we are statistically no different from any other of our fine cities: it is however an unavoidable numerical fact that we are stacked with more of them…many of whom (in my opinion) seem to take an inordinately misguided and misinformed interest in what is best for our harbour. Wish us luck!  
*(Craig Colven)*
LYTTELTON
With container vessels becoming more alike in size and machinery it is good to have something different arrive at the port. We recently had a visit from the Joides Resolution, a vessel which started as an oil exploration vessel before being converted for scientific use. I came into work expecting to see a newish research ship with the usual twin screws and bow thruster and was surprised to see a forty-year-old vessel with a sixty-metre drill rig plonked in the middle. That explained the need for two tugs. She had been down to the Ross Sea investigating how the West Antarctic Ice Sheet has evolved with climatic and oceanic change over the last twenty million years. This work will lead to a better understanding of Antarctic Ice Sheet sensitivity to warmer climates. She was full of the best brains in their respective fields, but one thing we all have in common is the need for a good run ashore, first call in a new port. When I was going home that night, the local bar, Civil and Naval, had patrons spilling out onto the footpath, the T-shirts being worn giving away their origin.

The requirement to have a MFG as an entry-qualification to Pilot Training continues to be tested, but one thing that has been cleared-up is the need to carry a Pilot on a vessel. There have been informative articles on Stuff and in the Shipping Gazette on this subject and it is good to know our jobs are safe. It is clear a pilot cannot make the decision to dispense with his own services. Having been spread over several sites the entire staff at LPC now occupy the one building, the aptly named Waterfront House. There is a large common cafeteria on the Ground Floor and the open plan offices are upstairs, Corporate to the right and Operations to the left. It has all the modern features including sensor-operated lights to reduce power-use. For some reason, they don’t pick me up, so at night I spend the first few minutes walking around the desks trying to illuminate the place. Things were much easier when you just used a switch…

(Nial Fflay Laird)

NAPIER
As we shoehorn Ovation of the Seas out of Napier we are only left with 10 more cruise vessels for this season, one of which is the Ovation the week after next. Huge sighs of relief from around the team, but it only means the onset of the apple season. Logs are also going gangbusters, so there are ships shifting left right and centre as we clear berths for the big guys. The big guys are getting bigger, the ‘wall of wood’ is growing and the port is still the same size. We are starting to feel like Mr Creosote as he takes his last “wafer-thin mint” and we know how that one ended!

With everyone working flat-out, training has taken more of a back seat the last 3 months apart from Colin going to Smartship for his B-Class training & assessment with Robbie. With only his Orals to go, we are hoping to have Colin out on the water with us soon – or as soon as MNZ process his licence. The extra licence is going to be more than welcome as every week we try to minimize fatigue with careful allocation of pilot resources. FAD Fatigue Assessment software has also been purchased to help analyse and minimise the build-up of Fatigue. I think the maths are reasonably simple: lots of ships cause stress and fatigue; lots of ‘big’ ships cause more stress and fatigue; more pilots and resources help minimise stress and fatigue – am I being facetious? Probably!

The hunt for the perfect third tug and the best new pilot launch continues slowly. Members of the pilot launch committee should be out and about soon checking on the new builds around the coast – when we get the chance!

Ed is hunting me as I type, so until my next moan, safe piloting. (John Pagler)
“EDITOR’S HOLIDAY”

During the summer school break, we visited Wellington (whilst leaving the car in Picton). Through the good offices of [President] Steve Banks, I was allowed to visit the bridges of both ferries (Interislander then Bluebridge) for both arrivals and departures (in my persona of editor) to gain insights into the application of BRM in a different environment to pilotage. I was very impressed with everything I saw and with the quality of the personnel. Without going too deeply, these were a few of my observations:

