THE LOADSTAR CONTAINER SUPPLY CHAIN

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Writer:
Sam Whelan

Production: David Badger

Sagitta, Tower Bridge Moorings,
31 Mill St, London SE1 2AX

www.theloadstar.co.uk
@TheLoadstar

On the cusp of change

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The US-China trade war appears to be on hold – for now. However, the ramifications for container shipping players continue to unfold across Asia, where the ebb and flow of container supply chains indicate potentially dramatic changes on the horizon.

Inside

Like global trade, the logistics industry is in flux – on the cusp of change driven by digitalisation, surging fuel costs, shifting production, and carrier consolidation and vertical integration.

And, according to Rahul Kapoor, senior analyst for Asia transportation at Bloomberg Intelligence, big opportunities await businesses that move quickly.

"We see upcoming shifts in manufacturing production and reorganisation of Asian supply chains amid the China-US trade war," says Kapoor.

"This will give a multi-year revenue growth opportunity to nimble players, opening a rare window for cost-competitive, efficient logistics providers."

For example, he says any trade war escalation that forces manufacturing to shift out of China, would see Thailand, Vietnam and Cambodia emerging as production alternatives, with many businesses requiring logistics and freight forwarding support to establish operations.

Global container trade growth cannot escape a slowdown this year, however, claims Kapoor.

"Rising tariffs and geopolitical uncertainty are hampering demand. While the fourth-quarter benefited

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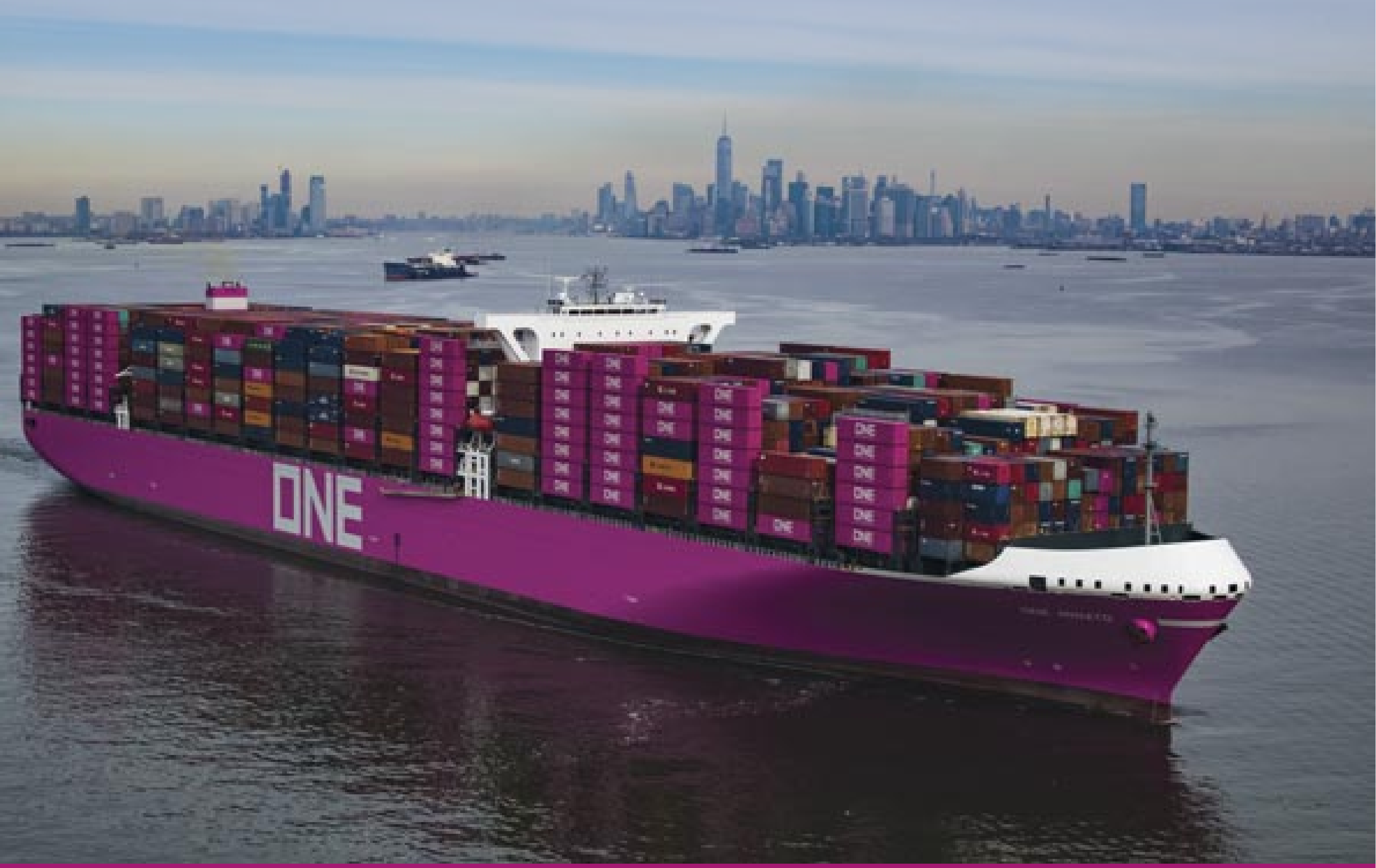

