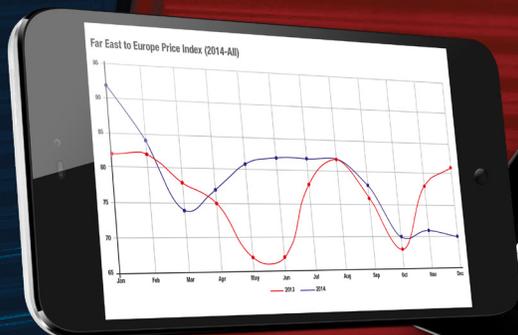


Digitalisation & Data

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South East Asia	Algeria	Colony Reacher	France MED	Germany Med	Spain MED	Tunisia	Other West Med & North Africa	Total
Indonesia	715	16	664	0	...	1,531	0	5,855
Malaysia	0	0	521	0	...	412	0	809
Philippines	0	0	583	14	...	213	0	4,040
Singapore	18	0	23	0	...	720	0	322
Thailand	43	0	98	0	...	182	0	612
Vietnam	504	24	1,024	0	...	182	0	6,483
South East Asia Total	3,069	89	4,038	19	...	4,186	7	10,182
								28,910

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Digitalisation & Data

Regulatory pressure is compelling maritime companies to be more data-driven in both their culture and organisation. However, there is a bewildering array of applications and solutions available. Making smart on data investments is the key.



Siarhei Yurchanka/Alamy Stock Photo

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Editor
Linton Nightingale

Lloyd's List Managing Editor
Richard Meade

Contributors
James Baker, Nidaa Bakhsh, Richard Clayton, Bridget Diakun, Nigel Lowry, David Osler, Janet Porter, Tomer Raanan, Adam Sharpe, Cichen Shen, Enes Tunagur, Michelle Wiese Bockmann, Megawati Wijaya, Fred Williams, Robert Willmington

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Maxwell Harvey

Advertising Production Manager
Mark Leech

Production Editor
Felicity Monckton

Printing
Paragon Customer Communications

Editorial
Lloyd's List,
240 Blackfriars Road,
London SE1 8BF
Email: editorial@lloydslistintelligence.com

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Tech companies say transformation works best when skills are outsourced; maritime customers persist in developing in-house teams.

Advisors and partners needed for reluctant converts

Maritime businesses continue to believe they run ships better in-house; overcoming traditional attitudes is being made easier as class societies and the providers evolve as advisors and partners, **Richard Clayton reports**

Digitalisation is expected to transform the way maritime businesses are run, the skillsets of people working for them, and the relationship between data-driven entities.

Shipping companies with long experience of building in-house teams for all operational needs are likely to find it hard to source all the skills they need from within the industry. In competition for graduates on the open market, shipping is likely to struggle.

This is the basis for a rethinking of the way maritime businesses will be run in future.

Tech companies argue that transformation works best when some of the skills are outsourced – and they are asking maritime customers why they persist in developing in-house teams.

The reason is, it's the way they know. Part of the explanation for why third-

party shipmanagers have struggled to lift the proportion of vessels beyond the 15%-18% mark is because most operators believe they can run ships better themselves.

In the same way, most vessel operators believe digitalisation can be handled by further recruitment into the IT team, or by building a new team to focus on digital solutions.

The traditional avenue of recruiting from seafarers coming ashore is getting harder to sustain.

At first sight, outsourcing critical elements of a competitive operation to a software business – probably hosted in another country and more than likely without a focus on shipping – does not appeal.

However, the advantages of cloud computing are gaining traction in other industries and should be explored in maritime.



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According to a McKinsey & Co report released in 2022, technology industry analysts predict rapid growth in the Software as a Service sector — and expect to see the global market for SaaS products nearing \$200bn by 2024.

Advocates of the SaaS business model say it gives users access to powerful technologies without having to stump up huge costs in advance or install expensive hardware.

Providers claim the solutions are both secure and scalable — and can often be tested prior to payment.

The maritime technology market has grown rapidly to meet industry demand for software capable of supporting better decision-making in voyage routeing and fuel consumption to drive lower emissions in line with new regulations, as well as cost savings.

