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IN BRIEF

Emissions toolkit

To reduce emissions across the maritime sector, national authorities need to first quantify those emissions and then develop a strategy to reduce them. The International Maritime Organization (IMO) has released a set of free-of-charge toolkits to address this. The Ship Emissions Toolkit and Port Emissions Toolkit has been developed under the GEF-UNDP-IMO Global Maritime Energy Efficiency Partnerships (GloMEEP) Project, together with its strategic partners, the Institute of Marine Engineering, Science and Technology and the International Association of Ports and Harbors.

Fuel availability

Liberia has submitted a paper to the International Maritime Organization Marine Environment Protection Committee calling for early reporting on the availability of fuel oil that is compliant with the new 0.5 per cent global fuel oil sulphur limit well in advance of 1 January 2020, the effective date the new fuel oil must be used on board ships. David Pascoe, senior VP, maritime operations and standards, Liberian International Ship & Corporate Registry, the US-based manager of the Liberian Registry, said: "Shipowners and operators hold a disproportionate responsibility in meeting the challenges associated with implementation of the 0.5 per cent m/m global fuel oil sulphur limit and should not need to guess where or whether compliant fuel will be available."

Mental health

Synergy Group has launched iCALL, a free psychological helpline for the worldwide maritime community available 24/7 in English, Hindi, Marathi, Gujarati, Bengali, Tamil, Telugu, Sindhi and Kutchi via phone, email and the chat-based nULTA app. "Numerous studies into the psychological health of seafarers have shown that large numbers of seafarers suffer from obvious manifestations of impaired psychological wellbeing such as social isolation and depression," said Captain Rajesh Unni, CEO and founder of Singapore-headquartered Synergy Group.

Criminalisation biggest fear for seafarers

Criminalisation remains a major worry for those working in the industry, with nearly 90 per cent worried about the risk of prosecution, according to a survey by the maritime professionals' union Nautilus International.

The survey of more than 500 seafarers found nearly three-quarters of respondents (70 per cent) suggested the threat has a direct impact on their desire to remain at sea and identified a resulting impact on recruitment and retention within the industry.

The announcement follows the launch of Nautilus International's fair treatment campaign which provides practical support for seafarers. This includes a 24/7 helpline, a worldwide network of lawyers and the JASON advice and assistance scheme (the Joint Assistance and Support Network), run in partnership with Nautilus Federation unions. The union will also be launching a new mobile app, giving members instant access to advice following an incident.

Over one in 10 of those surveyed reported they have been directly involved in legal action, opening them up to persecution and requiring union support. Of these, a third of cases (30 per cent) involved civil action and a fifth (20 per cent) involved maritime administrative action or criminal action.

The announcements coincide with the start of a trial in France of the US P&O cruise captain who allegedly breached pollution limits in Marseille earlier in March this year. If found guilty, the individual could face up to a year in prison and a €200,000 fine.

The union's head of strategy, Debbie Cavaldoro, said: "The criminalisation of seafarers not only has a damaging impact on individuals who can suffer as scapegoats, but also on the economy, as skilled workers will be put off from entering the industry that we rely so much upon.

"Sadly, the example in France highlights the injustice seafarers face following incidents at sea. As a result, our fair treatment campaign aims to present these issues to the industry and government alike, while providing practical support to ensure members' rights are protected at sea as they would be on land." *MRI*

Legal status of electronic bills of lading analysed

Law firm Clyde & Co, in conjunction with the International Chamber of Commerce's (ICC) Banking Commission, has launched a report on the legal status of electronic bills of lading, considering whether the law in this area reflects the technological change that is rapidly occurring in the international trade sector.

For centuries the principal document in international trade has been the bill of lading (B/L). It is issued by the carrier and can be transferred from seller to buyer, often via their respective banks. The B/L is a "document of title" in that the holder of the original B/L has specific legal rights in relation to the goods. The question remains whether those rights and liabilities are replicated if the original paper B/L is replaced by an electronic bill of lading (eB/L). Similarly, there is currently uncertainty over the legal consequences if the eB/L is subsequently printed in paper format.

The ICC Banking Commission appointed Clyde & Co to conduct a survey on the legal status of eB/Ls, whether in the form of an electronic record or in paper format when converted from an electronic record. The survey covers 10 jurisdictions: UK (English law), US (NY law), Germany, Netherlands, UAE, China, Singapore, Brazil, India and Russia. The report sets out the relevant issues and the results of the survey.

The survey has been coordinated by London based Clyde & Co consultant Stephen Tricks and partner Robert Parson. Tricks said: "As technology continues to disrupt industry it is essential that the law can keep pace with new developments. We were therefore delighted to work with the ICC Banking Commission on this important report."

Sean Edwards, lead of the legal work-stream of the ICC Digitalisation Working Group added: "To work out what needs to change in the law to support digitalisation in this area, we first need to know what the law is today." *MRI*

IN BRIEF

Shipping confidence

Shipping confidence dipped very slightly in the three months to end-August 2018, according to the latest confidence survey from accountant and shipping adviser Moore Stephens. The average confidence level expressed by respondents was down to 6.3 out of a maximum possible score of 10, this compared to the four-year high of 6.4 recorded in May 2018. Confidence on the part of owners, however, was up from 6.6 to 6.8, equalling the highest level achieved by this category of respondent when the survey was launched in May 2008, with an overall rating for all respondents of 6.8 out of 10.

Fishing collisions

The UK P&I Club has launched the second in a series of educational and informative, training videos, "Collision with a Fishing Vessel", which explains how a bulk carrier, navigating at night with good weather and visibility, collided with a fishing vessel despite detecting the craft in good time. The series of videos, which are being released on a bi-monthly basis, provide an interactive training experience with a focus on educating crew members on common marine accidents and how to prevent them using real-life examples. Hosted across Thomas Miller websites, including UK P&I, as well as its YouTube and Vimeo platforms, the videos will be available for training purposes by both marine employers and employees.

Cargo solution

Willis Towers Watson has launched an innovative solution aimed at the cargo market which combines geopolitical exposures which previously would have to be covered separately. Cargo Undercover minimises potential gaps in coverage and the likelihood of claims disputes, as well as removing the need to establish the motivation for a claim – a challenge at times of political instability. It provides cover for a variety of geopolitical exposures including political violence, terrorism, rebellion, terrestrial wars and looting, whether politically motivated or otherwise.

UK economy depends on ports

Ports are vital to the wider British economy and can be the perfect channel to increase the UK's export performance, according to the Confederation of British Industry (CBI) president, John Allan. Demonstrating how exports will give a boost to the economy, and make a company more productive and profitable, Allan explained why it is time to steer towards rapidly expanding the UK's exports.

He focused on three key areas – infrastructure, innovation and skills. By developing existing infrastructure, nurturing talent from both here and abroad and reforming the apprenticeship levy, he said the UK is well on the way to increasing its competitiveness.

On the UK's current imbalance of exports to imports, Allan said: "The UK's trade deficit is the greatest it's ever been, second only to the US. The vast majority of ports handle far more imports than exports. And more often than not, cargo ships arriving in the UK will leave here completely empty. Today, less than 10 per cent of businesses engage in exporting activity. And that's the challenge."

Allan said: "A lot of it starts with infrastructure. We can't have exports without ports.

"We also need long-term investment in the roads and railways which connect these ports to people and to goods. This includes delivery of long-term projects – HS2 and Crossrail. This includes planning infrastructure at a local level, through the creation of new strategic transport bodies, to provide full coverage across English regions."

On getting the right Brexit deal for ports, Allan said: "No matter what trade deals we sign the EU will continue to be our nearest landmass. It is our job to provide the facts; to be frank about the real impact of Brexit on the border checks and the pay cheques. And it's why we need ports and the businesses they support to help the CBI get it right when it comes to customs, or regulation. To minimise the challenges. And maximise the opportunities. We must focus on our exporting agenda starting with the right infrastructure, innovation, and skills. So that the choices we make in the next few years set us up for the next 50." *MRI*

BIMCO and industry partners to launch hull underwater cleaning standard, amid environment concerns

In response to growing concerns over the impact of hull biofouling on the marine environment, BIMCO and a group of industry partners have set out to create an internationally recognised standard. The group consists of eight different organisations, including paint manufacturers, ship owners and cleaning companies, with the aim to take a holistic approach to establishing an international standard that will work in practice. The standard is expected to be finalised in the autumn of 2019.

Today, underwater cleaning is only allowed in a few locations around the world, and there is a trend for coastal and port states to tighten their rules for underwater cleaning, as well as an increase in ports prohibiting it all together. This may increase emissions from shipping as fouling increases the fuel consumption or in worst case force the ship to change its route. "Creating an international standard is important. We need more places available around the world for underwater cleaning. We believe that a standard that is safe, efficient and environmentally sustainable, will encourage states to make more places for underwater hull cleaning available," says Aron Frank Sørensen who heads the working group and heads BIMCO's marine technology and regulation.

The standard will ensure that the result of the cleaning is in accordance with a set of specifications, that the environmental impact of the process and coating damage is controlled and that the cleaning process is planned, safe and effective. Part of the standard will therefore relate to how to ensure that the paint is not damaged during cleaning, and that debris and wash-water is collected in a practicable and sustainable manner.

The standard will also cover how shipowners can use it in their ongoing maintenance plans and, will establish an approval system for underwater cleaning companies, a currently unregulated and fragmented market. *MRI*

IN BRIEF

Industry challenges

Around 80 members of the maritime industry from the Middle East and India attended a seminar hosted by North P&I Club on some of the most pressing challenges facing the industry. The event focused on the practical and legal implications of the changing sanctions regime imposed on Iran and the global fuel sulphur cap being introduced on 1 January 2020. North's global director of underwriting Savraj Mehta opened the event, saying: "The maritime industry has changed considerably in recent years and North P&I Club is no different."

Offshore cover

The UK P&I Club, in conjunction with Thomas Miller Specialty Offshore (TMSO), has launched a range of insurance covers for members operating in the offshore arena. The products cover a wide range of operations such as anchor handling, tug and supply, offshore and diving support, offshore construction, pipe and cable laying, seismic research, windfarm support, and ROV/subsea operations. The UK P&I Club and TMSO have extensive experience in the offshore market, having previously worked in both the offshore construction and offshore P&I industries.

Joint venture

International SOS, a medical and security risk services company, and Future Care, a maritime telemedical assistance and onshore medical case management service, have formed a strategic joint venture, which will unite Future Care's depth of industry expertise and International SOS's global provider network. It will deliver telemedical assistance and onshore medical management services to the commercial maritime shipping sector. Christina DeSimone, CEO Future Care, will lead the venture. The joint venture will focus on client-led operational synergies, as well as using the best practices of each partner. This will achieve operational excellence and a worldwide footprint, for commercial maritime sector clients.