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from cargo front-loading, the negative effect is likely to be felt in first half of 2019.

"Trade will also be squeezed in the months ahead as souring economic sentiment dents new export orders and, in turn, container volumes.

"In the longer term, there will likely be increasing risks to volume growth from nearshoring - the moving of production closer to or within the US. This will increasingly feature in global manufacturing and trade dynamics, and could crimp cross-border trade growth long-term," he says.

As it stands, the most immediate container shipping impact from the trade spat has been in the US, rather than China. Ocean Network Express (ONE) chief executive Jeremy Nixon tells *The Loadstar* there have been two consequences for the transpacific trades.

"Clearly many customers have taken action already to mitigate the tariff risk by bringing forward their shipments into the US," Nixon explains. "However, the westbound trade has also been impacted due to the specific commodities China has placed tariffs on."

This has actually had a greater impact, argues Nixon, due to the nature and complexity of particular supply chains.

"The elasticity of demand - the ability of the Chinese to replace those import commodities with commodities from other origins - has had a bigger impact than on the eastbound trade where the American importers have not been able to as easily switch sourcing at such short notice."

This is because the eastbound trade is largely retail and consumer products, he explains, noting these manufactured items have very sophisticated supply chains, lead times and warehousing requirements.

Congestion indigestion

According to Edoardo Podestá, managing director air and sea logistics Asia Pacific at Dachser Far East, the cargo front-loading caused significant port congestion in the US, as well as continued supply chain uncertainty for shippers.

"It created an oversupply of goods in US warehouses which are bursting at the seams as everyone was trying to beat the next round of tariffs," Podestá says.

"Extending the tariff deadline will leave shippers asking whether to

import more in case something happens. But warehouses are full and there's a shortage of trucks which is creating congestion and bottlenecks at the US terminals, especially on the West Coast".

As of late February, presidents Trump and Xi appear to be edging towards a trade deal that would end further tariff hikes. "Very productive talks", led Trump to announce the US would delay the March deadline for increasing tariffs from 10% to 25% on US$200bn of Chinese imports.

For China, however, the damage may already be done.

"In terms of 2019, we think that we will continue to see a strategic reduction in sourcing from mainland China by American importers," says ONE's Nixon.

"Firstly, because the relative cost of Chinese manufactured goods has been increasing compared with other Asian origins, certainly over the last three-to-four years. And secondly, the belief is that the trade friction is not going away, and will probably continue for a long time to come."

Around 65% of all US imports are from China, notes Nixon, and so it is likely importers will review their supply chains and high exposure to the China market – but is likely there is only so much they can do.

"We don't think there will be a significant change in the first year simply because of the significant share China already has, and the fact that there's not a lot of spare capacity in the south-east Asia and Indian Subcontinent markets to take up the slack."

Dachser's Podestá adds that the manufacturing shift has been - and will continue to be - driven by China's push to reduce pollution and move away from low-value production.

"Labour costs have increased and we've seen already in the last four-to-five years certain production moving away from China. This is happening with or without what's happening in the US, but it will still take one-to-three years to really see things moving to a dramatic point into other countries simply because the ecosystem isn't there yet."