OrbitMI chief executive Ali Riaz has observed that environmental challenges and regulatory pressures have compelled maritime companies to be more data-driven in their culture and organisation.

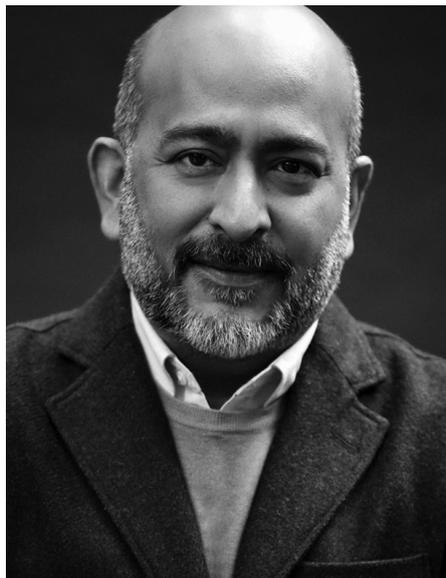
However, he said, there is a bewildering array of applications available.

“Consequently, there has been little understanding of how to evaluate different applications, so the whole business of software selection has been poorly informed, which has proven a big barrier to adoption,” Mr Riaz said.

So, while the push to transform maritime culture has been forceful, it has been hindered by an insistence that in-house teams do it better, a belief that hiring technological expertise will be too expensive, and confusion about which applications are most suitable.

Confusion calls for clarification.

Among other entities, classification



“There has been little understanding of how to evaluate different applications, so the whole business of software selection has been poorly informed, which has proven a big barrier to adoption”

Ali Riaz
Chief executive
OrbitMI

societies have evolved rapidly away from an emphasis on developing technical standards for the design, construction and survey of ships, and carrying out surveys and inspections.

Today, they are also ‘trusted maritime advisors’, working with clients on digital products and data-driven compliance.

Meanwhile, technology businesses have revised their mission statements to enhance their digital capability from trainers to ‘trusted partners’.

Besides transforming operations and recruitment, digitalisation has therefore encouraged the growth of advisors and partners.

However, the problem is not the technology; it’s the psychology.

Speaking at Posidonia 2022 about how technology would shape the maritime landscape, Signal Group founder Ioannis Martinos opined that personal

relationships would remain a bedrock of maritime business, especially in broking.

“There are people — especially in the technology world — who are democratising some of the information,” he said.

“I don’t think that’s a trend that can come to full completion because many of the commodity traders would rather keep the price at which they are selling commodities — and the destination where the commodities are going — secret.”

One month later, in a report looking at Seafarers in the Digital Age, Thetius, a digital consultancy, and Inmarsat, the communications provider, revealed that more than half of respondents agreed their company had a digital transformation strategy.

In addition, one in three mariners now decide their next appointment on the level of access to digital tech — more than the proportion choosing their next ship based on pay.

However, while the overall sentiment remains generally positive, maritime professionals are uneasy about the implications.

Seafarers believe their long-term future is far from assured. Half the survey respondents feared that one-quarter of their jobs would be replaced by technology within five years.

In spite of the emergence of trusted partners and advisors, transforming the industry through digital technology will find the human element is the toughest nut to crack.

The future for shipping may well be characterised by “a closer and more intimate co-operation between human and machine”, but there’s work to be done to explain the benefits.

“There are people — especially in the technology world — who are democratising some of the information. I don’t think that’s a trend that can come to full completion”

Ioannis Martinos
Founder
Signal Group





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The aim for shipowners, charterers and everyone involved in the collection and sharing of data is to simplify.

Resistance to change limits digital transformation

Technology businesses must do more to show why they have invested in data-driven solutions and how it has improved operational performance if the resisters are to change their attitude, **Richard Clayton** reports

Like motherhood and apple pie, digitalisation is widely regarded as a good thing. According to a survey of industry attitudes to digital transformation carried out by Wärtsilä Voyage and released in January 2023, 78% of industry professionals believe that technological innovation is positive for shipping.

However, while the survey revealed most respondents had a clear understanding of why digitalisation is needed and what its benefits are, it also disclosed that there is a significant chunk of the business that is ‘actively resistant to change’ – and an even larger proportion (almost half of respondents) that held a ‘volatile attitude’ towards technology.

