



Towards a more efficient future

A spectre is haunting the maritime and logistics industry – the spectre of innovation.

This amorphous idea has been changing the way things work in our industry since time immemorial – but the pace is speeding up now, with digitalisation, visibility and connectivity, **Ian Ackerman** writes

Innovation is changing the maritime logistics industry whether the industry is ready for it or not. This industry is notoriously reticent to change, but the impetus for innovation and change is coming from several directions outside the industry.

Because regulation, efficiency imperatives and customer demands are the drivers of innovation in the industry, it has no choice but to bow to the pressure and embrace the digital innovation wave that has swept through every business and industry over the past several decades.

WHAT IS INNOVATION?

The *Macquarie Dictionary* describes the verb innovate to mean “to bring in something new; to make changes in anything established”. The word’s origin lies in the Latin *innovo* – “to renew, restore, alter” – at the very root of the word is change.

In a paper about the definition of innovation, the authors (Anahita Baregheh, Jennifer Rowley and Sally Sambrook) wrote that “innovation is the multi-stage process whereby organisations transform ideas into new/improved products, service or processes, in order to advance, compete and differentiate themselves successfully in their marketplace”.



Peter Creeden,
MPC
International

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INNOVATING THE SUPPLY CHAIN: OFLOAD



Geoffroy Henry, Ofload CEO and founder

■ Australian supply-chain startup Ofload is looking to maximise efficiency by expunging everything in the supply chain that does not create what CEO and founder Geoffroy Henry said is “truly the value of freight”.

“At Ofload we simply consider that the value of freight lies between the truck and the truck driver – as well as the people loading and unloading the freight,” he said.

He said there is a huge amount of paperwork and manual processes involved in moving freight, and those sitting in offices managing freight are not actually moving the freight.

“If things were perfectly automated, and things were perfectly efficient, and documentation was done digitally, we wouldn’t require any of those layers of complexity or overhead,” he said.

Mr Henry said Ofload aims to co-ordinate the market with itself in the middle as a digital marketplace that connects companies with truck carriers.

Others have been taking note of the importance of the innovation that Ofload is carrying out – the company won the Supply Chain Innovation & Technology Award at this year’s Shipping & Maritime Industry Awards.

The company also recently announced it has secured \$60 million in Series B funding, including debt and equity components.

The round was led by Jungle Ventures, Singapore’s largest independent venture capital firm, and featured increased backing from existing investors King River Capital, Bay Grove, Maersk Growth and Foundamental.

Mars Growth Capital, part of the Liquidity Group, delivered the debt financing component, which helps further Ofload’s inorganic growth initiatives, following on from its acquisition of Melbourne freight specialist CIA Logistics in September.

Mr Henry said, “Ofload is pleased to welcome Jungle Ventures as an investor, and we look forward to continuing to grow our offering and service to the Australian freight industry across all corridors very soon.”

Jungle Ventures said Ofload’s unique has potential to increase supply-chain visibility and efficiency across Australia, creating meaningful benefits for both shippers as well as transport operators.

Jungle Ventures managing partner Yash Sankrityayan said, “We are proud to partner with Ofload given their mission to help the large number of SME transport operators serve the demand across the country, and to do so with reliability and technology at every step.

Already the empty loads reduced by Ofload and process transparency are creating positive change for all stakeholders, as well as for the environment.”

Ofload’s digital freight forwarding system matches freight from Australia’s largest companies with transport operators across

Ofload is a digital marketplace for companies and truck carriers



So, innovation is not about technology; innovation is about novelty – new ways of using existing tools.

In the maritime and logistics industry, innovation has taken many forms over its long history. Using a steam engine to propel a ship is one example, as is containerisation. Both these innovations used existing technology in new ways to make carrying freight more efficient.

Peter Creeden, managing director of supply-chain consultancy MPC International, told DCN the shipping industry is not intrinsically innovative.

“The shipping and logistics industry is the most technophobic industry out there,” he said.

