The logistics of disruption

Words like disruption and unprecedented have become hackneyed and cliché in the logistics world over the past two years, but words become so for a reason. There is a new world emerging, and in this interregnum, we're seeing a time of difficult logistics, high costs and general supply chain strife. Many outfits are finding their way through this time – even finding ways to thrive – through innovation

The year 2021 has been a story of unfulfilled potential in the ro-ro shipping segment

Mariusz Bugno; Wallenius Wilhelmsen

THE RO-RO OUTLOOK

The container industry has attracted the limelight recently as a shining example of supply chain chaos triggered by the COVID-19 pandemic. However, there has been significant fallout into other shipping modes. Ro-ro and multipurpose carriers are no different, dealing with industry-specific logistics and supply chain bottlenecks.

Wallenius Wilhelmsen vice-president, head of sales, Oceania Vedran Muratbegovic said the ro-ro specialist logistics company is seeing a recovery of volumes compared to 2020, which was obviously heavily impacted by plant closures in Q1/Q2 as a consequence of the pandemic. But, he said the company is not yet seeing a full recovery to pre-pandemic levels.

"Twenty twenty-one is, however, a story of unfulfilled potential with parts, and labour shortages impacting production and leading to demand for goods outweighing supply. Those supply chain pressures seen this year have certainly pushed some of the growth out in time."

But, Mr Muratbegovic said the general outlook for the segment remains positive in key segments. He said for auto original equipment manufacturers (OEMs) are unable to meet demand.

"Today, light vehicle inventories are at a record low, but with production of semiconductors now ramping up, we assume the situation will stabilise during the second half of 2022. Meanwhile, consumer confidence, low interest rates and good job figures have led to a strong demand for durable goods including light vehicles," he said.

"Global light vehicle sales are expected to reach 80 million units in 2021, up from 76 million in 2020 but still behind 2019 volumes, which reached 90 million.

"For 2022, moderate growth is expected to hike sales to 83 million, with global sales expected to reach pre-pandemic levels in 2023 before a big upswing in 2024 and 2025."

RESOURCES BOOM, MORE MACHINERY

Mr Muratbegovic said due to generally high prices for mined commodities, mining machinery sales are expected to grow over the coming year.

"Broadly speaking, spot prices of mined commodities are now below their recent peaks but significantly higher than their long-term averages. For many metals and bulks, this means that they are trading close to their records in the last decade.

"The notable exception is iron ore, where the price has retreated more than 50% since this summer," Mr Muratbegovic said.

He noted that mined commodities tend to perform well in an inflationary environment like we have today, as price increases are inherently inflationary.

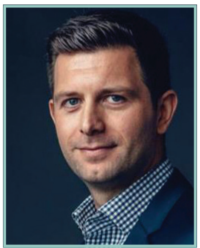
"Crucially, current prices enable miners to generate strong cash flows and are expected to continue doing so. Next year, miner earnings are forecast to be roughly twice the average from the last 10 years," Mr Muratbegovic said.

"The strong profitability has lifted miner capex approximately 20% this year. Inevitable replacement of ageing machinery is expected to push spending in this category further up in 2022 and 2023.

"The market currently predicts that machinery sales will grow around 15% each of these years. At this rate, sales at the end of the period will be more than 20% higher than they were before COVID hit."

And agricultural equipment demand is also expected to increase.

"Much like mined commodities, prices of agricultural products have rallied spectacularly since



Vedran Muratbegovic, vice-president, head of sales, Oceania, Wallenius Wilhelmsen

Wallenius Wilhelmsen vessels carry a significant portion of cargo other than cars and trucks

the trough in the first half of 2020. Globally, food prices are at their highest level since July 2011.

"This yields historically buoyant earnings for farmers – despite inflationary pressure on inputs such as fuel and fertiliser – and continued support for machinery investments," Mr Muratbegovic said.

Agriculture machinery markets staged a very strong and swift comeback after the initial COVID shock, leaving export volumes essentially unchanged from 2019 to 2020. The strong momentum has continued this year, with year-to-date exports almost 30% higher in the three-month period ending in August.

"Next year, machinery manufacturers are forecast to record another 10% growth in revenues, followed by 5% in 2023," Mr Muratbegovic said.