Wärtsilä Voyage concluded that fears about digitalisation had brought progress towards transformation of the industry to a standstill.

Michael Christiansen, vice-president, Smart Vessel, at Wärtsilä, notes a tension within shipping characterised by “wildly different and vague interpretations of what digitisation actually means”.

Technology providers have struggled to persuade many companies to invest beyond entry-level solutions and have tasked their chief technology officers to find out why. Their findings go to the heart of digitalisation itself.

“Most people begin with digitalisation and technology,” said Vincent Joly, who heads Bureau Veritas’s SmartShip project.

It is the wrong place to start.

“We are not smart because we want to be digital; we are smart because we have objectives,” he explained.

Mr Joly observes that setting out on the digital journey with tools like the Internet of Things and Artificial Intelligence is much more likely to confuse than clarify.

He believes it is important to know your objectives.

“Ask what you want to achieve, then work out how to achieve it – rather than ask what you have and how you want to use it,” he said.

FKAB Marine Design’s head of sales Andreas Hagberg says a further distraction has come from a belief in the usefulness of gathering data for its own sake.

If this data is to be of any value, he noted in a BV report, “it’s crucial to know what type of information one wants to extract.

“Today, many people collect data without a precise goal in mind,” Mr Hagberg warned.

At its core, digitalisation is about data – how it is collected, communicated, processed, shared and leveraged.

This has brought headaches of its own, especially about who owns the data generated by ships operated around the world.

Guidance was provided on this issue in 2022 by the Smart Maritime Network, a body set up to promote the benefits of enhanced integration and data-sharing across the industry.

It advised that the raw data produced by shipboard equipment belongs to the owner of the equipment.

Taking responsibility

However, in taking ownership of vessel data, shipowners are also taking responsibility for the storage, protection and security of that data from the equipment manufacturer.

This has implications if a dataset is considered an item of interest in an incident, accident, or other legal inquiry.

Not only that, the SMN stated, if an equipment owner fails to share raw data under their control with the equipment manufacturer, it might hinder the manufacturer from preventing shipboard incidents relating to that equipment.

And, while the gathering of data can be haphazard and unco-ordinated, so too is the reporting of that data.

“When onshore stakeholders look for data, they don’t ask what reporting is already being done,” says Arnaud Dianoux, chief executive of French performance management business Opsealog.



While the gathering of data can be haphazard and unco-ordinated, so too is the reporting of that data.

“They demand their own report for the needs of their own departments, then add additional requirements. That’s what I see today on board ships.”

The need is not more data, or even different data, Mr Dianoux suggests; it is co-ordination between stakeholders to make sure the data meets quality considerations and is used most effectively.

“We want to replace and simplify the gathering of data to require manual input only once, and to stop the need for so many different spreadsheets.”

The aim for shipowners, charterers and everyone involved in the collection and sharing of data is to simplify.

Data is very powerful, but a big concern is that masters, chief engineers and chief officers have been creating spreadsheets and sending them via email out into the ether, with no added value gained from it. It is only powerful if used effectively.

Back at Wärtsilä Voyage, chief data and analytics officer Peter Jackson wonders whether the sheer volume of data being generated by ships globally is aiding or hindering decision-making.

His colleague Sarah Barrett, from the Product Insights team, reflected on more than a decade working on the manufacturer side of technology. She says it is instructive for technology businesses to discover what shipowner customers are actually doing with the data.

“Why not look at less data and use it more effectively?” she added.

Given the ambivalent attitude to digitalisation picked up by the Wärtsilä

Voyage survey and concerns about the unco-ordinated nature of data gathering and reporting, it is hardly surprising there is talk of a two-tier structure emerging.

Technology business leaders have learnt that digitalisation involves a significant investment in education – not about the benefits of specific tech products, but about why the investment is needed in the first place.