Mr Creeden said a major reason for this is that generations of managers and senior managers have been trained to save as much money as possible because the margins in the industry were so thin.

“There’s very little research and development in this industry,” he said.

“That is a problem, that is a serious problem. You’re not going to get innovation if you’re not doing research and development.”

Because of this situation, Mr Creeden said change must be forced on the industry.

He pointed to the sulphur cap that came into force at the beginning of 2020.

“Shipping lines had to react,” he said.

And now another IMO decarbonisation initiative is about to come into force. These new regulations, in short, will grade ships on their “carbon intensity”, giving them a grade between A and E. Only ships rated A, B and C will be able to operate after 2024.

“This is going to put a lot more pressure to change to alternative fuels or more efficient ships,” Mr Creeden said.

“Overall, it’s going to suppress any of the older vessels, it’s going to be a speed cap on the industry. The supply chain is going to lengthen – they’re going to add more ships, and they’re going to slow down because of this carbon rating system, and that is a big change. That’s going to force innovation.”

SPECIALISE OR DIE

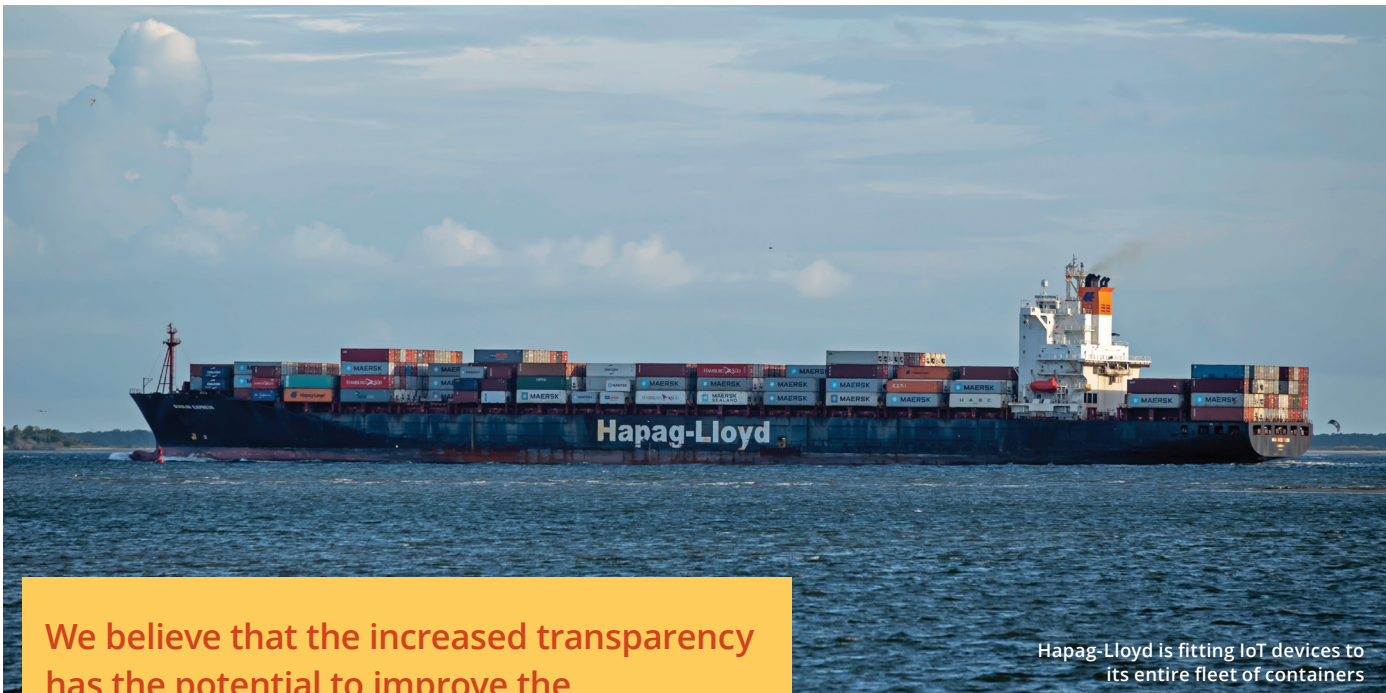
There is an old analogy about freight forwarders and travel agents. You’ve probably heard it: Freight forwarders are the travel agents of freight. If this analogy is anywhere near true, it does not look good for freight forwarders.