RO-RO WIND FARM LOGISTICS

There is more to ro-ro cargo than cars and trucks, the vessels are suited to carry a wide variety of other cargo.

Mr Muratbegovic said a significant portion of what Wallenius Wilhelmsen carries is made up of other types of cargo.

"Our ambition is to continuously diversify the type of cargoes we carry. We see this process as an infinite game rather than something that has a fixed end goal."

Mr Muratbegovic said Wallenius Wilhelmsen recently delivered a shipment of wind turbines from Germany into Fremantle. The turbines were to be deployed by Blair Fox, an electricity company that builds and operates wind farms in Western Australia.

He said the shipment included five base/mid-section tower stacks, each weighing 51 tonnes and measuring 21.3 metres in length; three top tower section stacks weighing 25 tonnes; and two blade stakes weighing up to 15 tonnes and 26.2 metres in length.

He said Wallenius Wilhelmsen used specialised handling equipment that ensured minimal lifting to reduce the risk of damage.

"Integrated solutions allow for better planning," Mr Muratbegovic said.

A reliable ocean service and safe handling solutions were only one piece of the puzzle.

"Our integrated logistics service offering meant we could also offer trucking from site to our customer's compound for survey and then from there to the port of load in Bremerhaven, Germany. There, our team oversaw the terminal handling, cleaning and cargo lashing surveys for the customer."

He said careful planning is always important when dealing with cargo of this size.

"The major challenges often encountered when transporting renewable energy components are mainly on the road due to the dimensions of the products. Certainly, close collaboration and utilisation of our tailor-made logistics service was key to devising a detailed route plan that ensured both the road and ocean leg of the journey were optimised," Mr Muratbegovic said.

"By combining the strength of our ocean services with our logistics expertise, we were able to deliver a solution for our customer, giving them peace of mind."

REGULAR SAILINGS

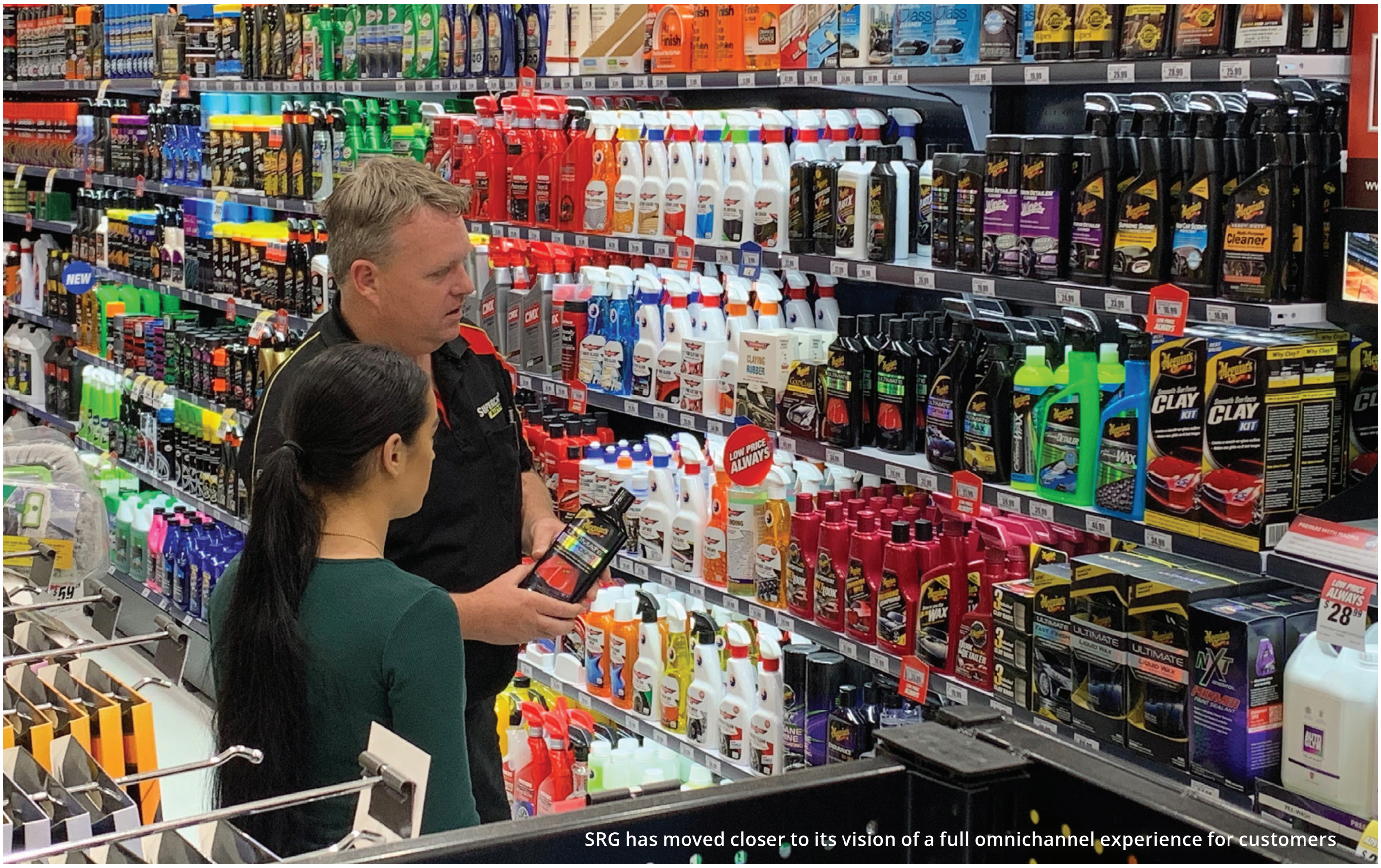
Wallenius Wilhelmsen has up to six sailings per month from Europe to Australia/NZ both via the Panama Canal and via the Cape of Good Hope, with three sailings per month from North America.