Making the transition from ship to shore

The prospect of coming ashore to progress their career can be daunting to many working at sea, according to a survey into the experiences of those who had made the ship-to-shore transition conducted by the Institute of Marine Engineering, Science & Technology (IMarEST). Many, understandably, reported feeling apprehensive about climbing the ladder.

Those who found the transition relatively straightforward stressed the importance of studying for certain qualifications before leaving the sea. As one engineering superintendent explained, sea-going qualifications are acceptable for operational level roles, but not the managerial roles that senior sea staff are aiming for: "For that they need degree and postgraduate qualifications."

Many of those who struggled cited the practicalities of arranging interviews as a major frustration. It often proved hard for seafarers to schedule interviews whilst on leave and then persuade a potential employer to wait until they returned from their next voyage for the next step.

Another common difficulty was adjusting to working in an office environment, where the pace of work lacked the urgency ex-seafarers are used to. A typical comment was at sea "things have to be done and the results of them not happening are far more immediate and obvious. Ashore, people go home at 5pm. They are not living the job." There were other culture shocks, including a need for greater diplomacy and patience, and adjusting to a less hierarchical management structure.

Technical skills and competence are only part of the story when it comes to stepping ashore. They must be accompanied by a mixture of "soft skills" needed for effective people and project management, such as leadership, communication (verbal and report writing), negotiating and networking, and administration skills such as budgeting, finance, logistics and procurement. Several respondents said that secondments ashore during their seagoing careers would have (or had) helped prepare them to "swallow the anchor".

An overwhelming 88 per cent believed that the right sort of education or training would assist the transition. Two-thirds said they would have benefited from either management/business training or gaining a higher education qualification. More than half (56 per cent) of those surveyed were promoted to a higher position when they came ashore while some saw a salary drop, which was often attributed either to a lack of formal qualifications or else a difficulty in communicating the relevance of their skills. *MRI*

Standard Club leaves Lloyd's

The Standard Club, the world's fourth largest P&I Club, is withdrawing from underwriting at Lloyd's from 2019. The Club established a syndicate in 2015 to underwrite marine and energy risks. It represented one strand of the Club's broad strategy to provide its members with a wider range of insurance covers to meet their needs and diversify the Club's source of revenues.

It said it remains committed to these strategic aims but it has concluded that current overcapacity and a weak pricing environment have made Lloyd's a challenging environment from which to develop a profitable underwriting business with sufficient scale. The Club is exploring alternative approaches to provide its members with additional insurance covers, including establishing an underwriting agency, to build on the strong base established through the Lloyd's initiative. Jeremy Grose, chief executive, The Standard Club, said: "Conditions in the Lloyd's market are far more challenging today than they were when we planned the launch of the syndicate and it is the right decision to pull out now and allocate the capital to other initiatives."

Meanwhile, the boards of The Strike Club and The Standard Club have announced plans for The Strike Club to join The Standard Club group. On approval, the transaction will provide members of The Strike Club with the stability and A-rated financial security of being part of a larger mutual insurer with more than US\$460 million free reserves. Members of The Standard Club will benefit from access to marine delay insurance.

Under the proposals, The Strike Club will continue as a member-controlled, dedicated mutual delay insurer, operating as a class of The Standard Club. It will be supervised by the current Strike Club Board, which will become a Strike committee of The Standard Club.

- For more on the Lloyd's market, see page 20 *MRI*

AEGIS
CARGO UNDERWRITER



James Hyett has been appointed by AEGIS London as cargo underwriter. He joins from Sompo International where he was a marine underwriter.

Based in London, James will report to Richard Palengat, AEGIS London's head of marine and energy. Hyett's London market career spans 18 years, beginning in the claims department of broker JLT. After becoming a placing broker with a series of broking firms culminating in Lockton, he joined Sompo International in 2010.

Haynes and Boone
NEW PARTNER



Mark Johnson, a transactional lawyer and former naval officer and ship captain, has joined Haynes and Boone, LLP as a London partner in the firm's shipping practice.

Mark served 13 years in the Royal Navy, in a wide variety of posts including boarding office, navigating officer, and exchange officer (to the Royal Dutch Navy). He also served as a captain of a patrol boat through 2005 and 2006 – an appointment which included planning and directing the deployment of multiple patrol vessels in addition to his own. He said his experience as a naval officer working to build motivated teams and provide resilient planning and risk management has been helpful in his legal career.

Liberia
OFFSHORE TEAM



Liberia has established an offshore and gas technology department, renewing the registry's focus in these sectors, to be headed by Captain Stephen Bomgardner, an industry expert and consultant with offshore experience as a master/OIM of drillships. This department strengthens Liberia's presence in the offshore and gas sectors and is a response to the registry's unprecedented growth in 2018.

The department includes technical, safety, and registrations personnel and capabilities.

Galileo Academy
NEW CREW CENTRE

Galileo Maritime Academy has completed its new architect-designed professional crew training centre and crew residence in Phuket, Thailand. The "T" shaped buildings comprise state-of-the-art training and recreation rooms, a seafarer medical centre, a culinary arts and hospitality school, a 3 m-deep survival training pool and first-class accommodation for 30 students.

This central complex is located just above Yacht Haven Marina, the largest superyacht marina in Asia. The 200-acre site includes a marine engineering school, a survival craft and fast rescue boats training jetty, an advanced fire-fighting school and eight training vessels moored in the marina.

Thomas Miller
CHARITY DRIVE



Thomas Miller (Americas) Inc has raised more than US\$206,000 at its annual "Play For Pink" Charity Golf Day held on 2 October at Forsgate Country Club, Jamesburg, New Jersey. Thomas Miller members and brokers from UK P&I Club and TT Club, together with attorneys and industry experts from across the US, participated in the golf competition which continues to support the Breast Cancer Research Foundation (BCRF) where 90c of every dollar raised goes directly to fund research. BCRF is the highest rated breast cancer organisation in the US.

Tall Ships Youth Trust
FLAGSHIP APPEAL

The Tall Ships Youth Trust, which offers young people, many of whom are disadvantaged or disabled, life-changing experiences at sea, launched its New Flagship Appeal at St James's Palace. The reception, hosted by The Duke of York – Patron of The Tall Ships Youth Trust – launched the appeal to raise funds for the purchase of a new flagship vessel.

The Tall Ships Youth Trust is the UK's oldest and largest sail training charity supporting more than 1,200 people each year. Beneficiaries face challenges including learning difficulties, hearing or visual impairments or behavioural, emotional and social difficulties. It also enables young carers, youth offending units and other individuals not in employment, education or training to benefit from the experience of life on ocean-going vessels.

In total, it is estimated that the Trust has helped 117,000 beneficiaries and sailed more than 2 million nautical miles. It is hoped a new vessel, akin to the schooners the Trust owned 60 years ago, will enable the Trust to more than double the capacity of young people they can take on the voyages each year.

UK P&I Club
NEW CHAIRMAN

Directors of the UK P&I Club have, subject to regulatory approval, elected Nicholas Inglessis as their new chairman, succeeding Alan Olivier.

Nicholas, who has been a director of Samos Steamship, the 140-year-old Greek ship management company, since 1991, brings considerable experience to the role. He has been a director of the UK Club since 2005 and was elected deputy chairman in 2012. Olivier, who was at South African company Grindrod for more than 30 years, was elected chairman of the Club in 2013.

Inmarsat
SAFETY PRIZE

Inmarsat's new Fleet Safety service has been named Best Safety Service of the Year in the IHS Safety at Sea Awards 2018.

The award celebrates developments that demonstrate both innovation and effectiveness in enhancing the safety of vessels. This year, the service accolade recognises the role Fleet Safety has played in enhancing safety at sea and its part in modernising the IMO's Global Maritime Distress and Safety System (GMDSS).

Inmarsat senior vice president of safety and security Peter Broadhurst said: "We are especially delighted that our contribution as a provider of services day in, day out has been rewarded, given that improving safety at sea was the mission that Inmarsat committed itself to at IMO on our foundation four decades ago and remains so today."

Personal technology aboard ships: a risk to seafarers' health?

Richard Stevens, at The Standard Club, discusses the risks posed by seafarer access to improved communications

There is little doubt that developments in technology in the last two decades have brought about a revolution in the way individuals communicate. Anyone in possession of a smartphone or tablet, and within the vicinity of a mobile phone or wi-fi network, is able – quite literally – to see, hear, and talk to friends or family across the entire world in a matter of moments. Clearly the benefits of these developments; such as bringing people close together, enhancing the speed of communication, and the improvements to commerce and industry cannot be exaggerated.

The maritime industry has benefited from this change in technology, ensuring ships across the world's oceans are in continual contact with navigational aids, weather information, medical services and similar vital services. Ships of every shape and size are now linked almost permanently to the rest of the world through communications technology, and a large proportion of ships now offer wi-fi technology to crew aboard. There is now talk of autonomous vessels, controlled from the land, via enhanced internet and communications technology.

Seafarers, by definition, spend many weeks and months at sea, separated from families, friends, and loved ones. As such, one might logically argue that the developments in technology will benefit seafarers, allowing them to maintain regular communication with the “outside world”, and therefore to alleviate any anxiety of being away from home for such long periods of time, and the isolation that may bring.

“Blue light from phone or tablet screens is said to have an impact on sleep patterns because it blocks the release of melatonin which is needed for that activity”

Certainly, being able to communicate so easily and quickly must be recognised as a positive development in life at sea. It is logical to assume that the majority of seafarers possess a smartphone and many others will also own tablets of some description. This, combined with a steady wi-fi connection aboard a ship, has arguably transformed the lives of seafarers for the better.

Indeed, there is some suggestion that a continual wi-fi connection – rather than the intermittent mobile phone reception obtained when near shore or in port – is preferable, in that seafarers do not need to “ration” their communication time, and can deal with issues (marital, familial or otherwise) promptly, without the added stresses of delays in communication.

However, all that being said, in the last few years there has been a steady increase in the warnings issued by health services

and medical bodies worldwide as to the potential side effects of prolonged use of personal technology. Those pronouncements centre on both the physical as well as mental health impact of excessive or prolonged use. An often-repeated warning concerns the blue light from the screens of phones or tablets which is said to have an impact on sleep patterns because it blocks the release of melatonin which is needed for that activity.

There are also warnings that prolonged use of personal technology can cause eyesight difficulties (so called “computer vision syndrome”; which leads to eye strain, blurred vision and dry eyes). Perhaps more alarming was a recent study by the American Medical Association which demonstrated that continual exposure to artificial light generated from tablets and smartphones can lead to the disruption of circadian rhythms (the natural 24-hour physiological processes), with negative effects such as depression and mood disorders, and an increased risk of cancer.

When those possible side effects are imported into a maritime environment, the consequences can be significant or potentially very dangerous, for both the ship and to the individual seafarer. As a straightforward example of this, a master recently told the writer an anecdote involving a seafarer who was required to call his partner at the same time every day, no matter where in the world he was. While amusing in one context, the implications to the safety of a ship of a seafarer who is fatigued through lack of sleep because of a daily telephone call are clear to see.