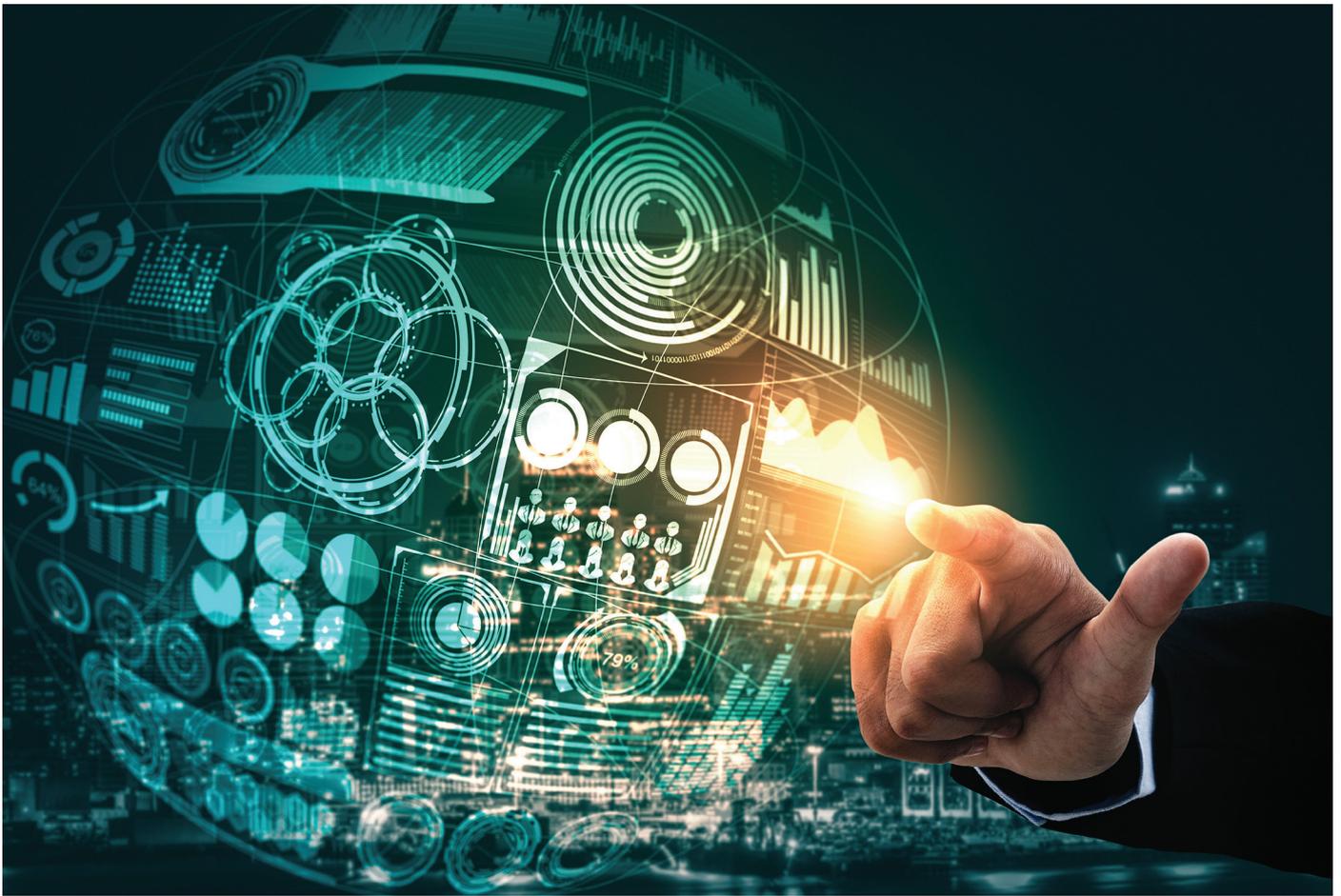
The real obstacles are not the perceived expense or the skills that will need to be recruited, but the attitude of mind that argues against change per se. Unless regulators impose levels of digitalisation onto the industry, most operators will only invest minimal amounts.

Mr Joly at BV believes the real challenge for digital transformation – and, ultimately, for smart shipping – is change management. Yet managing change has been made harder, not easier, by the plethora of data-driven technologies now on the market.

Over the past five years, digitalisation has started to ask deeper questions about traditional corporate business models and how goals can be achieved.

A substantial proportion of the shipping industry believes it does not need to invest in data analytics to inform decision-making.