Mr Muratbegovic said Wallenius Wilhelmsen can change the capacity on the sailings depending on overall market requirements.

"The vessels we deploy in the trades to this region include our highest capacity vessels with a deck height of 7.1 metres (accepting cargoes of up to 6.2 metres in height to allow for height of equipment used which is approximately 0.85 metres in height) and ramp capacity of 500 tonnes (allowing for cargoes of up to 420 tonnes in weight)," he said.

"They are the only ro-ro vessels of their kind in the market and a true differentiator in the industry when it comes to shipment of oversized/project cargoes."

Wallenius Wilhelmsen



SRG has moved closer to its vision of a full omnichannel experience for customers.

Reconfiguring retail

Over the past year, retail group SRG has completely reconfigured its online supply and fulfilment network partly in response to the COVID-induced spending splurge, **Paula Wallace** writes

Super Retail Group (SRG) is one of Australasia's largest retailers, housing iconic brands including Boating Camping Fishing (BCF), Macpac, Rebel Sport and Supercheap Auto. Headquartered in Brisbane, its network extends to more than 670 retail stores and 12,000 team members across Australia, New Zealand and China. The group achieves annualised turnover in excess of $2.5 billion.

SRG's supply chain team manages the movement of products from import and local trade partners to service all channels and brands with SRG (store, online and commercial). As part of this activity, its supply chain team manages inventory across its various company-owned distribution centres (DCs) and its store network.

DCN spoke to two key members of SRG's performance and insights team, Edwin Yakop and Mathew Budden.

Mathew Budden, performance and insights lead, SRG

"Over the last 12 months, we've seen a surge in online orders ... and demand for products such as gym equipment increase due to extended COVID-19 restrictions in Australia and New Zealand.

"The increase in online volumes put significant pressure on our online fulfilment and customer service operations, and we started looking at ways to secure a consistent and well-defined network and move towards our broader vision of a full omnichannel experience," Mr Budden and Mr Yakop said.

Up until recently, each of SRG's 670 retail stores were available to deliver and the online order fulfilment system allocated orders based on proximity to customers without considering the true cost to fulfil.

As a result, more than 20% of home delivery orders were shipped interstate at a higher cost, despite the company having the items in stock in the state.

Image supplied

In addition, more than 15% of home delivery orders were split into multiple packages, which also increased fulfilment costs. For example, a single order for a cricket bat, cricket pads and helmet might come from three different Rebel Sport stores.

GAINING INSIGHTS

"We needed to understand our current delivery flows and how many zones inventory was moving across," Mr Budden and Mr Yakop said.