Enter Vietnam

However, he singled out Vietnam as one potential front-runner. "We're very bullish on Vietnam. There's an acceleration of interest, and more and more people are going there looking into how to set up a factory and production."

Vietnam's economy grew by over 7% last year, a 10-year high that pegs it as the fastest growing market in ASEAN. Total exports increased 13.8% to $245bn; while national port volumes leapt 20% to reach 17.7m teu. The growth was mirrored at the southern deepwater port Cai Mep, where volumes were up by 21% in the first 10 months of 2018, reaching 2.4m teu.

According to Nixon, ONE's strategy is to maintain its China coverage whilst also increasing port calls across south-east Asia.

In Vietnam, the carrier already has four direct calls per week to the US from Cai Mep, and in May it will add a fifth, operating from the northern port of Haiphong. Recently expanded, the port's Lach Huyen terminal - like Cai Mep - is capable of handling 14,000 teu ships.

The same is true of Thailand's major container gateway, Laem Chabang, where Hutchison's recently opened Terminal D paved the way for a 40% capacity increase in the largest vessels calling at the port.

As a result, ONE was able to upgrade its 14,000 teu-operated Asia-North Europe FE5 service with direct calls from both Laem Chabang and Cai Mep.

"We're also seeing increased interest and sourcing in south-east Asia from Europe," adds Nixon. He says both south-east Asia and the Indian Subcontinent are becoming more competitive in manufacturing.

"There's significant growth there, both as consumer markets and also manufacturing markets, because of their competitiveness of labour costs, the reasonably high population levels, and relatively close proximity to the deepsea trades in terms of hub port connections."

In Indonesia, Jakarta's New Priok terminal has also won mainline services to the US and Europe. However, despite the regional port upgrades and subsequent uptick in direct calls, the south-east Asia transhipment market looks set to continue largely unchallenged, with the mega ships plying the deepsea trades having already surpassed most of the region's terminal handling capacity.

Transhipment tactics

Nixon explains: "The ability to add mainline calls is really linked to the infrastructure quality and maturity of the terminals to accommodate big ships. The 14,000 teu ships are at the upper-end of the limit for a lot of the south-east Asia terminals, and so it's not so realistic to deploy 20,000 teu ships on the Europe trade, for example.

"We'll continue to develop more direct calls where the market justifies it, but where customers are looking for frequency, and a direct call is not so important, we have that hub-and-spoke network."

ONE has chosen to hub all of its intra-Asia services into a single location – Singapore. The Japanese carrier has 75 services a week calling the city-state, and in December inked a deal with PSA to jointly operate a dedicated four-berth terminal at Pasir Panjang.

Nixon says the 4m teu capacity facility is a "long-term commitment that allows ONE to ensure really smooth connections between deepsea, feeder and intra-regional services".

The deal is a coup for PSA, whose carrier joint-venture strategy has seen it tie-up the regional transhipment market for the foreseeable future - all three of the global shipping alliances are now anchored to Singapore through similar partnerships.

Ocean Network Express chief executive Jeremy Nixon

PSA's throughput increased by 8.7% last year to 36.6m teu, and the forward-thinking operator is forging ahead with plans to move all of Singapore's terminals to a new 65m mega-port at Tuas by 2040.

Malaysia's Port Klang is the "main loser" from the deal, according to industry analyst Alphaliner, as it limits the port's ability to attract transhipment cargo away from its rival.

Hong Kong faces a similar challenge. In January, having experienced declining volumes in recent years for a variety of factors - including competition from mainland China and Singapore - the city's competing terminal operators formed an alliance they say will boost port productivity and bring down shipping costs. The Hong Kong Seaport Joint Operating Alliance Agreement was immediately slammed by local shippers as anti-competitive, however, and is under investigation by competition authorities.

"We'll continue to develop more direct calls where the market justifies it"

Jeremy Nixon CEO, ONE

Carrier-terminal cooperation

With ports across Asia still coming to terms with ultra-large container vessels and the mega-alliance structure, ONE's Nixon insists carrier-terminal cooperation needs enhancing.

"Fuel costs are likely to increase from January 2020, therefore the cost of operating liner services is going to increase and so we need better schedule reliability and better port productivity to try to minimise the cost impact."