“If you don’t specialise, you die,” Mr Creeden said of travel agencies and freight forwarders. He said if a travel agency does not specialise in something specific – business travel, niche destinations – they’re not going to make any money because everyone can now book their air travel online.

“How are freight forwarders planning to innovate?” he asked. “And how does one let the computers do the job to free up the people to manage the job?”

Mr Creeden said a lack of digital literacy is a big problem in our industry.

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We believe that the increased transparency has the potential to improve the management of strained supply chains for the benefit of our customers.

Dr Maximilian Rothkopf, Hapag-Lloyd

Hapag-Lloyd is fitting IoT devices to its entire fleet of containers



Dr Maximilian Rothkopf, Hapag-Lloyd

“In our industry a lot of people rely on their guts, and they’re not comfortable using data yet,” he said. “We have to bridge that gap. Hopefully that’s where innovation will come.”

In a 2019 study called *Driving Innovation, the Boardroom Gap*, the Australian Institute of Company Directors (in partnership with the University of Sydney Business School) found that corporate boards in Australia have low innovation and digital literacy levels.

The report said Australian boards lack critical technical and innovation skills, and need to increase access to specialist advice.

The report does not deal with leadership in the logistics specifically, but Mr Creeden said digital literacy is a significant problem in the industry.

“If there’s no strategy from senior management, the organisation doesn’t follow. A data scientist is only good if they know the right questions to ask,” he said.

“If they’re asking questions that don’t help the business move forward, they’re not helpful in improving the supply chain. There needs to be a balance between supply chain understanding and technology understanding.”

SUPPLY CHAIN VISIBILITY

Hapag-Lloyd this past August announced it would install real-time tracking devices on its entire dry container fleet. The company, which is the fifth-largest container line by capacity (its fleet can carry 1.77 million TEU) according to Alphaliner, said the vast majority of its 1.6 million dry containers would be trackable by the end of 2023.

The internet-of-things (IoT) devices can transmit real-time data on location, temperature and any shocks the container experiences.

At the time of the announcement, Hapag-Lloyd COO Dr Maximilian Rothkopf said his company was the first carrier in the industry to undertake such a comprehensive step towards the digitalisation of container shipping.

“The containers leaving our depots with a tracking device will now be fully visible to us and, in a next step, to our customers as well, whether they are in a warehouse or moving on a truck, train or barge,” he said.

“We believe that the increased transparency has the potential to improve the management of strained supply chains for the benefit of our customers.”

Mr Creeden said this move by Hapag-Lloyd was an important one for the company and the industry as a whole.

“They raised their hands and said we’re not just competing with the other shipping lines, we’re competing with transparency platforms like Terminal49, Project44,” Mr Creeden said.

INNOVATING THE SUPPLY CHAIN: INBOUND

■ Usage of Inbound – a multi-modal, multi-function, multi-facility community vehicle booking and visibility platform – has been expanding across supply-chain boundaries.

Inbound CEO and founder Luke Duffy told *DCN* the system is being used at sea-freight LCL warehouses, breakbulk and general ports and intermodal terminals, with a pipeline of new facilities in these sectors set to join in 2023.

“As well, the platform is likely to be adopted by other sectors including airfreight terminals, pallet depots and grain packing facilities,” he said.

“Benefits are many and varied, but in essence Inbound removes an enormous, longstanding problem that derives from the random arrival of vehicles at facilities and significantly reduces costs and inefficiency.”