Industry leaders think otherwise. First-movers must now embrace transparency and collaboration to show how digitalisation improves sustainability while also improving safety.



Pitman Piyavatin/Alamy Stock Photo

If you want to derive valuable and accurate insights from data, you must understand and be engaged with data and its processes

Data analysis in shipping: there is no shortcut

Data-driven decision-making is a priority for most businesses, though the digitalisation process feels out of reach for many; it is not – but it requires engagement, a bit of expertise and some enthusiasm, **Bridget Diakun** reports

Data is valuable for commercial decision-making. Plain and simple. It can be used to improve operational efficiency, assess risk and improve safety records, and offer transparency on carbon emissions.

This is not insignificant, given a highly competitive global market, the intensifying push for decarbonisation and general demands from the public for businesses to literally – and figuratively – clean up their acts.

Yet shipping has a multi-faceted data challenge. Standardisation is not universal, there is a wide knowledge gap,

and the expertise to integrate and utilise data is not always readily available.

Any business that wants to collect and analyse data needs to be working with some form of standardised information, otherwise it is impossible to analyse at scale.

Companies can build and use their own internal templates. However, that throws up a roadblock for the broader industry analysis that is needed to tackle issues such as decarbonisation.

The Digital Container Shipping Association is setting standards for container lines to adopt.

“If you want to have interoperable supply chains and frictionless exchange of data, then you need to have widely adopted standards applied across the industry,” said DCSA’s chief executive Thomas Bagge.

“This is the only way to ensure an efficient and sustainable shipping industry that is fit for the future.”

Standardisation is the foundation not only of digitalisation, but of advanced data analysis.

The only way data can be assessed is if it is collected in a uniform way and stored properly.

The container industry is fortunate to have the guidance of the DCSA, but the bulk carrier and tankers sectors do not yet have a dedicated standardisation body.

This does not mean these shipowners should just throw in the towel; it is just an added task when trying to utilise and leverage data, and the fragmented approach will hinder the wider digitalisation process.

For those who think this all seems like a lot of work, there are third-party tech solutions that make the job easier.

“Data quality is crucial here. I guess any company can crunch, validate and clean data. You just have to make sure you have access to the right data sets and understand how to see the relationships between these data sets,” said Mathijs Slangen, vice-president, sales, at supply chain management company Flexport.

Resources and knowledge

“In the end, it is not extremely difficult, though it does require a serious amount of resources and knowledge about the applicability of the data.

“For us, it is our bread and butter. It is what we do, and we have a massive number of engineers who work on it,” said Mr Slangen.

“For a standalone company, it is probably not money well spent to set up a similar taskforce. To build a similar set-up would be a very costly exercise — one that only massive multinationals can do.”

There are benefits to looking externally for data solutions. Such outfits can combine and compare a wide variety of data sources, which enables access to new information. Further, it means data can be verified independently, which improves data quality.

“Data quality is crucial here. You just have to make sure you have access to the right data sets and understand how to see the relationships between these data sets

”

Mathijs Slangen
Vice-president, sales
Flexport



“If you want to have interoperable supply chains and frictionless exchange of data, then you need to have widely adopted standards applied across the industry

”

Thomas Bagge
Chief executive
Digital Container Shipping Association

“The industry is progressing at different rates. For those further along on their data journeys, they often have the option to integrate data from platforms into their own workflows. Thus, the external data is an additional layer of intelligence to be used in analysis

”



Tarun Mehrotra, chief strategy officer at RightShip, an environmental, social and governance-focused digital maritime platform, uses the company’s vetting solution as an example.

“For charterers, we are an independent provider of services, because you really want an independent view on the risk profile of a vessel.

“Any elements of ESG businesses want an arms-length view, and then they can take the action that they want from their own risk profile,” explained Mr Mehrotra.

Holistic view

The diverse range of sources and sheer volume of data that third-party solutions collect means these providers have a holistic view of the market, enabling them to notice trends and help customers benchmark themselves against the industry.

An additional benefit is the retention of data and maritime industry expertise. These experts are available to provide support to clients, ultimately to make decision-making with data more accessible.

The industry is progressing at different rates. For those further along on their data journeys, they often have the option to integrate data from platforms into their own workflows. Thus, the external data is an additional layer of intelligence to be used in analysis.