Intra-Asia aches

Ports also face carrier consolidation and vessel upsizing within the intra-Asia market. Nixon describes the trade as a relatively mature one, noting its vast size of 100 port pairs, and 10,000 shipping lanes spanning Japan to the Middle East, and back to Indonesia and Oceania.

He calls intra-Asia the engine of global trade, accounting for roughly one-in-four boxes moved worldwide and growing by a healthy 5% in 2018. The region is covered by three types of services: deepsea loops, dedicated feedering and – by far the most dominant – bespoke intra-regional services.

"These use smaller tonnage deliberately connecting various port pairs on a direct basis with a fixed rotation," he adds, noting ONE has around 45 such services per week.

Feeder carriers, meanwhile, are consolidating services, according to Nixon, because as ship sizes get bigger, more direct feedering is required by the main alliance partners in order to match-up services.

He says one potential off-shoot of the trade war is an increasing flow of semi-finished goods.

"The intra-Asia market will work harder to move various components between specific markets, so that where the final product is manufactured, or said to be manufactured, may vary going forward. Some reengineering of the intra-Asia supply chain will be needed by some shippers and customers in North America and Europe to accommodate that."

Of a similar mind is Naresh Potty, chief commercial officer of SeaLand Asia, Maersk's intra-Asia unit.

"A lot of semi-finished goods and raw materials continue to move within Asian countries," says Potty. "Any increase in the shipments of finished goods to the developed economies has a positive impact on intra-Asia trade. The front-loading of transpacific volumes seen in 2018 had a positive effect on all global trades, including intra-Asia."

He says that while the market is seeing a strong trend towards increased manufacturing activities in most Asian countries, but primarily in Vietnam, there is little evidence that this has been accompanied by a manufacturing exodus from China.

"It is more a case of companies

expanding their sourcing areas and more Asian countries coming on-board as manufacturing hubs. The 'China-plus-one' diversification strategy has been in place for some years and countries like Vietnam are getting into a position where investment and manufacturing are becoming much easier to establish than in the past."

Asia's shoppers

North Asia continues to generate the bulk of the intra-Asia volumes, according to Potty, with Vietnam and the Philippines showing the most robust growth in South-east Asia.

He adds: "There's been continued improvement in spending from Asian consumers. This development continues its positive upwards trend, and the evolution of the Asian middle class means sophisticated and seasoned shoppers – those able and willing to pay a premium for quality – is increasingly emerging as the dominant force."

For Dachser's Podestá, the intra-Asia market operates on completely different dynamics to the deepsea trades. Rates are more stable and transit times are much lower, he explains, meaning customers can be won and lost on good service rather than on price, as the wild rate fluctuations common to the East-West trades are unusual.

Another factor influencing intra-Asia is the global e-commerce boom. Podestá describes e-commerce as "a very big magnet for cargo", and adds that intra-Asia's shorter transit times results in plenty of e-commerce moving by sea.

ONE's Nixon says the lack of cross-border land connections in Asia means e-commerce normally moves by sea or air.

"A lot of e-fulfilment centres are continuing to evolve and grow and they all need connecting. We also see a lot of the big international e-retailers, who were historically doing order fulfilment from North America or Europe, now largely doing this from source in Asia."

The industrial shipper

US-firm Caterpillar is one global shipper keeping close tabs on Asia's container supply chain developments. Shipping around 250,000 teu per year, the construction equipment manufacturer is one of the largest cargo owners in the world.

"We're up there with Dell, Lego and Electrolux - we're all in the same ball game," remarks Caterpillar's Michael Nielsen, transportation operations manager for ASEAN and India.

Caterpillar has production and distribution centres throughout Asia, while ocean freight operations are centred on Shanghai and the deepsea trades. Intra-Asia lanes, meanwhile, are used mostly by suppliers, and for the shipper's after-sales market.

"I think all companies are validating where it makes sense to source," Nielsen says regarding the region's manufacturing characteristics.

"In Thailand they have a very strong base in electronics and automotive, which kind-of acts as a value-add to Caterpillar, while there's certain things we do there that don't exist elsewhere.