The side effects noted above can clearly impact on the health and wellbeing of seafarers. Fatigue is a regular cause of accidents and injuries, from the minor “trip and slip” to the life changing. That in itself leads to higher levels of injury claims by seafarers, which obviously impact the finances of a shipowner, and are noted within the statistics of P&I insurers.

Seafarers who spend their resting hours in their cabins continually connected to the ship’s wi-fi network risk becoming isolated at the very least and, at worst depressed, and fatigued. Given the reduction in manning levels aboard ships in recent years as a result of increased automation, and the mix of languages and nationalities working together, the risk of isolation amongst seafarers is increasingly high. Rather perversely therefore the connectivity gained by developments in technology and communications could lead to some individuals, who are already working in comparatively small groups in isolated surroundings, becoming more isolated and disconnected from day-to-day work and life.

“Access to communications technology should be coupled with suitable programmes to protect the wellbeing of seafarers, particularly given the possible side effects”

The importance of mental health is increasingly being cited by governments and health services, and undoubtedly the impact of mental health issues on any individual can be severe. From stress through anxiety through depression, mental illness in any form can be debilitating and requires careful treatment. Seafarers who suffer a recognisable mental illness may require repatriation and treatment in their home country. There is therefore a financial impact to both a shipowner and P&I insurer in such circumstances.

Moreover, according to the World Trade Organization, the rate of suicide for seafarers is three times as high as for shore workers. Further industry data revealed that the rate of suicide amongst seafarers rose threefold from 2014 to 2015, which is startling. It also noted that the anxiety, pressure of work, social isolation and disturbed sleep were relevant to many claims presented by seafarers. The fact that these symptoms are identified as potential side effects from excessive use of personal technology should clearly not be ignored and there may be a risk that without intervention by shipowners or the industry in general the aforementioned statistics will remain unchanged or could even increase.

A recent study undertaken by the Sailors’ Society in conjunction with Inmarsat (the global mobile satellite company) and Royal Holloway, University of London, identified that the latest generation of seafarers identified with the need for shipowners to provide suitable communications technology aboard ships (specifically access to a wi-fi connection) and that this was a significant driver when determining a suitable shipowner employer. It is clear therefore that access to such technology is a major “pull” factor to a potential seafarer. Arguably therefore the access to that technology, to address the expectations of seafarers, should be coupled with suitable programmes to protect the wellbeing of seafarers, particularly given the possible side effects noted above.

There are arguments that the maritime industry has been slower to react to the impact of personal technology, but there are numerous bodies and organisations (including P&I Clubs) which have sought to give guidance (or even provide solutions) to shipowners to address the potential side effects of the use of personal technology, most notably the impact on mental well-being. These include restricting wi-fi access to communal areas, encouraging group daily exercise, more social interaction between crew in general and providing training and guidance to highlight the possible risks of excessive use. The intention is to try to minimise not only the possible isolation of seafarers but also to reduce the amount of time seafarers spend using personal technology. Those goals are designed not only to increase the operating efficiency of ships, but also to ensure the well-being of seafarers, and negate the identified side effects of this technology.

With more than 1.65 million seafarers employed worldwide, and with the increasing level of both automation aboard vessels (leading to smaller crews), the level of enhanced communication available to seafarers is at once a benefit and a cause for concern. Younger seafarers are increasingly seeking employment aboard vessels which are comprehensively “connected”; and while that is clearly understandable in the modern world, it seems arguable that ongoing steps must be taken to ensure the potential physical and mental side effects of excessive use of personal technology are managed and mitigated so far as possible. **MRI**



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Richard Stevens

Richard Stevens, divisional claims director, international, at The Standard Club

Why today's seafarers are turning digital

Sean Moloney examines the ever-growing demand from seafarers to stay connected with friends, family and definitely their bank accounts while at sea

A friend of mine said something the other day which totally threw me. Turning his back on the advantages that digitalisation increasingly offers to our daily lives, he proudly declared that he has never used online banking and never would because of his fear that his security would be breached.

So, he would much rather jump in his car, drive the eight miles to the bank, park the car at a cost of £1.50, then queue up for a further 10 minutes behind the one working till to withdraw whatever cash he needed to pay his bills and then repeat the whole process to return home. And what about the risk involved in carrying the cash from the bank to his car? His own personal security is at greater risk.

By eschewing the computer, he denied himself the thrill of operating in a cashless society. He would have been able to securely and efficiently pay his bills online, check his balances, maybe transfer funds from one account to another, all in the knowledge that his privacy and security were intact and that his transactions were trackable.

Welcome to the new world.

But as Stuart Ostrow, president of ShipMoney says, with up to US\$6 billion in hard currency still being delivered to the global merchant fleet on an annual basis to pay crew wages and supplier bills, shipping companies can be accused of deploying idle capital, which equates to almost US\$180 million in agency fees.

For example – looking at a fleet of 50 vessels with 20 crew members per vessel, on the basis that \$500 per month onboard is used in cash advance for crew and \$15,000 for ship operations, some \$15 million in cash would be delivered to the fleet. In this example, the company could be incurring \$450,000 in direct costs just to send cash to their vessels – assuming the average cost of 3 per cent for cash-to-master.

“Using an online portal will give seafarers more power over how much money they send home and how they spend it. This doesn't mean to say that vessels should be cashless, rather just have less cash”

Ostrow went on to pose this rhetorical question: “What if there was a solution to cut that cash in half by using alternative payment methods? That's \$225,000 in direct cost savings by simply delaying the delivery of cash from every two months to every three months and cutting the amount of cash for each delivery by 25 per cent. And this does factor in the return of the idle capital back to the balance sheet?”

He highlighted wire costs, since virtually all crew members are paid via a wire sent to a bank account in combination with some amount of cash onboard. Citing a World Bank study of remittance costs, the global average is 5.7 per cent, with banks being the most expensive service providers with an average cost of more than 11 per cent. Cost being defined for this study include transaction fees, foreign exchange, and transit costs. Surprisingly, the least expensive option identified in the study are prepaid cards.

Taking the same example of 50 ships with 20 crew members and an average wire transaction fee of \$7.50, Ostrow said that the wire fees for this company would approach \$90,000 annually.

And most notably, this does not factor in the costs incurred by the seafarers when US dollars are remitted to an account denominated in local currency. This is the “hidden cost” incurred by seafarers since they do not have any visibility as to what the exchange rates are.



“As the industry continues to look for sustainable initiatives, why are seafarers incurring extra costs just from receiving their wages in cash? Sending money back home and exchanging money at port all add up to unnecessary costs for seafarers, in an age when wire-transfers and card payments are as regular as clockwork”, he said.

“By adopting a digital payment strategy and reducing the amount of cash onboard, masters and seafarers can build a sustainable initiative, which will save time and money. For seafarers, absorbing exchange rates and the cost of sending money can make a huge difference in their monthly pay packet. Using an online portal and reducing these costs will give seafarers more power over how much money they send home and how they spend it. This doesn’t mean to say that vessels should be cashless, rather just have less cash.

“Seafarers must be treated as a valuable and integral part of the team. And maritime companies should offer crew members financial access and flexibility similar to shoreside staff.

“In today’s digital world of real-time transactions that can be initiated anywhere and at any time, there is no reason why large volumes of cash are still sent to ships to pay crew wages and onboard ship expenses. It is our mission to effectuate change in the maritime industry to adopt alternative financial solutions.”

So, prepaid cards are seen as the way forward but, as Greg O’Connell, EVP of European business development at ShipMoney, contended, while there is no conscious push from the ship

owners and managers to embrace the benefits of digitalisation when it comes to transferring money to a vessel, the industry is finding itself forced to change because of society’s march away from cash in favour of, and increasing familiarisation with, more secure and efficient forms of payment.

“The way people pay from a treasury perspective, they all have a method of internet banking nowadays; even the crew has a method of internet banking. The landscape of what we do ashore is changing, because it is a natural evolution,” O’Connell stressed.

But with the drive towards digitalisation shifting so quickly, and new disrupters emerging almost every day, how are maritime payment solutions providers such as ShipMoney remaining relevant and compelling to the marketplace?

O’Connell again: “It’s a good question when based on my reply which would be that there are still nationalities and demographics in the market that lack access to e-commerce, via card or that it is just too expensive to use their own cards. So, our platform will provide value from the outset if they want access to their funds. This will drive behaviour itself because ships are getting more internet access onboard now. The question is, how much internet access, but it is improving.

“Demand for change is there but it begs the question as to whether the market is quick enough to react. Are ship owners and managers agile enough to move with the times?”

“There is still strong demand for prepayment cards coming from eastern Europe and beyond. A good example is Ukraine where the Ukrainian banking system is in default. This means it is very difficult for Ukrainians to get money out of their bank accounts, so what they like to do is have a certain proportion of their funds placed on a card, so they can have access to their money and transfer funds to (for example) their wife’s companion card.”

Demand for change is there but it begs the question as to whether the market is quick enough to react. Are the ship owners and the ship managers agile enough to move with the times? As O’Connell suggested, yes absolutely, but when the answer might be a subtle no, not yet, then payment solution providers have to be quick and agile enough themselves to plug the gap.

“If you look at our platform we can conduct a manual card prepayment process or carry out an API link. API, or application programming interface, as it is known, is the digital platform so when your system talks to that operated by the owner or the managers they can run a process from Excel payment and one bank transfer. But irrespective of the systems they employ, whether current or older legacy systems, ShipMoney has the capacity to incorporate this and there wouldn’t be an interruption to their normal workflow,” he said.

If the question is, are ship owners agile, and you put it into context of ShipMoney, then according to O’Connell the answer is yes on the basis that payment can still be made, manually or digitally. “This meets the needs of both current and legacy systems,” he said. [MRI](#)



Preventing accidents and personal injuries

The UK P&I Club's **David Nichol** comments on the measures we should be taking to help prevent accidents and personal injuries occurring onboard

Personal injury incidents to crew members represent one of the largest categories of P&I claim both in terms of frequency and cost. By their very nature, significant personal injuries are traumatic, physically and also mentally, potentially resulting in full or partial disability, unfitness for future employment and sometimes death. Their impact can therefore be far reaching, not just for the affected crew members but also their families and dependents. Such incidents can also deeply affect ship management staff, who may have known the seafarer and their family for many years.

The very nature of sea-going life can be a contributory factor to the incidence of crew personal injuries as well as exacerbating their consequences when they do occur. Ships operate in a hostile environment, with ship motions depriving seafarers of the predictably stable platform for moving about and working that shore workers would take for granted. Sick bay equipment and medicines on board are basic and medical training of officers and crew rudimentary. When an accident occurs, the ship may be many days away from professional shore medical facilities, meaning what would ordinarily be considered a relatively minor injury ashore could turn out to be life threatening in the absence of timely medical intervention.