"To do this, we pulled in a wide range of data sources such as postcodes with Alteryx Spatial Analytics to map out key delivery routes and location points (to and from the customer).

"We used a thematic map of geographical delivery zones across Australia to measure distance and travel time between points."

Following the spatial analysis, SRG ran multiple simulations on alternative delivery routes or zones based on current production and demand forecast data, to determine outcomes. For example, when a fulfilment centre was in one of the new delivery zones, it would be prioritised. When it was not, SRG would pick a store and bulk up the inventory in that store to fulfil the demand.

By utilising retail stores as micro-fulfilment locations, SRG can realise its "click to consumer" customer promise around time.

"By presenting the data through the thematic map, we were able to secure executive leadership buy-in and implement a new delivery network operationally within two months," Mr Budden and Mr Yakop said.

RECONFIGURING THE NETWORK

SRG was able to completely reconfigure its online supply and fulfilment network to increase speed to customers, which in turn reduced costs and improved its scores on customer experience and satisfaction.

In addition, SRG was able to grow and mobilise its teams with one analytics automation platform, to help build agility into systems, decision-making and processes.

"Our supply chain is made up of several pieces … we have product that arrives from international vendors by sea along with product that arrives from Local vendors typically by road," Mr Budden and Mr Yakop said.

"This stock is handled by one of our DCs that are positioned at key locations across Australia and NZ.

"Our retail network is supported by a combination of rail and road freight and our online customers are supported by a range of carriers and Installation partners by both sea and air freight which are selected based on the type of products orders along with the customers' requirements."

Overall, this project has created a leaner and more streamlined approach to SRG's online network that is easy to understand and implement.

"We have been able to build a platform that is able to grow with new investment opportunities to improve the customer promise around delivery," Mr Budden and Mr Yakop said.

"The effective migration to the new system was able to support SRG with the sudden online order volume influx due to the global pandemic disruptions, while maintaining key business metrics such as Net Promoter Score."

By optimising its online fulfilment network to ensure inventory from all of its brands could be more effectively managed by stores or fulfilment centres in key zones, SRG reduced its total number of parcels by 24%.

"In addition, by finding the most efficient route to each customer destination, we were able to reduce lead time by 11% and improve scalability to handle a surge in online demand during COVID-19," Mr Budden and Mr Yakop said, adding that costs have been reduced by 18%.

"The flow-on benefit of reducing transit distance and lowering split deliveries means that we've be able to improve environmental outcomes in our supply chain, as part of our broader sustainability strategy," they said.

Edwin Yakop, performance and insights manager, SRG

By presenting the data through the thematic map, we were able to secure executive leadership buy-in and implement a new delivery network operationally within two months.

Mathew Budden and **Edwin Yakop**, SRG

Previously, each of SRG's 670 retail stores were available to deliver and online orders were allocated based on proximity to customer

SRG

Navigating in a sea of disruptions

A group of maritime and logistics professionals came together recently for a symposium organised by the Australian Maritime Logistics Research Network. By Vinh Thai

A number of diverse themes were discussed at the recent, third symposium of the Australian Maritime Logistics Research Network (AMLRN).

The online event was organised in conjunction with the Australian Maritime College/University of Tasmania, the University of Sydney, and RMIT University, notably Associate Professor Vinh Thai, founder of the AMLRN.

Vinh Thai, Associate Professor, RMIT University

Themes covered by participants included the treatment seafarers during the pandemic; modern supply chain security; sustainability in Australia's port and supply chain network; container shipping market movements; and the resilience of supply chain systems post-COVID.

Among the keynote speakers was Professor Devinder Grewal, CEO of the Australian Institute of Shipping and Transport Logistics, who delivered a moving presentation on how seafarers have been "forgotten" during the pandemic.

Professor Grewal highlighted the notion of "90% of everything": while seafarers run ships that carry the vast majority of goods we all consume, they have not been welcomed in many ports around the world.

He also noted that many countries have classified workers in other sectors as essential workers, but seafarers in many countries are still not classified in this way. According to the latest BIMCO/ICS 2021 report, the maritime industry currently employs 1,892,720 seafarers, but about 250,000 are stuck on ships well beyond their contracts (last year this figure was more like 400,000).