"If you look at Vietnam, Myanmar, Cambodia and Laos - it's still textiles that's the dominant industry. So are we going to go there? We're very conservative on how we do things - I think all companies are."

He compared the trade war to the changing regulations affecting intra-Asia trade. For example, in order to avail the benefits of the China-ASEAN free trade agreement, he notes there are very specific requirements for Chinese exports regarding port calls, as China's special administrative regions are not included.

"The challenge is when governments put something in place and only one ocean carrier can support that, then your hands are really tied. It's not just tariffs between US and China, it also happens with intra-Asia and those are implemented faster and more efficiently than the global ones, so they have more impact for us.

The laws of immutability

The future for blockchain in logistics is a bright one, according to tech-advocate Igor Jakomin, despite the current knowledge gap.

Chief operating officer at CargoX Jakomin and his colleagues in Slovenia and Hong Kong have spearheaded the attempt to create a blockchain-backed bill of lading, dragging one of the world's oldest shipping documents into the digital age.

CargoX says its Smart Bill of Lading (Smart B/L) has the potential to save the industry up to US$5bn a year in courier and banking costs, cutting up to 10 days off the time to transfer documents between shippers and receivers.

However, despite the apparent benefits, Jakomin says the start-up has faced an uphill battle from its beginnings.

"We've spent a lot of time visiting customers to try to educate them on blockchain and what it offers," he explains. "Because the awareness of it - and how useful it is - is really a very small percentage of business people."

This did not stop CargoX from securing funding of "$7m in seven minutes" through its Initial Coin Offering (ICO) in Hong Kong, however. But while investors may be keen, it was a different story when CargoX initially approached shipping lines with the concept.

"No one was interested in discussing it. They rejected the new technology, but then realised they can't stop it, and decided to develop solutions themselves. They see what their competitors are up too and they don't want to be left behind," notes Jakomin.

Indeed, Maersk's TradeLens initiative with IBM, which is also developing a blockchain B/L, was swiftly followed by a mishmash of carriers, forwarders and terminals who formed various and competing blockchain alliances.

The issue, critics say, is the industry's historical reluctance to share data, because everyone is scared of one company or alliance controlling the platform. Would the industry be willing to adopt Maersk's B/L solution, for example?

"They think they can force everyone in the world to use TradeLens but I'm not so sure," responds Jakomin. "The difference with CargoX is we are neutral and not controlled by any carrier."

CargoX has successfully tested its Smart B/L with a shipment from Shanghai to Europe. Jakomin says the company is close to signing up its first carrier, and also a large NVOCC. The carrier plans to offer CargoX in tandem with its own solution, so forwarders are not obliged to use either one.

He also says CargoX is close to receiving approval from the International Group of Protection and Indemnity (P&I) Clubs, which would provide the final piece in the puzzle on fulfilling regulatory requirements for an electronic B/L.

Jakomin sees big potential for blockchain document exchange across all shipping modes, having received "a lot of requests" from air cargo, warehousing, couriers and cargo insurance.

""Blockchain has big future potential in the shipping business. We're in an early stage and need a maturation of the technology, but within three-five years it will be commonplace."

"I don't want to say there's trade wars - there's free trade agreements that come and go, collaborations that come and go, but you can't change the networks overnight. You have to have a long-term strategy."

On the road again

Nielsen points to the upgrading of south-east Asia's road networks as one potentially promising development, with ASEAN countries collaborating to improve cross-border overland connections. Furthermore, some big electronics manufacturers are moving into the region and pushing development.

"Huawei is setting up in Thailand, and Dell and HP are in Malaysia, so there's a lot of drive to build the road network which we're then piggy-backing on.

"For them it's a question of cost savings versus air. But for us we get a good opportunity to mitigate some ocean transit times and variability. So we look to other industries to see what they're doing because that creates opportunities for us as well."

Ocean carrier schedule reliability is a particular bugbear for Nielsen, who says it's been "very poor across the board". There's data to back him up, too, with SeaIntelligence Consulting reporting 2018 industry schedule reliability at the lowest levels seen since 2012.

"Due to the poor reliability you end up carrying more inventory in order to cater to the variation," Nielsen adds.