1. BRM clearly evident in briefings prior to departures. Clearly assigned roles of Administrator, Navigator, Co-Navigator and Helm. All internal and external communications were closed-loop with standard phraseology.
2. The professional demeanour on the bridge was augmented by amiable good humour, which fostered an easy atmosphere for “Challenge & Response”.
3. Having listened to the presentation at the 2016 NZMPA Conference, I was expecting to see “Track-Pilot” in action: I was very surprised to learn that Kaitaki has no Track-Pilot, nor was it used on Strait Feronia. Autopilot across the straits, then helm orders in pilotage waters. (There may exist an element of mistrust with Track-Pilot after the Aratere incident?).
4. Conning the ship is based on matching the ship predictor with the intended track. Helm orders are based on experience of what works. I noticed that entering Tory Channel (homeward-bound with a following tide of 4 kts) that 5° helm at 18 kts SOG soon gave ROT of 40°-42°/minute but with no discernible heel. Because it was flat calm, the river of tide running in & around the entrance to the channel shows how Wheki Rock poses such a trap for the unwary.
5. Topics of conversation included Annual Audits and Simulator training for emergencies. In the former, ferry crews are audited by a pilot with less experience than themselves: perhaps a ferry operator from Scandinavia/Australia might be a more useful option to consider (?). With respect to the emergency training, since there have been several close calls to Wheki Rock, then a simulated exercise (temporary loss of power) could make life interesting. Rehearsing such scenarios might be one positive outcome from the imminent TAIC report on Azamara Quest (?).
6. Finally, the 50th Anniversary of the Wahine disaster reminds us that the cruel sea is often the main villain of the story, and that the highest standards of navigation and equipment are essential. It is of the utmost importance that we learn the right lessons from history, and then apply them. As Normans Cousins wrote: “History is a vast early warning system”.

What to do on a Sunday in Wellington? We were keen to see inside the Old St. Paul’s Church, which incredibly was once under threat of demolition during the architecturally psychotic 1960s. The massive timber arches are indeed like the hull of an upturned galleon, but the lighting from the many stained glass windows bathes everything in a warm rosy glow. Apparently, there is an annual commemoration by US Marines (20,000 of whom were stationed in Wellington in 1942) and one can only imagine the effects of such an invasion.
By way of contrast, we briefly popped into “New” St. Paul’s Cathedral, whose soaring concrete heights and minimalist windows were more reminiscent of a Mussolini-era railway station. Not wishing to dally but before we could retreat, we were pounced upon by an Anglican cleric whose slight American twang and engaging demeanour put one more in mind of a white Barrack Obama. By now, we were well spiritually fortified for a visit to Parliament: we booked a tour for 1245, which allowed us 20 minutes to have lunch at the “Back Benchers” pub across the road. Our tour guide was a treasure trove of insights into the history of the NZ democratic experiment, how NZ, UK and Israel are the only Western Democracies without a Constitution. She also explained how the elite Upper Chamber was abolished (a 3-year parliamentary term was the substitute check on tyrannical government). We briefly visited the Beehive Banqueting Hall, and then proceeded to the main debating chamber, with doors marked for the Ayes and the Noes lobbies (now only used for conscience votes). The library building (based on Thomas Turnbull’s design) was the final gilding on the lily. The fact that we had such easy access to Parliament and without any armed security in sight is symptomatic of a healthy society, and reflects NZ’s non-hostile foreign policy: long may such Human Decency prevail.

Our next adventure was the cable car up to the planetary observatories (and historic gun batteries) and then a lovely descent through the Botanic Gardens, past the monument to King Dick Seddon, who took credit for women’s suffrage and old-age pensions. New Zealand was clearly a world leader as the Victorian age gave way to the 20th Century. Afternoon tea in the Rose Gardens gave time to ponder that inheritance which is our duty to preserve.

Once again, Steve Banks had worked his magic: we were welcomed aboard the tug Tiaki by her tugmaster, Erik. We were there to stand-by for the sailing of Radiance of the Seas, although our services were not required. It was abundantly obvious that Erik is a first-rate professional who takes great pride in his craft – in every sense of the word. The tug herself is in immaculate condition and is clearly a well-loved and well-maintained lady, a reflection perhaps on the equal time roster and thus crews’ proud ‘ownership’ of their vessel.