Professor Grewal then highlighted that the secretary-general of the International Maritime Organisation (IMO) wrote to all member states in October 2021 asking them to designate seafarers as key workers, and the International Labour Organisation and UNCTAD later joined the IMO's call.

This designation allows seafarers to be prioritised for vaccination, permitting travel to and from ships. So far, 62 out of 175 member states of the IMO have done so. In the Oceania region, Kiribati, Marshall Islands and New Zealand have already designated seafarers as key workers, but not Australia.

As governments have been busy focusing on their own citizens, these key workers who are essential to the wellbeing of the world remain forgotten, and the crew change crisis continues.

To address this crisis, Professor Grewal suggested that seafarers' social/health data should be formally collected, analysed, shared and policies based on sound data should be made under harmonised protocols.

He also noted that data and technology are just enablers, the role of governance and leadership during global emergencies is critical. In the long term, a floor of rights for seafarers should be developed.

EFFICIENCY AND SUSTAINABILITY

Jonathan Kempe, CEO and Founder of VERIFAI addressed the symposium on how modern technologies can augment supply chain processes and assist participants to operate more effectively and efficiently.

Mr Kempe delivered a presentation of how the internet of things can help to enhance granular visibility across stages of supply chains, including that of sea transport. He also illustrated the role of low-earth orbit satellites to increase transparency across supply chains.

Altogether, these technologies may help improve supply chain security outcomes, which will eventually benefit consumers. However, he noted that as these systems do require more data and connectivity, there is always the concern of cybersecurity.

Meanwhile, Bilal Ali Khan – general manager (new markets) at GeelongPort – spoke about sustainability. Citing the Victorian government's ports review to tackle the structural issues in sustainability of

Image supplied

An interesting point raised during the panel discussion was the need for data analytics in maritime operations, and a co-ordination mechanism among states relating to a single national window for freight related data.

supply chain networks, he highlighted key themes on augmentation of existing infrastructure. This was extremely reassuring as it ensures investment in port infrastructure is fit for purpose and does not result in stranded assets.

Mr Khan noted that GeelongPort sees sustainability as a journey where milestones are celebrated, with the most recent one being the organisation's 100% carbon neutral certification under Climate Active.

Mr Khan explained that GeelongPort made the decision to go carbon neutral as it acknowledges climate change as one of the major risks currently facing communities globally. He also argued that, with a clear focus on creating a sustainable future, private port operators should proactively engage with the government to deliver "future-focused port infrastructure".

FURTHER DISCUSSIONS

The symposium also included an interesting, insightful and thought-provoking industry panel discussion with Zoran Kostadinoski (IFCBAA); Rohit Sukumar (CMA CGM Group); and Mark Cooper (Tasmania Ports Corporation).

Topics of discussion include the impacts of current global supply chain disruptions on the Australian maritime industry, exporters/importers and consumers and successful strategies to date in tackling these disruptions.

Participants also discussed the impacts that COP26 commitments will have on the Australian maritime sector and what should be done to address these issues, with a focus on academic and industry collaboration.

An interesting point raised during the panel discussion was the need for data analytics in maritime operations, and a co-ordination mechanism among states relating to a single national window for freight related data, incorporating all key players in the maritime supply chain.

The need for tighter empirical research collaboration between institutions and the industry in relation to maritime logistics was also highlighted.

Professor Devinder Grewal, CEO, Australian Institute of Shipping and Transport Logistics

EXPORT-IMPORT SOFTWARE START-UP LISTS ON NZ STOCK EXCHANGE

After the company's listing in November, TradeWindow's COO Andrew Balgarnie spoke to *DCN* about the New Zealand-founded company's plans to expand its business, offering digital systems for exporters, importers, freight forwarders and customs brokers

Can you tell us about your products?
TradeWindow's digital trade platform covers compliance, operations management, data sharing and storage, internal and external stakeholder collaboration, and end-to-end supply chain traceability. Digital trade solutions deliver most value if data can be captured at source, securely shared, and re-used across multiple use cases.