What do I do?

All of this might seem too advanced for some businesses, where the first question is simply: ‘What do I do with all this data?’

Work backwards. It is easy to be overwhelmed by lots of data feeds and points, especially if it is unstructured — so the best thing is to establish the purpose for which the business needs data.

For example, start with identifying pain points that need to be addressed. From there, you can identify the data fields, or information, that you need.

“Data-enabled decision-making holds the key to optimising every vessel and voyage, improving revenue and increasing asset value,” said Sarah Barrett, head of product insights at Wärtsilä Voyage, a maritime technology company.

“The true power of today’s software algorithms is that they make recommendations that can then be analysed and interpreted by the user to course-correct, blending software insights and human reasoning to chart the best course.”

Data informs decisions

It is an important point to make.

Data – even that not fed through an algorithm – does not make decisions; it informs them.

Whether your business decides to lean on a third-party solution or leverage in-house information, or somewhere in between, all stakeholders need to be engaged.

Any team trying to use data that is removed from the process risks misinterpreting the information, which could lead to poor decision-making.

The value of data is not in the fact that it simply exists, but in being able to gain insights to make commercial decisions.

To do that, you have to understand how data is collected and cleaned, as well as how it is processed into different information. There is no workaround.

“*Any elements of ESG businesses want an arms-length view, and then they can take the action that they want from their own risk profile*”

Tarun Mehrotra
Chief strategy officer
RightShip



“*Data-enabled decision-making holds the key to optimising every vessel and voyage, improving revenue and increasing asset value*”

Sarah Barrett
Head of product insights
Wärtsilä Voyage



Data – even that not fed through an algorithm – does not make decisions; it informs them.



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Cyber-risk casts shadow over digital transformation

The latest attacks on the shipping industry are a stark reminder of the threat posed by cyber-crime and its perpetrators, **Tomer Raanan** reports

A spate of recent attacks serves as an ominous reminder of how vulnerable the shipping industry remains to cyber-crime.

Maritime technology firm VoyagerWorldwide, which offers cyber-security protection among its services, fell victim to a cyber-attack that shut down some of its systems for several days in mid-December 2022.

Just a few days later, the port of Lisbon suffered a ransomware attack that took down its website.

Then, in early January 2023, DNV's Shipmanager platform was targeted, leaving more than 1,000 vessels without connection to its fleet management software — a worrisome incident, considering that classification societies are usually at the pinnacle of the industry's technical know-how.

These attacks took place over a period of less than a month and demonstrate that even shipping's savviest tech-minded players can fall prey to malicious digital actors.

As the industry becomes increasingly digitised and interconnected, it is also inevitably becoming more vulnerable to cyber-crime. An attack that begins in the middle of the ocean can quickly spread to company's offices on shore and vice-versa.

The most common ways that attackers gain access to companies' systems is via fraudulent e-mails, infected USB sticks, and through penetrating suppliers' cloud services, according to Daniel Ng, chief executive of maritime cyber-security firm CyberOwl.

About 80%-90% of cyber-crimes affecting the shipping industry are ransomware attacks, he said. These are attacks in which the criminals gain access



Skorzeiwak/Alamy Stock Photo

Experts advise stakeholders to gain genuine visibility into their cyber-risk and to have a back-up plan for when they are attacked.

to a company's systems and encrypt critical parts of it until they are paid a ransom.

The attacks are generally not targeted, he added, but rather attackers cast a wide net and hope that at least a few victims will fall prey to their malicious endeavours.

Companies also fall victim to these attacks as collateral damage, rather than being their designated target — as happened to Maersk in 2017.

"Nobody attacked Maersk [directly]. Maersk was collateral damage," Vespucci Maritime chief executive Lars Jensen told Lloyd's List, referring to the 2017 NotPetya attack.

"That was a Russian state attack against the state of Ukraine; 7,000 companies got hit, Maersk was just one of them."

One trend Mr Ng said will be consequential for shipping is the proliferation of low-orbit satellites like

StarLink, which is reducing gaps in internet coverage on the high seas.

While this has many benefits for seafarers and ship operations, it could also give criminals a continuous, uninterrupted connection to a ship's system and many devices connected to it.