Clearly the aim for all ship managers and crew must be to prevent accidents happening in the first place. The concept of "zero accident" policies is sometimes derided as being unrealistic or unobtainable, but must nevertheless be something that the shipping industry strives for. However, reducing or eliminating accidents is not possible to achieve without having a full understanding as to why they occur in the first place.

Although it is well established the large majority of accidents are attributable to human error, this rather broad term needs to be dissected to determine what factors are actually at work. At an elemental level, we are all prone to human failings and vulnerabilities which must be overcome by a combination of nurture, cultural conditioning, learning, and vigilance. We all make mistakes but it is within our evolutionary make-up to learn by them to survive.

A great challenge facing ship managers when recruiting seafarers is identifying applicants who possess the right aptitude not just for the position but also for the peculiar demands and rigours of life at sea. A career at sea is not just a job but a way of life for which not all people are naturally suited. Therefore, apart from holding the requisite pieces of paper, recruits need to be of the right character, fortitude and resilience to enable them to be happy, safe and successful seafarers.



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Modern seafarers must now possess a plethora of training certificates in accordance with STCW requirements. To what extent these qualifications are meaningful will very much depend on the quality of the training received, which is not always easy to assess. For all the noble aims of STCW, a criticism sometimes levelled at the system is it can drive expectations of competence down to a lowest common denominator, rather than producing seafarers able to meet the demands of the modern shipping industry.

Deficient training, experience and knowledge gaps are undoubtedly a contributory factor to many accidents. However, there are also numerous instances of seafarers making inexplicable uncharacteristic errors despite being well trained and suitably experienced, with the following being a tragic example.

The chief officer of a general cargo ship loaded with sawn timber did not appear on the bridge as expected to perform his afternoon watch. On being notified by the duty officer on watch, the master ordered a systematic search of the vessel during which his body was found lying motionless below an open cargo hold access hatch. The alarm was raised but before a properly planned rescue attempt could be performed, the chief engineer entered the hold without protection and very soon collapsed on top of the chief officer. Thereafter, the second officer followed suit and himself became a casualty. It was only then the remaining crew members carried out a properly executed rescue using breathing apparatus. Unfortunately, the chief officer and chief engineer could not be revived and the second officer suffered serious injury.

“Reducing or eliminating accidents is not possible to achieve without having a full understanding as to why they occur in the first place”

Later investigation determined the casualties were asphyxiated after entering a hold space severely depleted of oxygen caused by the nature of the sawn timber cargo. Although there was some criticism of the vessel safety management system in respect of enclosed space procedures, sufficient procedural guidance was in place to have required enclosed space pre-entry safety checks to have been performed. Information was available on board which could have alerted the ship's officers to the potential danger of entering a hold space loaded with sawn timber, and should have been consulted. The chief officer and other crew members should have been aware

of the hazards and precautions associated with enclosed space entry and yet they were not observed on this occasion.

This is not an isolated example of otherwise good crew making fundamental mistakes and thus endangering themselves and others due to the neglect to apply accumulated knowledge or follow documented procedures. The reasons why this occurs with alarming regularity are varied and include complacency, lack of motivation or alertness, poor material resources or management support, pressure of time, conflicting and high work demands and fatigue, which can all conspire individually or in combination to influence seafarers in not performing to the standards they would normally expect of themselves. The actions of the chief engineer and second officer were probably an instinctive response to wanting to save the life of fellow crew members with little regard to their own safety, but why didn't other crew present intervene to stop them entering the hold? This is again a common feature of accidents whereby for cultural or other behavioural reasons, seafarers do not feel able or willing to challenge the decision making or actions of someone more senior in the shipboard hierarchy.

Just as the underlying causes of accidents can be complex and diverse, providing management solutions requires a multi-faceted approach. Although not intended as an exhaustive overview of what steps ship managers are taking to develop a good safety culture within their organisations, the following guiding principles can be considered to apply not just in the context of the preventing personal injuries but in accident prevention as a whole:

- Select the right crew not just in terms of qualifications and experience, but also aptitude and conscientiousness. This may involve more forensic pre-employment due diligence and interviewing techniques than traditionally applied.
- Facilitate and encourage continuous learning and development both on board and ashore. Company training conferences held in-house, at crew manning centres or training establishments also offer a unique opportunity for office and sea staff interaction and bonding.
- Consideration may be given to reviewing safety management systems to ensure that they are readily accessible, concise, written in plain language and easy to understand.
- Shipboard training and drills should be fit for purpose, ship specific, varied and as realistic as safely possible.
- Risk assessments and permits to work should be tailored practically to the applicable job and treated as essential working documents, not a tick-box exercise carried out by rote.
- Involve all concerned crew members in safety briefings and pre-work tool-box talks and promote open discussion between ranks.
- Encourage onboard mentoring of crew members by officers or senior ratings who demonstrate suitability and enthusiasm for the task.
- As the saying goes, "we learn by our mistakes". However, it is far preferable to learn from the mistakes of others. Therefore the diligent and open reporting of accidents and near misses with accompanying "lessons learnt" benefits not only the ship's crew but all the company's seafarers if communicated throughout the fleet.
- Auditing and monitoring of crew performance should be diligent, thorough and carried out by persons suitably

qualified and experienced for this vital role. Audits should be seen as constructive and not over-bearing.

- Recognise the value of regular management shipboard visits. This not only gives an invaluable opportunity for direct face to face interaction with the crew but also assists in gauging standards and the condition of morale onboard.
- Impose a zero tolerance policy to breaches of STCW requirements for work and rest hours. Where the nature of a vessel's trading pattern makes compliance difficult, proper consideration must be given to engaging additional crew as needed.
- All crew members should feel empowered to reasonably question the actions or decision making of senior colleagues, without fear of ridicule or reprimand. The implementation of "Stop Card" type systems may be considered.
- Make sure crew have the proper tools for the job and no compromises are made with regard to the provision of safety equipment and its diligent use.

“Masters and senior officers should be trained to recognise the signs of mental distress and the means made available for all crew members to seek support and advice from ashore”

- Be alert to underperforming crew members and offer support as appropriate. However, demonstrably incompetent or persistently disruptive individuals posing a danger to themselves and their shipmates should be relieved at the first opportunity.
- Have a dedicated policy in place of looking after the mental welfare, recreational and pastoral needs of crew members. Masters and senior officers in particular should be trained to recognise the signs of mental distress and the means made available for all crew members to seek support and advice from ashore.
- Encourage a sense of belonging and culture of excellence throughout the fleet and offer incentives for good performance. Fair employment conditions and mutual respect will foster professional pride and loyalty. The development of a solid and enduring partnership between ship managers and sea staff is widely recognised as being an essential element in promoting safe and efficient shipboard operations as well as the commercial success of the enterprise. *MRI*



David Nichol

David Nichol, senior loss prevention executive, at the UK P&I Club

Medical care on board – a useful guide

Magda Daskalou, for Prevention at Sea, provides some practical tips on seafarer welfare and keeping medicines safe

Care of the health-impaired sea-goer is a challenge for the healthcare provider, especially when there are miles separating the ship from shore. Some ships are equipped with well-trained health personnel and very sophisticated equipment, while others rely on those with comparatively minimal training.

The latest edition of the *International Medical Guide for Ships* by the World Health Organization, provides step-by-step instructions on how to diagnose, treat and prevent health problems in seafarers, with a focus on the first 48 hours after injury.

Fortunately, for the health of all merchant seamen and others at sea, the world has changed. Modern technology allows for nearly continual “real-time” communication between the ship and shore, meaning live medical consultation is nearly always available, enabling serious medical problems to be managed via communication with shore-based physicians and other medical resources. More sophisticated tele-medicine capabilities, often including video as well as audio components, are also continually being expanded. One of the most important aspects is prevention. Prevention, of both acute and chronic disease, will improve the quality of the mariner’s life at sea and even continue into retirement. Prevention will also maximise the productivity of the crew and its ability to meet its deadlines.

Medicine chest

All ships subject to the regulations established by the International Maritime Organization (IMO) and International Labour Organization (ILO), must have adequate medical supplies that are periodically inspected, kept in good condition and are ready for use whenever required. The quantities needed on board will depend on the duration and destination of the voyage, the number of crew members and the nature of the cargo. The medicine chest is designed to hold a range of medicinal products needed for the most common medical emergencies likely to occur on board ship, however distant it is from shore.

Basic rules for managing the medicine chest

Responsibility

The ship’s master is responsible for managing medical supplies kept on board, although he may delegate responsibility for their use and maintenance to a properly certified officer. Nevertheless, however well-trained, crew members are not medically qualified. A doctor should always be consulted about serious illness or injury or when any doubt exists about the proper action to take in treating a patient.

Keeping records

A list of medicines and medical supplies should be kept on board and be regularly updated. The list should include, for each item, such details as expiry date, storage conditions and quantities remaining after purchase or use. A record of treatment given

to any person on board, including the type and quantity of any medicines administered, must be entered in the ship’s log. In some countries, it is compulsory to keep such a record. In addition, the master of the vessel is required to maintain a register of controlled drugs and this register must not be discarded until two years have elapsed after the date of the last entry.

Identification of medicines

All medicines should be identified on their packaging by their generic or approved name, since local brand (or proprietary) names may differ from country to country. The dose per tablet, capsule, or vial/ampoule, and the expiry date of each item should also be clearly indicated on the package or container. If the label is illegible or if the contents of an opened or unlabeled package or container cannot be identified, the medicine should be destroyed.

Storage of medicines

Drawers or medicine cabinets should be large enough to store medicines and equipment in an orderly manner so that they are easily identified and available for immediate use. This is particularly important for medicines and equipment used in emergencies. These should be kept separately in an easily accessible place. Generally, items of the same type or category should be stored in a box, shelf or drawer, properly labelled. Controlled medicines must be kept apart in a locked compartment, preferably the master’s safe, in a room that is locked when unoccupied (see below, under “Controlled drugs”). All medicines must be kept in good condition and protected against humidity and temperature extremes. When not otherwise specified, they should be stored at room temperature (15 to 25°C). A refrigerator should be available nearby for storage of items that must be kept at 2°C to 8°C. This refrigerator should not be used for any other purpose and should be equipped with a lock.

Expiry date

An expiry date for a medicine corresponds to the average maximum shelf life for that medicine, given appropriate storage conditions. Medicines must be inspected regularly to make sure they have not reached or exceeded their expiry dates; those that have should be replaced and then taken to a pharmacy to be destroyed. Certain types of medical equipment also have expiry dates. Moreover, some countries impose fines on ships entering their territory with expired medicinal items on board.

Unwanted side effects and drug interactions

All medicines have unwanted side effects that must be evaluated case-by-case – by the patient, the responsible officer and the consulting doctor – in relation to the benefits of using the medicine compared with the potential side effects. Severe unwanted side effects can occur when certain medicines administered simultaneously to a patient interact with each other. A doctor should always be consulted if a patient is already



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taking medication or if several medicines from the list in the guide have to be used together.