Once the Tiaki was safely berthed alongside, we transferred onto the new Pilot launch Te Haa. The first thing to note is the generous seating arrangements; the second point was the effortless power and acceleration of this jet boat, but with virtually no noise or vibration – even at 28 kts! Once we had disembarked Steve from Radiance, Craig & Darrell demonstrated the remarkable stopping ability, which allows maximum control when running before big seas. Both Craig and Darrell had been steadfast propeller men, but were now complete converts to the jet boat concept. Both had been involved in the design and had learned from Taranaki’s boat design and improved upon it; they couldn’t speak highly enough of the builders.

In very short order, we were back at the wharf, and we disembarked in style right by Italian restaurant, Porto Fino, just in time for our dinner booking. We are indebted to Steve Banks and the marine staff at CentrePort who made us most welcome and were more than happy to share their knowledge and insights. Thanks guys, you are all great ambassadors for Wellington. There is always much to be gained from seeing how other ports operate and exchanging ideas and experiences. It would be great to return that hospitality in due course.
NEW FROM NAVICOM PPU – GyroPilotV3 & GyroPilotPlus”
(Navicom’s Dale Marsh explains)

Portable Pilot Units (PPU) were introduced as a decision support tools for pilots. They serve as a secondary source of information apart from the vessels own data, while navigating in confined waters. PPU usually comprises of the sensor hardware interfaced with a display unit (laptop or tablet) that is loaded with piloting software and charts. The sensor measures important data points of the vessel like position, heading and rate of turn along with velocities which it feeds to the software to create an image of the real time position and movements of the vessel on screen along with predictors.

It helps users overcome the challenges of unfamiliar bridge equipment and errors in the ships data which could be prone to inaccuracies in vessel information. PPU’s, being portable with high focus on ease-of-use, are especially beneficial to tug masters, harbour masters and mooring masters wanting accurate position information. During low visibility, PPUs have proven to be invaluable support tools.

Advancements in technology have led to various enhancements in accuracy, performance, robustness and design of PPU’s over the years. John Tamis, Executive Chairman of Navicom Dynamics, a New Zealand based company who is a market leader and pioneer in this segment says “We constantly research, develop and introduce new and cutting-edge advancements in our PPU systems. Our vision is to provide efficient and reliable sensor technology that improves safety and assists navigation”.

Navicom Dynamics just launched their popular GyroPilot devices with a host of enhancements. The GyroPilot is a compact unit that fits in the palm of your hand. It is the perfect tool to support a broad range of professional piloting operations like coastal pilotage and basic manoeuvres. It is best suited for pilots wanting to use the ships pilot plug but wanting independent rate of turn or better heading information while being wirelessly connected to the charting software on their display unit.

It transmits the ships AIS position data while providing independent Rate-of-Turn (ROT) info from its own gyro and precise heading (HDG), smoothed to two decimal points for increased accuracy. The vessels equipment, apart from being unfamiliar, is also prone to errors. These can range from position offset errors, no AIS data, ships gyro errors etc. GyroPilot plugs into the ships AIS and identifies and compensates for such faults in the plug.

Apart from its core function as a stand-alone Pilot-Plug-based PPU, the GyroPilot can be wirelessly linked with other sensors to augment the system and increase its performance. Pairing it with the GyroPilot “Plus” gives independent position data. This is a clever way to upgrade the system as more independence from the ships systems is sought. Navicom are also working on another system to add on wireless antenna powered by Trimble technology which provide independent Heading and Position data to the user.

The GyroPilot Plus which is a newly introduced independent position sensor can be wirelessly linked with the GyroPilot. The GyroPilot Plus is placed on the bridge wing to interface with the GyroPilot plugged inside and provides independent (SBAS corrected) position, independent ROT and accurate heading which is then fed into the software as stable and accurate data. Like all Navicom PPU’s, the GyroPilot devices are compatible with all leading piloting software available across the world.

Navicom’s portfolio also includes a range of piloting and navigation systems that are increasingly independent from the ships systems and can be customised as per the users’ needs and their operational requirements. With these systems serving as navigational aids, users in over 30 countries have benefitted and continue to do so every day.