Our products fall into three categories:

- **Productivity:** TradeWindow Prodoc, ExpressDoc, Freight, and ExpressFreight
- **Connectivity:** TradeWindow Cube
- **Visibility:** TradeWindow Assure

Can you tell us who your top investors are?
Our three largest shareholders are ASB Bank, a fully-owned subsidiary of Commonwealth Bank of Australia (CBA) which owns 22.4% of the shares on issue; AJ Smith, CEO and founder who owns 17.2% of the shares on issue; and Quayside Holdings – which is the majority shareholder of Port of Tauranga, New Zealand's largest export port – which owns 7.9% of the shares on issue.

Can you explain why you recently listed on NZX without raising capital or issuing shares?
Our reason for pursuing a listing was to reinforce our status as a trusted partner of government agencies and major enterprises, including managing the most sensitive trade data of these parties. As a listed entity we are required to meet the highest standards of governance and transparency which supports our growth as a trusted organisation.

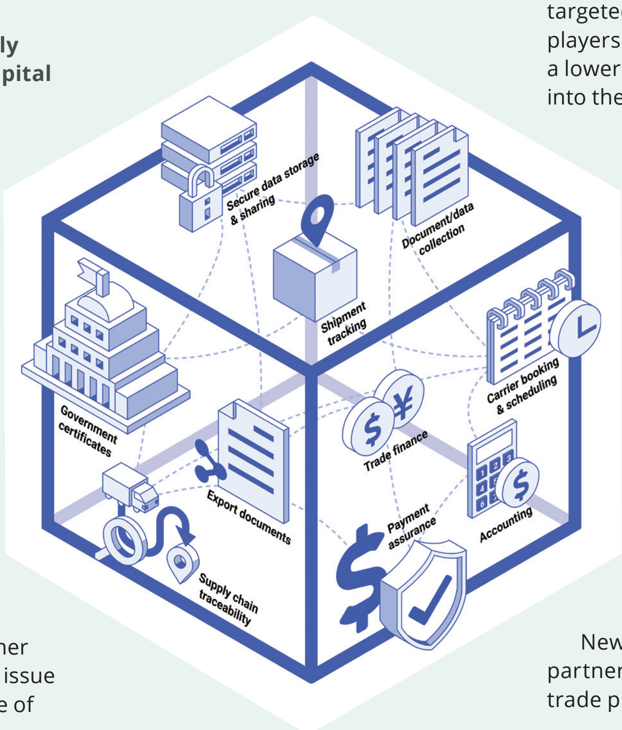
We joined the NZX as a direct listing – also known as a compliance listing – rather than an initial public offering, or IPO. It means our shares are listed on the main NZX board and can be bought and sold as with any other listed shares. However, we did not issue new shares to investors at the time of listing and the company's founders did not sell down their shares because TradeWindow was not seeking to raise further capital after an oversubscribed capital raise of NZ$15 million that closed in September 2021.

What business are you generating in the Australian market?
TradeWindow expanded to the Australia market in February 2020, with the acquisition of Sydney-based Cyberfreight, a freight forwarding software solution since rebranded as TradeWindow Freight. We now have offices in Auckland, Sydney, Singapore and these are supplemented with sales staff on the ground in Melbourne and Brisbane and other locations in New Zealand and across Asia. Our solutions are used by exporters and importers of dairy, meat, grains, horticulture wine, seafood but also timber, building products, consumer items and manufacturers.

Can you tell us what other companies you have acquired this year and are you looking to acquire further businesses in Australia?
Strategic acquisitions can provide an opportunity to buy into a market position that would otherwise take years to build, as well as cross-sell and up-sell opportunities to both new and existing customers. In October this year, we acquired two further New Zealand solutions providers. These were customs clearance software solution firm Speedi Solutions Ltd, and freight quotation software solution from Freight Legend Limited. As an extension of this strategy we think that small, targeted acquisitions of established players in the Australian market provide a lower risk, faster, and stronger entry into the market.

Andrew Balgarnie,
chief operating officer, TradeWindow

How have you been assisting the Australian government to develop digital trade policies in relation to free trade agreements?
When the Australian government has been consulting on pending trade agreements, we have made submissions sharing our experience and perspectives on the policy clauses needed to effectively enable digital trade. In addition to this Australian government agencies have been observers of digital trade pilots between New Zealand and Asian trading partners, using TradeWindow's digital trade platform.



TradeWindow