Drug allergy

Before any drug is administered, the patient should be asked whether he or she knows about or has experienced in the past any allergy, intolerance, or sensitivity to medicines. The patient's answer should be noted in the patient's record. If the patient is unable to answer for whatever reason, that fact should also be recorded. A patient who believes he or she is, or is likely to be, allergic to a medicine should not be given the medicine without medical advice.

Controlled drugs

Controlled (or "scheduled") drugs are those that, in most countries, are subject to prescription requirements limiting their distribution and use, because of their liability to be abused. Controlled drugs should be obtained only from a pharmacist or other person licensed to supply these medicines. The supplier will need a handwritten order, signed by the master, and formulated according to national requirements. The master has also to sign a receipt for the goods.

National regulations of the country visited, however, predominate and must be respected. National authorities of many countries require ships' masters to produce a general declaration of medicines on board and a separate declaration of controlled drugs and to keep a drug register for two years after the date of the last entry in it.

The Maritime Labour Convention 2006 contains guidance on national authority responsibilities in this matter. Smaller vessels should carry medical supplies in accordance with the relevant national guidelines and in relation to their needs, as determined by length of voyage, and number of crew.

A ship must not carry quantities of controlled drugs larger than those specified by the appropriate national regulations, unless required by a doctor. Regulations relating to records to be kept concerning the use of controlled drugs vary from country to country. Generally speaking, these records should be kept separate from patients' ordinary medical charts and should give the following information:

- doses given, including the name of the person ordering the dose, the name of the person giving it and the name of the person receiving it;
- date and time when a dose is lost or spoiled (eg broken ampoule, drug prepared but not injected, and so on);
- a running count of remaining stocks, updated after each use;
- a count, made at least weekly, of remaining ampoules, tablets, etc, in store, to be checked against the records of use and the running count.

Controlled drugs are drugs that are graded according to the harmfulness attributed to the drug when it is misused. For this purpose, there are three (3) drug categories:

- Class A includes heroin, morphine, and opium,
- Class B includes barbiturates and codeine, and
- Class C includes, among other drugs, anabolic steroids.

A ship must not carry excess quantities of Class A or Class C drugs unless authorised by the administrator.

Ships carrying dangerous goods

Ships carrying dangerous goods have additional medicines, specific antidotes, and special equipment on board, as prescribed in the IMO's medical first aid guide for use in accidents involving dangerous goods (MFAG). These special items, which are not listed in this guide, should be stored and registered together with the regular medicines and medical supplies carried on board.

Disposal of medicines and medical supplies

Medicines and medical supplies shall be disposed of properly in accordance with all applicable local and national laws and regulations of the state in which disposal is occurring and any applicable international requirements.

Inspection and certification requirements

MLC Standard A4.1 requires regular inspection by the competent authority of the ship's medicine chest, to be conducted at regular intervals not exceeding 12 months. In this regard, ship owners may rely on the inspection and certification of medicine chests by a pharmacist/pharmacy providing this service that has been approved by the competent authority in which it is located.

Training requirements

The master and any worker delegated to take charge of medical care on board vessels, must hold a recognised Proficiency in Medical Care or Updated Proficiency in Medical Care Certificate, issued within the last five years. This will enable them to conduct medical procedures on board, while in remote locations, in accordance with STCW Convention and Code 1978, as amended, section A-VI/4-1. **MRI**



Magda Daskalou

Magda Daskalou, maritime advisor/
analyst for Prevention at Sea

Accident investigation and the human factor

Mads Ragnvald Nielsen, of CMarTech, and **Arne Sagen**, FNI, look at the complicated issue of captains being put on trial after maritime accidents

On 13 January 2012 the Italian cruise liner *Costa Concordia* capsized and partially sank after a grounding near the island of Giglio in Italy, with the loss of 32 lives. The commander of the ship, Captain Francesco Schettino, was subsequently sentenced to more than 16 years' imprisonment following the Italian Supreme Court conviction holding him responsible for the accident.

Schettino's actions and inactions in relation to this incident are generally associated as the cause of the ship's grounding. But is this really the full story? How much is Schettino *solely* to blame? Was his human error at the core of the grounding? Or can the wider issue of ship's processes, applicable regulations, the Costa Crociere organisation and perhaps even the cruise industry in general, also be included in an examination of the tragedy?

In light of an appeal to the European Court of Human Rights against the jailing of Schettino, we examine the "human factors" which could be considered as possible cause of the event.

The master's "discretionary space" in deviating from a voyage plan

Establishing liability seemed to be chief in the wake of the *Costa Concordia* capsizing. The obvious way to do this is to apportion overall liability to the master, as he is by tradition and law ultimately responsible for what happens on board his ship. However, to what extent does a master have the ability to exert this responsibility effectively? The choices made in the field of operations are often full of uncertainty and ambiguity, while it may be difficult to foresee how actions turn out until after an event.

Furthermore, decisions made on board are not made in a vacuum; they are rather systematically connected to the features of the environment in which people perform their duties and to what may be referred to as the "discretionary space". The latter is an expression of the degree of freedom people have to make own choices while doing their jobs. The discretionary space may be determined by several factors: for example, it may be formally granted by regulations or specific procedures, which, in part at least, is the case with the ship master, as provided by the ISM Code:

"The company should ensure that the SMS operation on board the ship contains a clear statement emphasising the Master's authority. The company should establish in the SMS that the master has the overriding authority and the responsibility to make decisions with respect to safety and pollution prevention and to request the Company's assistance as may be necessary." (The ISM Code, para 5.2.)

The ISM Code may well in this case be an acknowledgement that in the face of uncertainty and changing conditions at sea, leeway to act is necessary to resolve situations that cannot effectively be specified in rules, regulations or procedures, but rather needs to find its basis in context-dependent knowledge, skills and experience, gained through job execution. While the discretionary space may grant responsibility and, thus generally, motivate people to do their work to the best of their abilities, it also offers the possibility of prosecution and unfair blame when incidents or accidents happen. This is because the decisions and actions of people are often judged by their outcomes in damage, rather than the process that preceded these. In hindsight, it is often commonly understood that if an accident happens, somebody must have done something wrong.

The accepted reason why *Costa Concordia* deviated from its standard route and passed the island of Giglio was to entertain the passengers and to show the ship to the people on the island. The company standard rules were those of the Italian Coastguard; that changes of the route up to 15 miles from main voyage plan without "message of changes" were permitted. Did Captain Schettino therefore act within his "discretionary space" in approving this action? Did he actually do something wrong by acting in this way?

The human factor in accident investigation

When reflecting on accidental events there are several analytical choices that must be made. For example, what is the view on *human error*? Are humans generally construed as a problem or as a solution in everyday operations? Is it at all possible to establish an *objective truth* about what happened? Can we create a complete understanding or are we constructing our stories according to, for example, knowledge of past events? And finally, at what level of understanding are we satisfied; do we stop the investigations when we reach a familiar issue that we can describe and then call it the cause, or do we inquire about *why* this issue was present at all?

Depending on the analytical angle of approach applied to the *Costa Concordia* incident, the narrative, the causes, and the issue of liability may look very different. If the starting point of the investigation is that people are generally a liability (a mechanistic approach), the following assumptions will likely be reflected in the results:

- Complex systems are fine, were it not for the behaviour of unreliable people (the human factor).
- Human error causes accidents, ie humans are the dominant contributors to errors.
- Failures come as unpleasant surprises.

This position is rather easy to adopt following an accident. The investigator only needs to identify instances where people did something different from what was officially recognised in procedures as "the right way" to do a job, or the investigator may discover a clear case of, for example, a structural or mechanical breakdown. Common conclusions are of either *technical failure* or *human error*, with little or no further inquiries about *why* these conditions or attributes were present in the system, or what created the basis for them. Claiming the cause of an accident as being human factor is inconsistent and unreliable.

A system-based approach to the investigation, where people are not judged only as an inherent problem to safe operations, would create a different set of assumptions:

- Human error is not the cause of failure, but rather the effect or symptom of a deeper problem in the system.
- Human error is not random, but is related to features such as tools, tasks, operational conditions, etc. People must often compensate for shortcomings inside the system.
- People must ensure safety while being thorough and effective in their roles.
- The human factor cannot serve as a conclusion to why an accident happened, but instead should be a starting point for investigations into the organisational system.
- the passing of the turning point was not observed by the bridge team; and
- the captain's evasion manoeuvre to escape the collision with the reef failed.

Based on this position, it would be natural to examine what seemed sensible to the people involved and what they based their decisions on, to create an understanding about what features of the system did not work well. This knowledge could be the key to creating safer systems and, thus, prevent the next accident.

Human factors applied to the *Costa Concordia* incident

If the accident investigation of the *Costa Concordia* grounding is approached mechanistically, the following issues are identified and used to explain the mishap:

- it is well known that ships can (and have) run aground in shallow waters, consequently:
- navigating in coastal waters should lead to better attention on the bridge.

Or in greater detail:

- the passage plan was not appropriate (since the accident happened);
- there was no proper risk assessment for navigation in shallow waters;
- there was no lookout function, as the lookout had been transferred to the helm;
- the ship navigated at a speed of 16 knots at a course perpendicular to the coast;

In hindsight, it may appear that the system in place would have been adequate if the captain, as the head of the ship, had not accepted a voyage plan where the ship passed that close to the coast of Giglio. Such reasoning undeniably leads to the conclusion that it was the master's decision and thereby the master who caused the accident. The conclusion is, therefore, that it was due to human error. However, this does not bring to light how this case of human error was generated.

If, on the other hand, the investigation of the *Costa Concordia* grounding had been approached from a system-oriented approach, new and different questions present themselves. For example, how did the interplay between the bridge team and the navigation systems, electronic as well as analogue, work, eg was there a breakdown in coordination between the crew determining the ship's position and the electronic chart system, and in such case, *how* and *why* did this breakdown occur? Was there something about the bridge team dynamics that resulted in poor coordination among them? Did one of these factors also contribute to the capsizing?

Final words

The *Costa Concordia* wreck is now removed from the water off Giglio and Captain Schettino is in prison. It means the public is no longer reminded how cruise shipping can quickly turn from luxurious joy into a nightmare. However, have things really changed for the better and is the cruising world now a safer place, in the wake of the *Costa Concordia* incident? Did we really learn what we should and what we needed to gain most from this unfortunate shipping event? The industry needs to examine the investigation into this incident and address the safety questions that are raised, to ensure the risk of a repeat tragedy is minimised. [MRI](#)



The narrowest of margins

Irvine Marr, David Owens and Martyn Haines, of Clyde & Co LLP, report on the UK's Court of Appeal decision in *The Alexandra I and Ever Smart* on the application of the "narrow channel rule" and the "crossing rule"

The UK Court of Appeal recently handed down its decision on appeal of the first collision case to be heard by that Court since 2004. The decision of the Admiralty Court in *The Alexandra I and Ever Smart* [2017] 1 Lloyd's Rep 666 had caused considerable interest given its findings concerning which of two rules in the Collision Regulations (COLREGS), the narrow channel rule (rule 9) or the crossing rule (rule 15), applied in circumstances where one vessel was exiting a narrow channel and the other vessel was navigating towards that channel in preparation for entering it.