Daniel Wright: Hapag-Lloyd

“Hapag-Lloyd is telling its customers, ‘why is a third-party company that’s not involved in your transport actually selling you the data on your transport? We’re taking that back, we’re going to give that to you directly.’ That’s how that’s working – that is a big space that’s coming.”

VISIBILITY FROM SPACE

CEO and founder of freight and shipment booking marketplace Shipz Jonathan Kempe pointed to some issues with uptake of visibility technology in the industry.

He said some in the supply chain resist such technology because it would make it easier to assign responsibility in the case of an incident.

He sketched out a hypothetical situation where a container of dangerous goods explodes and sinks a ship.

“If I’m the shipper of these dangerous goods, I want to walk away from that and wash my hands of it. Just as much as the carrier wants to walk away and say ‘we don’t know what happened,’” he said.

“You can’t have unilateral accountability. You have to have an agreement that there’ll be shared

responsibility. And at the moment, if I could put my finger on the dominant paradigm inside global supply chains, there’s a spoken and unspoken rule that that responsibility is demarcated between groups and it’s fluid in terms of who is actually responsible.”

With this resistance to change, new technologies face an uphill battle for implementation, Mr Kempe said.

“But, there are certain technologies that come along that don’t care – and one such innovation is the top-down visibility you get with satellites.”

Over the past several years, low-earth orbit (LEO) satellite constellations have attracted some attention as a way to not only boost maritime communication and data transfer but also monitor the seas.

Mr Kempe set out an example of the ways LEO satellites could help monitor and confirm emissions claims of ship operators.

“If a company builds a vessel that they say is zero, or low-emission, they can tell the press, and the world that it’s clean, and there is no accountability,” he said.

“But satellites sit overhead in an uncontrollable state – they can tell, with the sensors on board exactly how much methane that ship is emitting.” ■

MARITIME INDUSTRY CHALLENGES ARE MET THROUGH CONNECTIVITY: REPORT

■ Shipping companies seeking to overcome the challenges of the maritime industry would benefit from a strategic approach to connectivity, according to a recent report.

The Network Effect report from communications technology Inmarsat and consultancy Thetius details the business benefits and specific capabilities that shipping companies can access by applying a connectivity strategy across their business IT, crew, and operational networks. These include voyage and port-call optimisation, emissions reduction, condition monitoring and condition-based maintenance, trade facilitation, seafarer welfare and training, remote surveys and pilotage and telemedicine services.

Thetius director of research and consulting Matthew Kenney said against a backdrop of evolving regulatory requirements and increasing emphasis on seafarer welfare, connectivity and data are indispensable to shipping company competitiveness.

“However, simply purchasing data is no longer enough,” Mr Kenney said.

“If shipowners are to reap the full rewards of operational optimisation, decarbonisation and a loyal and talented crew the right connectivity strategy is essential.”

According to the report, once a shipping company has established its objectives and identified the capabilities needed to achieve them, it will benefit most from finding the right combination of communication services to best support those capabilities.

By joining the dots between business goals and connectivity options, operators gain access to a host of benefits including opportunities to optimise and drive efficiency, while reducing running costs and improving profit margins; the ability to attract and retain

talented crew; and the capacity to future-proof operations and build in competitive advantages.

Inmarsat Maritime president Ben Palmer said ultimately, a good connectivity strategy relies on a clear understanding of the company’s business goals, the technologies needed to attain those goals, and any additional influencing factors such as resource availability and investment requirements.

“In that sense shipping is no different to any other industry: collecting, collating, analysis and harnessing the value of data relies on resilient, reliable, secure, globally available connectivity services,” Mr Palmer said.

“It is also critical to recognise that implementing a connectivity strategy is a continuous and iterative process that requires constant monitoring, frequent reassessment, and regular feedback from internal and external stakeholders.

As this report makes clear, this is both necessary and highly valuable to modern shipping operations both in terms of driving competitive advantage and addressing decarbonisation goals.”



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