The fundamental take-away here is the indisputable advent of the technological era in the maritime industry. The empowerment that technology can bring to pilots, harbour masters and tug masters in the work environment is undeniably powerful. This has been proved over and over through the booming growth of sectors that have been fast to adopt the enabling command gained by the use of cutting-edge technology from market leading systems. [http://www.navicomdynamics.com/]
Port Ash Australia utilises manned ship models to provide real feel, real world training on its purpose built 2 Ha (5 acre) lake, and employs experienced Marine Pilots to provide world class training.

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The New Zealand Maritime School’s (NZMS) professional development programmes 2018.

Advanced Marine Pilotage training

In response to industry feedback, pilots and marine managers can enrol in one or multiple days at their choice, or receive a discount for enrolling in the full five days. The course will deliver a range of topics with the detailed scheduled announced a minimum of four weeks prior to the course dates to allow late enrolment. Topics include navigation and bridge management, based on the SMS concept, management, and updated with the latest research on ergonomics and master-pilot relationship. It will address issues of concern to pilots such as the application of new technologies, legal aspects of piloting, and the development of RISK management strategies. This course contributes to the pilot’s CPD requirements as per Maritime NZ’s regulations (MR-920.115). The course may be recognised as upgrade course to renew an expired STCW89/CoC as Master.

Duration: Five days
Dates: 30 April - 4 May 2018
         and 6 – 10 November 2018
Cost: Enquire on application
Quote: Minimum six, maximum 10 students

Advanced Portable Pilot Unit (PPU) training

Developed by Ports of Auckland and now proudly offered by the NZMS for all current and trainee pilots. The training is delivered by senior POAL pilots using the latest NavyCom Dynamics PPU in the full mission Training 5000 bridge simulator.

Duration: Two days
Dates: On request
Cost: Enquire on application

Seaways: Module 1 – Certificate in ASD and ATD Vessel Handling

This is a challenging course but also an extremely rewarding one. Driving an ASD/ATD tug at the required standard can only be achieved with repetitive practice over and over again. There are 21 individual exercises followed by a final competency assessment. You will complete each of these to a satisfactory standard before moving onto the next. At the beginning of each day’s training session you will also repeat all previous exercises. The course is a foundation course and prerequisite for the module 2 training.

Duration: Five days
Dates: 12-16 February 2018
         and 6 – 10 November 2018
Cost: NZ$960/CC
Quote: Maximum of four students

Seeways: Module 2 – Certificate in Undertaking Harbour Towing Operations

In this module we shall take the high level of tug control you learnt in Module 1 and apply it to assisting a ship whilst under pilot orders. There are 19 individual exercises that must be completed in the simulator plus six supplemental exercises and a final competency assessment.

Duration: Five days
Dates: 19-23 February 2018
Cost: NZ$960/CC

Generic ECDIS training

This Maritime NZ approved training programme is based on MIN module course 127 and STCW Reg 1/1 and table A-1/1. Successful participants of this course will also receive a type specific familiarisation certificate for the Transas 4000 ECDIS system.

Duration: Five days
Dates: Enquire on application
Cost: Enquire on application

Wrightway Ltd

A series of 1 and 2 day Human Element and BRM introduction courses are planned for March 2018 – please register your interest.
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Introducing the Next Generation

**GyroPilot v3**
- Transmits the ship's AIS position while adding independent rate of turn (ROT) from its gyro & smoothed heading (HDG) data.

**GyroPilot Plus**
- Fully independent add-on position sensor for the GyroPilot v3 (GPv3).
- L1 enabled, mGNSS device that receives SBAS corrections.
- Combined with the GPv3, the system provides independent position (from the GP Plus) and independent ROT and smoothed HDG (from the GPv3 plugged to the AIS plug).

- Tough, portable, cost effective and reliable, GyroPilot Plus weighs 300 gms and has a 30 hour battery life.

Wirelessly link GyroPilot Plus, an independent position sensor to upgrade to a more accurate and robust system.

Tough, portable, cost effective and reliable, GyroPilot v3 weighs 300 gms and has a 30 hour battery life.

Navicom Dynamics
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Phone: +64 9 915 5330 | sales@navicomdynamics.com | Follow us 🌐 LinkedIn