By a unanimous decision the Court of Appeal has upheld the finding of the Admiralty Judge that the narrow channel rule applied and the crossing rule did not apply. In dismissing each of the grounds of appeal raised on behalf of *Ever Smart* interests, the Court of Appeal has confirmed the finding of the Admiralty Court that *Ever Smart* should bear 80 per cent of the liability for the collision.

Facts

On 11 February 2015 a collision occurred between the laden VLCC *Alexandra I* owned by Nautical Challenge Ltd, and a laden container vessel, *Ever Smart*, owned by Evergreen Marine (UK) Ltd, just outside the dredged entrance and exit channel to the port of Jebel Ali in the UAE. *Ever Smart* had been in the process of departing the port via the channel and shortly prior to the collision had disembarked the pilot and was about to exit the channel. *Alexandra I* had been waiting to enter the port at anchorage when she was instructed by Port Control to wait "at buoy no 1" where the pilot (the same pilot due to disembark from *Ever Smart*) would board for inbound passage through the entrance channel. As *Ever Smart* exited the channel her master

called to increase the engines to full sea speed so that at the time of the collision, just outside the channel, she had a speed over the ground of 12.4 knots. *Alexandra I* had her engines at slow ahead while awaiting the pilot in the vicinity of buoy no 1. The port bow of *Ever Smart* struck the starboard bow of *Alexandra I* at an angle of about 40 degrees leading aft on *Ever Smart*.

Application of the narrow channel rule and the crossing rule

The parties were able to agree largely on the navigational facts, but a more substantial dispute remained regarding liability and more particularly the relevance and applicability of the narrow channel rule and the crossing rule under rules 9 and 15 of the COLREGS in this situation. Rule 9 of the COLREGS, entitled "Narrow channels", provides at rule 9(a):

"A vessel proceeding along the course of a narrow channel or fairway shall keep as near to the outer limit of the channel or fairway which lies on her starboard side as is safe and practicable."

Rule 15 of the COLREGS, entitled "Crossing situation", provides:

"When two power-driven vessels are crossing so as to involve risk of collision, the vessel which has the other on her own starboard side shall keep out of the way and shall, if the circumstances of the case admit, avoid crossing ahead of the other vessel."

On behalf of *Ever Smart* it was argued that she was positioned on the starboard side of *Alexandra I* so that, pursuant to rule 15, it fell on the latter to keep out of the way of the former.

Alexandra I interests disagreed and submitted that the crossing rules did not apply to a vessel in a narrow channel and a vessel navigating in preparation for entrance to the channel, as in



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the case at hand. Also, *Alexandra I* was not on a suitably constant direction or heading to ever be on a course for rule 15 to apply.

There was no dispute that the dredged channel was a narrow channel for the purposes of rule 9 of the COLREGS.

The Admiralty Court

The Admiralty Judge, Teare J, reviewed a number of English authorities dating back to *The Leverington* (1886) 11 PD 117, in which the application of the crossing rules in the vicinity of a narrow channel had been considered. He concluded that rule 15 did not bind *Alexandra I* when she approached the dredged channel leading to Jebel Ali and so she was not under a duty to keep out of the way of *Ever Smart*.

Having regard to the unsafe speed of *Ever Smart*, she contributed far more to the damage resulting from the collision than the very much lower (and safe) speed of *Alexandra I*. It followed that the causative potency of *Ever Smart's* fault was greater than that of *Alexandra I*. On this basis Teare J concluded that *Ever Smart* should bear 80 per cent of the liability for the collision and *Alexandra I* should bear 20 per cent of the liability for the collision.

The Court of Appeal

Permission to appeal was granted by Longmore LJ on an application on behalf of *Ever Smart*, such permission having initially been refused by Teare J.

The leading judgment of the court was delivered by Gross LJ, with whom Lewison LJ and Leggatt LG concurred.

On the key issue as to whether the crossing rules applied in the vicinity of a narrow channel, Gross LJ agreed in full with the approach adopted by the Admiralty Judge and shared his concern regarding the potential risks of conflicting requirements posed by the narrow channel rule and the crossing rule applying at the same time. He agreed that an overview of the situation as a whole confirmed that the crossing rules were inapplicable, noting:

“The navigation of *Ever Smart* in the narrow channel was governed by the narrow channel rule; the approach of *Alexandra I* to the channel was governed by good seamanship, having regard to the requirements of the narrow channel rule as and when she entered the channel (which, of course, she never reached). There was neither need nor room for the application of the crossing rules.”

The Court of Appeal then considered a new argument raised on appeal on behalf of *Ever Smart* to the effect that the findings of the Admiralty Judge on the applicability of the crossing rule could not survive the “stress-test” of examining the position if *Alexandra I* had, hypothetically, been approaching the channel in an east-west direction rather than the west-east approach that she had actually taken. However, having consulted the Elder Brethren, Gross LJ considered that the crossing rules had no role to play in the hypothetical east-west situation and this further ground of appeal was therefore dismissed.

The final issue considered by the Court of Appeal in relation to the applicability of the crossing rule concerned the finding by Teare J that *Alexandra I* had not been proceeding on a sufficiently defined course for the crossing rule to apply. Again Gross

LJ felt able to agree with the Admiralty Judge that, just as for the stand-on vessel, the give-way vessel must also be on a sufficiently defined course for the crossing rules to apply.

With all arguments raised on behalf of *Ever Smart* regarding the application of the crossing rule having failed, the only remaining issue on appeal was whether the Admiralty Judge had taken the correct approach towards the apportionment of liability for the collision.

“The findings are of some significance given that previous case law has been persuasive but perhaps not necessarily conclusive”

Ever Smart interests argued that Teare J was wrong in principle in singling out and “double-counting” excessive speed in relation to causative potency. Gross LJ was not persuaded by this submission and having helpfully recapped the correct approach to be gleaned from the authorities on this issue, noted as follows:

“I reject [this] submission of ‘double-counting’; the short answer is that having regard to this fault both in relation to the fact of the collision occurring and the severity of the collision, amounts to the separate counting of two different (and cumulative) aspects of the same fault.”

Having dismissed each of the various arguments raised on behalf of *Ever Smart* on appeal, it followed that Gross LJ proceeded to dismiss the appeal as a whole.

Comment

The findings of the Court of Appeal in this case – on one of the relatively rare occasions in recent years that they have considered a collision action – will be of considerable interest to the maritime community. As noted by Gross LJ at the very outset of his judgment, the appeal “highlights the continuing international reach of the Admiralty Court” and, given this reach, will hopefully assist in avoiding confusion regarding the application of the COLREGS in similar cases in the future.

The findings on both the application of the crossing rule in the vicinity of a narrow channel and also the correct approach regarding causative potency in the context of apportionment of liability are of some significance given that previous case law has been persuasive but perhaps not necessarily conclusive. This important decision has provided welcome clarity in relation to both issues.

- *Alexandra I* interests were represented by Clyde & Co. [MRI](#)



Irvine Marr



David Owens



Martyn Haines

Irvine Marr,
David Owens and
Martyn Haines,
of Clyde & Co LLP

London at the heart of marine risk

Neil Roberts, at the Lloyd's Market Association, takes a look at the state of the marine insurance markets and sees signs for long-term optimism

Marine insurers in Lloyd's and the London insurance market are a resilient bunch. Located at the centre of a global maritime nexus, they have a unique ability to adapt to change – and it is a time of great change in the maritime world. New risks, new routes, new vessels, new markets, new technologies and new ways of underwriting risk are converging in London.

Some underwriters have drawn back from marine risks, but this market adjustment has received more attention than perhaps it deserves. Capacity for marine risks has reduced and it is constrained. Pricing in the international insurance market is cyclical and different classes of marine insurance sit at different points in the cycle.

Cargo pricing has historically been reasonably stable and is now strengthening, but hull risks have endured a long downward trajectory and prices had not ceased declining during the 2017/2018 renewals. The subsequent supply-side correction may stop the slide and re-focus on sustainable results. The global yacht insurance market was hit very badly by 2017's Caribbean storms, a loss complicated by difficult access after the event, which made many damage claims into constructive total losses. The position was exacerbated by the recent Lürssen construction fire.

The withdrawal of some Lloyd's insurers from marine lines came after the central Performance Management Directorate (PMD) of Lloyd's conducted a number of analyses into specific lines of business. PMD identified eight classes, including hull, yacht and cargo where long-term performance was a cause for concern, before advising selected Lloyd's syndicates to produce or reschedule plans to readdress business plans for these classes in short order. If they were unable to show a realistic way to achieve a turnaround in the fortunes of those portfolios, Lloyd's would consider limiting their premium income or even shutting them down.

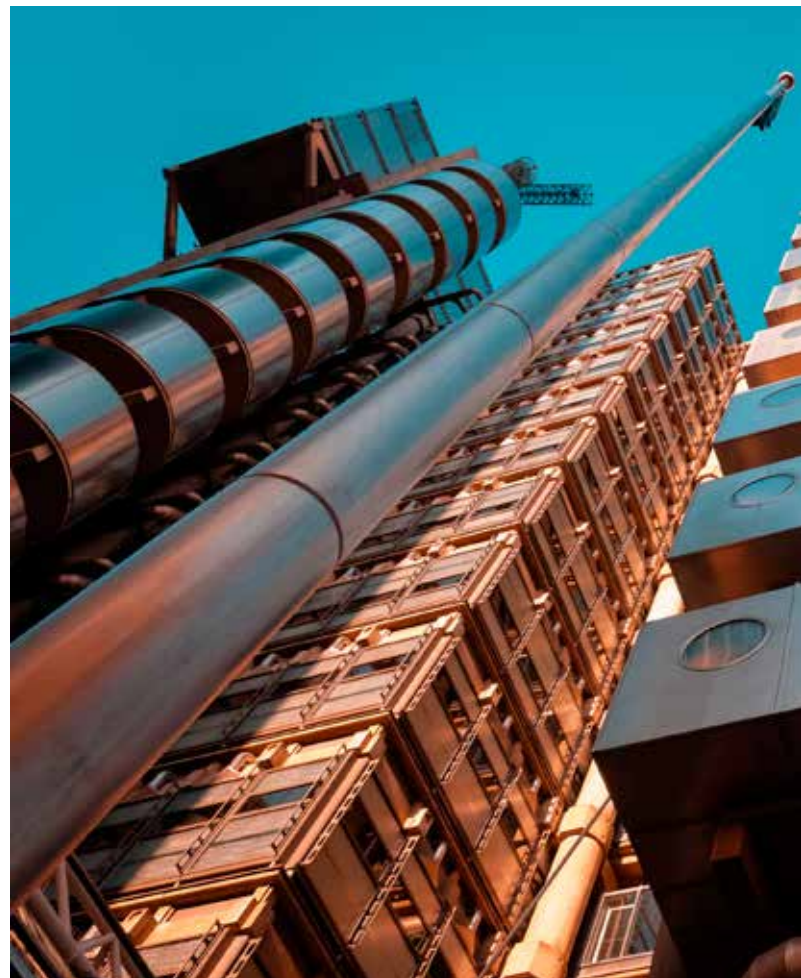
“Information flow is increasingly important as data dependency increases. At the same time, underwriters must analyse data and apply the insights yielded, rather than be swamped by numbers”

Some managing agents clearly decided that it did not make sense for them to continue in some marine lines, since the business presented no long term prospect of achieving a reasonable return on capital, especially given the potential for higher capital requirements under the European Union's Solvency II, some felt they could more profitably deploy elsewhere the tower of capital that had supported its marine underwriting.