Moreover, while this satellite also allows ships better access to critical security patches and updates, Mr Ng said the increased connectivity between devices and applications could vastly increase ships' vulnerability.

"Systems that were previously very difficult to use can now be used on board a vessel — and, if you then couple that with poor controls and policy for cyber-security, you basically have a sudden uptick of taking on new applications and new systems plugged into various things on board the vessel that were never designed to be securely connected."

A report by Mr Ng's CyberOwl, maritime tech outfit Thetius, and law firm HFW found that 32% of seafarers do not conduct regular cyber-security drills or training.

Moreover, 38% of senior leaders on shore either do not have a cyber-security response plan — or are not sure if their organisation has one.

Of the 200-plus participants surveyed in the report, 44% said they had been the victim of a cyber-attack, although some experts estimate that the true proportion in the maritime ecosystem is much higher.

It also found that similar issues exist across the maritime supply chain, where there is a “disconnect between the security standards ship operators are working to and the standards that the industry's suppliers work to”.

“What I've seen over the years seems to imply that the companies who are really taking this seriously tend to be the ones that have suffered from a successful attack,” Mr Jensen said.

Part of the problem is that unlike physical security threats, cyber-threats are amorphous and harder to grasp for the untrained individual.

However, Mr Ng says 2022 was an “inflection point” and that more and companies are now taking the issue seriously.

“People are no longer asking questions about why and whether it is really necessary for them to protect themselves. The conversation has shifted quite significantly to asking how they can protect themselves — and what are the right investments to make.”

However, he said the cyber-threat posed by malicious actors has become “significantly worse” over the past year.

Mr Ng finds the attacks on shipping's supply chains particularly sinister, because “one compromised supplier can

“*What I've seen over the years seems to imply that the companies who are really taking this seriously tend to be the ones that have suffered from a successful attack*”

Lars Jensen
Chief executive
Vespucci Maritime



affect the shipping operations of multiple shipowners/managers and fleets”, he said.

“And most shipping operators do not have clear visibility of the risks that their software suppliers pose to them on their vessel systems.”

Mr Ng said for stakeholders to better protect themselves, properly assessing their exposure is crucial. Companies typically underestimate the number of connected devices they have on ships — and therefore their risk exposure.

“If there's one thing that you do, it is just get more visibility of those risks; real visibility of the risks, rather than desktop exercises.”

Once risks are properly identified, even on older ships with legacy systems, they can be dealt with, Mr Ng said.

Yet even the best-prepared outfits can still have their defences breached — and no perimeter is impenetrable.

“It's not just a matter of making yourself more secure, because you can never have perfect security; it doesn't exist,” Mr Jensen said.

“*If there's one thing that you do, it is just get more visibility of those risks; real visibility of the risks, rather than desktop exercises*”

Daniel Ng
Chief executive
CyberOwl



“It has to go hand in hand with resilience: what is your back-up plan if something really bad happens?”

Companies should have a multi-layered defensive posture, Mr Jensen said, and make sure “everything is compartmentalised”.

However, they should spend an equal amount of time figuring out how to get up and running again if the worst-case scenario materialises.

“[As] we've seen over the past decade, the worst-case scenario does happen for individual companies every now and then, where they literally do lose everything and have to start from scratch,” he said.

Industry experts close to the matter for a global shipping company said: “It is imperative for everyone involved in any part of the supply chain to understand and anticipate the threat of cyber-attacks.

“Threat actors can take many forms and pose a security question that requires a full and co-ordinated response across the entire operation.

“There are many vulnerabilities that can impact our supply chains. Unfortunately, events like a pandemic or conflict — as in this period — increase the exposure to cyber-attacks that can cause severe and lasting disruption.

“Delays and lost business could have a huge impact on the bottom line for not only the targeted company, but all that rely on its services throughout the supply chain.”

Digitalisation is inseparable from decarbonisation, and the industry is only going to increase its reliance on digital products.

Shipping companies big and small should heed the advice of Messrs Jensen and Ng and work to gain visibility into their risk, devise a worst-case scenario plan, and build resiliency in their organisations.