The simple truth is that only a finite number of vessels ply the world's waters (about 48,000 ocean-going ships and about the

same number of fishing and pleasure craft). Owners and banks require the security which insurance provides, but demand is finite. Some investors have made the old mistake of believing that insuring a slice of the global fleet will always yield golden eggs, when in fact the returns yielded by many portfolios of marine risk have fallen away, as increased insurance supply came to the market to serve a relatively static fleet size. Time will tell if the recent withdrawals will end the declining price trend for hull risks.

Either way, the current world of low interest rates and difficult investment returns, alongside greater exposures to larger vessels and increased loss costs (such as for removal of wrecks), have created the stark need for insurers to reassess their underwriting to achieve a technical underwriting profit. Attendees at the International Union of Marine Insurance (IUMI) conference last month heard that the inadequate premium base is further pressured by the over-supply of capital, all set against a backdrop in which the importance of client loyalty has been blurred. All parties need to look at the dynamics that create and maintain a stable, sustainable market for the longer term.



Despite these challenges, Lloyd's continues to provide distinctive, high-quality marine insurance products: Jermyn Street, not high street. Service is more experienced and attentive than that provided by many other markets, in part because London works together to deliver the goods, especially through its joint committees, such as those dealing with emerging risk issues. Meanwhile Lloyd's is a leading participant in marine fora at the highest level around the world, from IUMI to the International Maritime Organization. Together that allows underwriters to deliver a highly regulated, bespoke product that is responsive to current conditions in the maritime sector.

In the evolving maritime world, owners like flexibility. As they consider new designs, for example in areas like propulsion, technical committees in London are informed and responsive, adjusting existing insurance products to meet the challenges of innovation, and creating new ones when necessary. London adapts to changes such as the new low-sulphur fuel regulations with a range of solutions, since the market comprises underwriters who prefer to embrace developments. They are always ready to see and write business.

Lloyd's, through the Lloyd's Market Association (LMA), regularly liaises with members of the International Association of Classification Societies (IACS), including Lloyd's Register. That provides a forum to discuss issues such as developments in engineering. IACS members are experts in areas such as metallurgy and technical detail, and have left an imprint on a number of projects across the maritime industrial piece, although their work is largely unknown. The LMA also engages

with loss adjusters and surveyors to discuss, for example, the capabilities of specific engine types to deal with certain fuels. Such discussions help to ensure that underwriters can always charge a risk-based price based on accurate perceptions of the varied mechanical realities and to develop risk management strategies for clients.

Information flow is increasingly important, as data dependency increases. At the same time, underwriters must analyse data and apply the insights yielded, rather than simply be swamped by numbers. Data alone confers no power; the benefits of data arrive only when the wherewithal to understand and use it is present. London is making great strides as a community of underwriters and intermediaries to harness the power of data, before using it to clients' advantage.

“London is making great strides as a community of underwriters and intermediaries to harness the power of data, and use it to clients' advantage”

Plenty of capacity exists to underwrite marine risks outside Lloyd's and around the world, but London's attractions have remained strong. Clients do not typically request digital transactions – for most, insurance is a people business – but a digitised underwriting protocol will be more efficient for all and will underpin the face-to-face relationships and negotiations on which the market is based. More efficient trading could make individual risks more attractive at finer margins, since less of the premium spent is consumed by frictional costs.

Meanwhile despite the headlines about withdrawals, Lloyd's syndicates remain alive to opportunities. For example, one managing agency has recently acquired marine underwriting operations in Copenhagen and Genoa, with the aim of bringing Lloyd's experience and high-quality underwriting to bear.

The combined impact of innovations in distribution, Lloyd's place and influence in London and around the maritime world, reduced capacity for maritime risks and the concentration of technical expertise in London strengthens the Lloyd's market as a centre for marine insurance. Its unique combination of talents and experiences – including those of brokers, adjusters, arbitrators and many others outside the underwriting market itself – allow Lloyd's managing agencies to deliver a highly client-centric, bespoke insurance product from the forefront of the international nexus of the international maritime industry. *MRI*



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Neil Roberts

Neil Roberts, head of marine underwriting, Lloyd's Market Association

Shipping industry trailing in the wake of automation risks

Sjaak Schouteren, of JLT Specialty, discusses the role blockchain might play in keeping shipping safe from cyber attack

The maritime sector is among those increasingly exposed to cyber risks, especially as it looks to use new technology and business models to drive efficiency. With technology being frequently relied on for communication, navigation and propulsion machinery, modern commercial shipping is becoming progressively dependent on technology and vulnerable to cyber risks.

At the same time, advances in the technology used in cargo handling and port management systems means they can now be controlled in real-time through wireless networks. There is a growing concern that the digitalisation of shipping will open the door to cyber criminals keen to exploit the sector's perceived weak cyber security. Yet, until now, cyber security has not been a priority.

Blockchain to the fore

The shipping industry began as a business based on operational technology (OT), but in time it has transformed into an IT driven sector. This has introduced some great opportunities for digitalising and connecting the supply chain, including a few projects with blockchain aimed at better managing the supply chain. These projects mainly seek to provide more assurance on the correct input of information into systems and confirm that any technology and systems created can be used as widely as possible.

With the large volume of transactions in the shipping industry, blockchain's digital platform can increase transparency and create robust compliance and strong governance. But, given the fact that the international shipping industry is responsible for carrying around 90 per cent of the world's trade, there is a strong need for analysis, maintenance and efficiency.

This cannot be accomplished without IT and using the connectivity between systems via the internet. This is mostly controlled by a centralised asset management system, with information about container arrival, cargo, delivery data, container location tracking, planning and scheduling the loading of ships, custom clearance, etc being managed, altered, added and shared within the supply chain.

A particularly vulnerable industry

Despite the undeniable progress on this front, we are also seeing different risks come to the fore and cyber risks being among the most prominent. With companies not reporting incidents and many going undetected, there are few examples of maritime

cyber attacks. Nevertheless, in those reported, the consequences can be severe, as seen in the well-known "NotPetya" incident, with ports, shipping and logistics firms from the US to Asia among the worst affected. It also caused considerable disruption to a number of ports and terminals in Mumbai, Rotterdam, New York and Los Angeles. In a survey conducted by BIMCO and Fairplay in 2016, 21 per cent of respondents from the maritime sector admitted to being victims of a cyber attack.

"With more than 50,000 merchant ships transporting every kind of cargo over a million seafarers, it is easy to see how the industry could be a feasible target for criminals, state actors and hackers"

For many of the systems being introduced into the industry, it is a question of how safe they are and what kind of impact an incident might make. With more than 50,000 merchant ships trading internationally, transporting every kind of cargo over a million seafarers, it is easy to see how the industry could be a feasible target for criminals, state actors and hackers.

In the NotPetya hack, one major shipping company suffered significant disruption to its operations, causing delays and impacting business volumes, which are expected to cost between US\$200 million and \$300 million. In addition, logistics company TNT, part of FedEx, suffered weeks of disruption as it struggled to clear a huge backlog of packages and invoices. The company warned investors that the ransomware attack was likely to influence its full year earnings.

The incident has rightfully generated a lot of attention, yet in the same period there were two other incidents that really show the vulnerability of the industry. In November 2017 Clarksons fell victim to a ransomware attack, in which perpetrators gained unauthorised access to computer systems. They accessed confidential information and threatened to release information unless a ransom payment was made. The company's share price decreased by 2.71 per cent. In June 2017 there was also an incident in Russia where at least 20 ships in the Black Sea were reporting false data being transmitted, indicating that the ships were 32 km inland of their actual position. It is now believed to have been the result of a global navigation satellite system (GNSS) spoofing attack.

What lies in wait?

The maritime sector is exposed to a wide range of cyber risks including physical damage, cyber extortion, fraud and theft, as well as acts of cyber terrorism and piracy. Given the great dependency on IT systems and the way these systems are becoming more entwined with a growing number of organisations, this makes them even more exposed to, not only attacks, but also system failures and human errors.

According to the BIMCO "Guidelines on Cyber Security Onboard Ships", the perpetrators have a number of different motivations and objectives. Activists can be aiming to cause reputational damage or disruption by destroying or publishing sensitive data and/or denying access to the service of a targeted



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system. Criminals on the other hand, are more motivated by financial gain. This can include; selling or ransoming stolen data, ransoming the ability to operate systems, arranging fraudulent transportation of cargo, or gathering data, such as the exact cargo location, off ship transportation and handling plans, for a more sophisticated crime.

The simple challenge of hacking into a system and getting through the cyber security defences has attracted some opportunists who want to make a quick financial gain at the expense of shipping companies. A much more sinister proponent is a state-sponsored attacker looking for political gain or espionage. The main objective of their attacks is to gain knowledge or disrupt economies and infrastructure critical to national infrastructure.

A unique challenge

Whatever the motivation or perpetrator, there are two things that make the maritime sector different from others, firstly, the convergence of IT and OT systems. OT systems were mostly built in the last 10 to 20 years and not designed to be connected to the internet or IT systems. Secondly, the vast number of stakeholders in the supply chain has a knock-on effect to the impact of an incident, as it affects more than a single port or terminal. In the Maersk cyber attack at least 17 terminals were affected.

Although it is never possible to be 100 per cent secure, companies can focus on mitigating their risk. Companies are experiencing great changes within a short space of time, due to the rapidly evolving nature of the industry, which in turn means that their risk profile changes as well. Identifying their crown jewel assets, critical systems, stakeholders and any weak points must be the priority.

This rapidly changing sector needs to have adequate risk assessments in place, which are done regularly to ensure that adequate response protocols are in place. In research undertaken by Sealntel in 2017, 44 per cent of the top 50 carriers were found to have weak or inadequate cyber security policies and processes in place.

Trailing in the wake

Authorities have recently looked at bringing cyber risk within the scope of maritime law and regulation. For example, with the US government tightening cyber security rules for ports and vessels and requiring port operators to have a cyber security plan. The US Coast Guard may also soon be providing guidance on cyber security.

The shipping industry is now responding to the threat of cyber-attacks with the development of cyber security guidelines and standards. A group of leading international shipping and insurance organisations, known as the Maritime Safety Committee, have

developed cyber security guidelines for ships, which were updated in July 2017 to include advice on buying cyber insurance.

On the international stage, the International Maritime Organization (IMO) is incorporating cyber risk management into its regulations. The IMO adopted high-level cyber risk management and security guidelines in July and has given ship owners and managers until 2021 to incorporate them into safety management systems.

All hands on deck

Shipping companies are finding that insurance policies, such as hull, cargo and port operators' liability, are increasingly containing exclusions for cyber risk, potentially leaving companies without cover in the event of a cyber attack. Cyber insurance, however, can be tailored to fill the gaps that may exist in traditional maritime coverage.

“Insurance policies are increasingly containing exclusions for cyber risk, potentially leaving companies without cover in the event of a cyber attack”

Tailored policies include access to IT security/forensics, legal representation and public relation consultants; ensuring that not only the immediate fallout, but also the long-term consequences are adequately covered.

Recent attacks and cyber incidents have revealed just how dependent maritime and transport supply chains are on information and communications technology. They also show how cyber risk and business interruption can come in unexpected forms. In a rapidly evolving industry, with so many stakeholders and points in the supply chain, it is clear that the maritime industry must protect themselves against the ever-growing threat of a cyber incident. *MRI*



Sjaak Schouteren

Sjaak Schouteren, a partner in the European cyber/technology E&O team at JLT Specialty

Needed: innovation for cyber risk cover

Insurers recognise the need for updated products, but are not sure of the best way forward, writes *Lloyd's List's* **David Osler**

Recent high-profile cyber attacks on such big names as Maersk, Svitser and Cosco point to a gap in the market for enhanced coverage of cyber risk, according to leading marine insurers.

The demand will probably be driven not only by owners' requirements, but also by the insistence of charterers, with blue chips increasingly asking shipping companies to provide evidence of control, mitigation and recovery plans, including insurance.

While there are already some products out there, the sector as a whole is still finding its feet, not least given the current lack of claims data to enable correct pricing.

The issues involved were highlighted in a recent interview given by Rama Chandan, the Singapore-based head of marine at QBE.

Further product development may be necessary to meet client needs, he told *Lloyd's List*. But the marine insurance sector will probably only be able to work out what is needed on the basis of experience. And it is early days yet.

“Maritime cyber risk as currently constituted has to be slotted into the existing framework constituted by P&I and hull and machinery insurance. There are no cyber exclusions, except if the risk is created by an act of war or terrorism”

“We have not been able to find a product that would suit the market at this point,” said Mr Chandan, who also serves as the chair of the International Union of Marine Insurance's influential ocean hull committee. “But it is an issue that will get more exposure going forward.”

Such sentiments are echoed by Joe Hughes, chief executive of American Club. “There are certain insurance products in the market that are available in relation to cyber risk, but they are in the nature of business interruption products,” he said. Given that the range of cyber risks also includes loss and damage to vessels and loss or theft of data, that appears to many eyes to be insufficient.

Maritime cyber risk as currently constituted has to be slotted into the existing framework constituted by P&I and hull and machinery insurance. Generally speaking, there are no cyber

exclusions in the rules of a typical International Group club, except if the cyber risk is created by an act of war, or where terrorism is involved.

But as North P&I claims director Adrian Durkin told a seminar in London earlier this year, in practical terms it is sometimes difficult to be certain what occurrences result from war, and which from crime. Mr Hughes said: “All the clubs are encouraging shipowners to be very aware of the nature of cyber attack and cyber risk generally, and to do everything they can to protect themselves against the dangers, almost as it were as a prudent non-insured.”

In the case of hull cover, there is widespread reliance on institute cyber attack exclusion clause 380 — which, while not mandatory, is widely placed on hull policies.

This provides that, except in a limited range of circumstances, “in no case shall this insurance cover loss, damage, liability or expense directly or indirectly caused by or contributed to by



or arising from the use or operation, as a means for inflicting harm, of any computer, computer system, computer software programme, malicious code, computer virus or process or any other electronic system”.

If the wording sounds slightly anachronistic, that is because clause actually dates back to the far-off days of 2003, when cyber risk was conceptualised in terms of the Y2K panic and 9/11, and the main fear was the potential for an unmanageable aggregation of loss.

Critics argue that the wording is too wide and perhaps overly cautious. After all, general cargo loss from almost any cause has traditionally been covered by a standard “all risks” form. Where the clause is in a hull policy, the owner is effectively not covered against most cyber risk.

If the very job of insurance is to protect the innocent uninsured, why shouldn't they enjoy the same degree of protection they do from this more modern peril too?

Then there is an additional layer of legal complexity, as highlighted by Robert Alexander, managing director of Alston Gaylor in *Lloyd's List's* sister publication *Insurance Day*. English law states that an insurer is only liable for a loss if the insured peril the proximate cause — and, of course, losses can have more than one cause.

According to the International Underwriting Association, “where there are two proximate causes of loss, one of which is specifically covered and the other is neither specifically covered nor specifically excluded, the insurer will in principle be liable for the loss”.

“Cyber risk is increasing as connectivity increases and ships carry more technology. Any new policy wording should explicitly take into account the growing likelihood of non-malicious attack”

However, “where there are two proximate causes of loss, one of which is specifically covered and the other is specifically excluded, the insurer can rely on the exclusion in relation to the entire loss”. So if a casualty is marked by cyber attack, the insurer would likely have grounds to exclude it, Mr Alexander points out.

The controversy doesn't stop there. Other industry voices believe that the aggregation risk has reached the point at which clause 380 actually needs to be extended, given the challenge of correctly pricing the risks and quantifying the scale of potential exposure. After all, it might be that thousands of ships are affected in a single incident. This alone incentivises the market to limit cover.

Cyber risk is increasing as connectivity increases and ships carry more technology, they aver. Any new wording should explicitly take into account the growing likelihood of non-malicious attack, they feel.

Insurance Day reported in July that both Lloyd's and the Prudential Regulation Authority are among those who want to see the clause broadened. The advantage here would be clarity; at least everybody would know where they stood.

Adding to the need for new forms of cover, Mr Hughes went on, are planned changes to the International Ship Management code, which will incorporate a cyber element from 2021. This will have insurance implications for vessels that do not have the extent of protection expected under the code, which might lead to issues of seaworthiness.

Inevitably, some underwriters have started to tout standalone cyber risk policies, covering losses arising damage to vessels, non-physical loss of hire, onshore business interruption, trade disruption, extortion and threat, liabilities and defence costs. Their basic selling point is that they cover everything clause 380 does not, and buyers can go bespoke, with packages tailor made to fit an insured's specific cyber-risk profile. **MRI**





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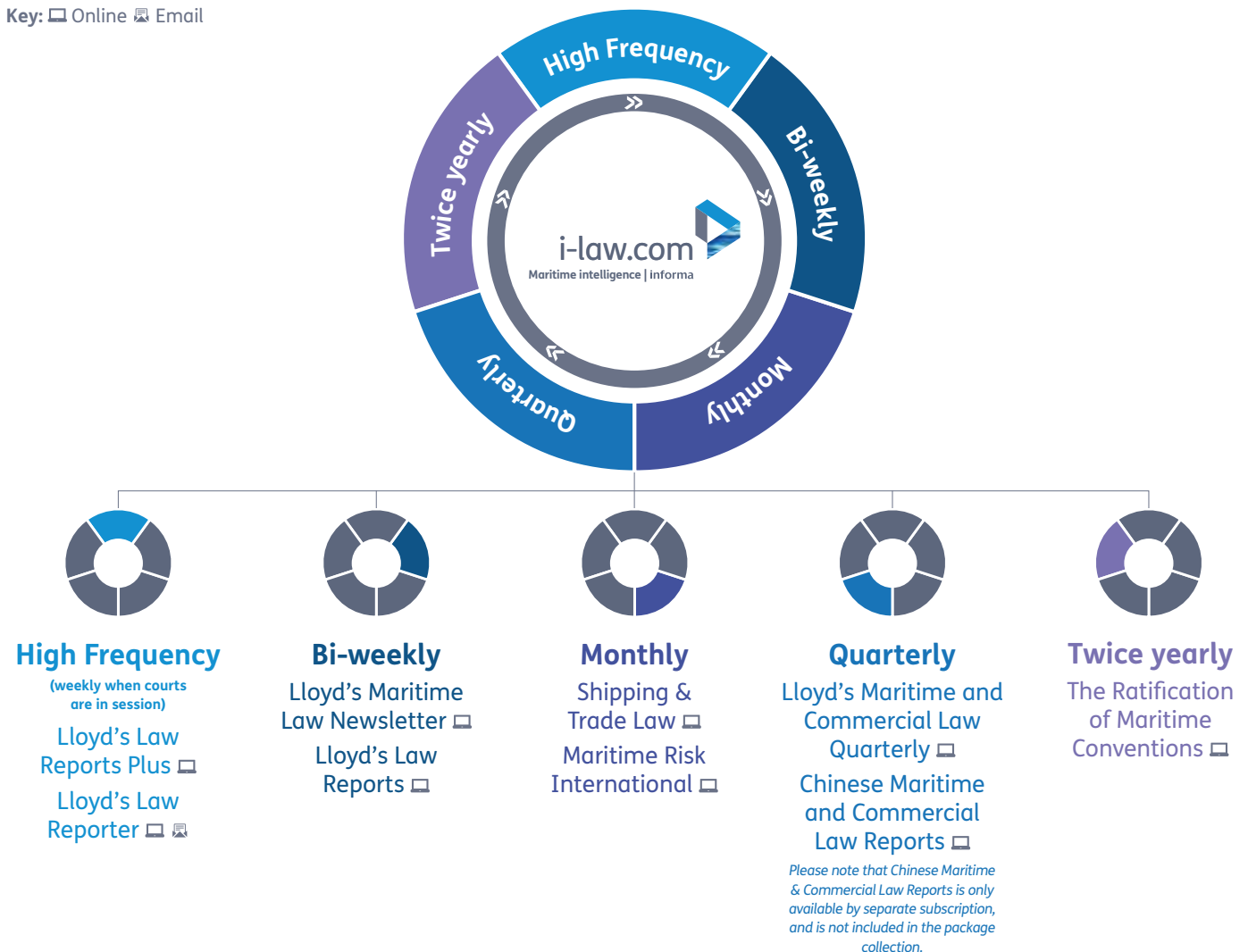
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