Suphanat Khumsap/Aamy Stock Photo

Will CII be maritime's digital game-changer?

If the CII is to be rolled out successfully, digital tools and technology centred on improving vessel efficiency will be pivotal.

Measures to tackle shipping's carbon intensity could accelerate a new wave of digital tools and technologies as owners look to make the efficiency grade, **Enes Tunagur** reports

New regulations aimed at reducing shipping's carbon intensity could pave the way for a wider digitalisation effort as shipowners turn to technology to improve fleet efficiency.

The International Maritime Organization's Carbon Intensity Indicator and Energy Efficiency Existing Ship Index measures came into force on January 1, 2023, applying to all cargo vessels and cruiseships at and above 5,000 gt.

Starting from March 2024, vessels will receive ratings from A to E, with the latter representing the least-efficient ships. Thresholds will become increasingly stringent through to 2030.

Proposals have been met with considerable pushback by industry stakeholders, who have raised concerns over the rulings metrics and the fundamental flaws as to just how the measures will be enforced.

Ships that fail to make the grade will be required to adopt an improvement plan. How this is achieved and monitored remains a grey area.

While concerns may be legitimate, if the CII is to be rolled out successfully, there is consensus that digital tools and technology centred on improving vessel efficiency and optimisation will be pivotal.

Indeed, Nick Chubb, founder and managing director of the maritime innovation consultancy Thetius, says the only way to make regulations like CII work is by using digital tools.

As such, there has been a significant increase in investment for digital solutions — particularly in the past three months, ahead of and since the initiation of the CII ruling.

Energy-saving devices and other technological solutions have now become a top priority for shipping companies.

A report by Thetius, published in 2022, stated that CO₂ emissions savings of 18% or more in some cases are being reported across early digital decarbonisation adopters.

According to Dr Maurizio Pilu, managing director of Safetytech Accelerator, a non-profit initiative by Lloyd's Register, these investments — and similarly the options open to stakeholders to enhance vessel efficiency — are two-fold.

The first, he says, is voyage efficiency and monitoring, reporting and verification (also called MRV), involving tools that help measure everything from weather rerouting and reducing time spent at ports to avoid higher fuel consumption.



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This could also stretch to other methods, such as those adopted by Star Bulk Carriers and others — which have even started using robots to clean hulls during drydocking to reduce fuel consumption.

Mr Pilu says the second option available to shipping companies are those that fall under “ship design and chemistry”, where artificial intelligence and the latest technology can also be utilised to reduce emissions.

While including engine and propulsion optimisation, this could also extend to blockchain-enabled technologies that can help trace the carbon intensity of bunker fuels, as highlighted in a recent study published by Lloyd’s Register.

Some digital technologies could also help the industry to address key challenges for alternative fuels, such as tracing lifecycle emissions, or the so-called well-to-wake issue.

Of course, the implementation of these digital tools, while effective at addressing the requirements stipulated under the CII ruling, have the added benefit of reducing operational costs — a major plus-point for shipowners and one of the main selling points for investing in new technologies.

“*We see more and more clients asking us about automatic data collection and software to control the CII of their fleet*”

Paolo Moretti
Chief executive

Registro Italiano Navale Services



Paolo Moretti, chief executive at Italian classification society Registro Italiano Navale Services, says in the ‘class’ field, there has been a notable and significant uptick in interest from the industry in how digitalisation can help them comply with current and potential regulations for this very reason. “We see more and more clients asking us about automatic data collection and software to control the CII of their fleet,” he said.

Adopting the whole digitalisation package is much more attractive for shipowners than in the past, he explains.

Not only is there an increase in cost-

savings — where, in some cases, there are opportunities to cut operational costs by double-digit percentage proportions — but there is also a clear window to improving a vessel’s CII rating, said Mr Moretti.

More importantly, however, is what he perceives as a change of industry mindset. Whereas before, shipping’s fragmented approach to digitalisation has been a stumbling block, it is becoming increasingly evident everyone is on board.

“I believe this is the moment in which the perception by the shipowner — even the smaller one — is changing on this topic,” said Mr Moretti.

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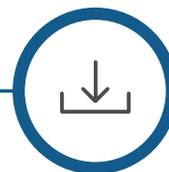
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