"It's almost something you have to cater for when you bid. The key thing that's going on, is the industry still talks about ETA [estimated time of arrival] and ETD [estimated time of departure], so you cannot hold the carrier liable if it comes two weeks later because it's in ETD - carriers are just not accountable."

"Due to poor reliability, you end up carrying more inventory in order to cater to the variation"

Caterpillar's Michael Nielsen

With shippers and carriers about to commence annual contract negotiations, Nielsen says it's difficult to gauge the market due to potential distortion from the trade war and rising fuel costs.

"There's always changes in terms of how the ocean carriers want to charge. Some work with an all-in rate and some work with a base rate and then do line items for fuel and other charges.

"We really have to see what's going to happen with IMO 2020, the carriers have been pushing a lot to increase rates, not just with us but the spot market has gone up significantly."

Black gold

Fuel costs are expected to sharply rise as the IMO sulphur fuel cap deadline approaches on 1 January. ONE's Nixon says the carrier is focused on supplying vessels with low sulphur fuel, rather than installing scrubbers, with bunkering set to begin in November.

"There will be an increase in costs as a result, the size in differential between the heavy fuel oil costs and low sulphur is yet to be known but is likely to be significant."

One analyst tells *The Loadstar* that only around 300 out of 5,300 containerships will have scrubbers installed by January, making it unlikely any one carrier will be able to gain an advantage by passing on reduced fuel costs.

"All the carriers are in the same

situation and working on the same economics," she says. "They will feel the same pain-point and it will be very high.

"The increase in costs for the industry are going to be $2bn-$10bn; none of the carriers are making that money and struggle to make a return on investment, and therefore they're not in a situation to absorb that."

On the other hand, according to Alphaliner chief analyst Tan Hua Joo, carriers may find it difficult to maintain capacity and freight rate discipline.

"Capacity discipline is observed only when carriers are losing money," he notes. "Carrier behaviour will inevitably change and it would be naive to assume that the discipline will be sustained when the market turns around.

"It is also clear that various carriers retain their ambition to grow market share, and this will be the main threat to carrier profitability."

Identity crisis

Meanwhile, years of financial turbulence has prompted some carriers to question their identity.

ONE's Nixon says the carrier is focused on supplying vessels with low sulphur fuel, rather than installing scrubbers, above

Maersk and CMA CGM, for example, look firmly set down the path of providing logistics services direct to cargo owners. This is not necessarily new, points out Dachser's Podestá, but it appears certain carriers have become more determined than ever to become "global integrators of container logistics", as Maersk puts it.

"They needed to do something and so started to look at their business models - simply being the providers of commoditised services is not good enough," Podestá says.

He notes carriers' previous efforts to

NYSHEX - introducing supply and demand to the booking process

Industry innovator New York Shipping Exchange (NYSHEX) is on a mission to transform the "unreliable" freight contracts plaguing the container shipping industry.

The lack of accountability within traditional ocean freight contracts is the root-cause behind shipper no-shows and carrier roll-overs - a US$23bn industry problem - according to Don Chen, the NYSHEX managing director for Asia.

Chen joined the outfit last year, and has since been busy setting up offices in Hong Kong and Guangzhou in order to facilitate bookings and payments in China.

"We're now focussing on the commercial side, developing the membership and helping carriers to offer rates on more trade lanes," he says.

It's been a brisk start for NYSHEX. On the transpacific trade, 19,000 teus were contracted through the exchange last year, up from just a couple of hundred after launching two years prior. Maersk, CMA CGM and Hapag-Lloyd are all investors, while Cosco/OOCL and HMM are also signed up and offering rates.

There are 339 shippers on NYSHEX, around half of which are NVOCCs, Chen notes. The company says it achieved a 98% fulfilment rate in 2018, which is "22% better than the industry average".

"We look at the booking process from a market perspective, unlike some other technology firms who want to apply tech-solutions onto the market," claims Chen. "Most of the NYSHEX senior management are from the industry, and are looking at the problem from both the shipper and carrier perspective."

He says there's a "vicious cycle" in the booking process, whereby shippers overbook in an attempt to secure lower rates, leaving carriers to suffer shortfalls when the cargo doesn't show up. In turn, carriers also overbook vessels which often leaves shippers empty handed during peak season when carriers roll cargo.

"It means the market is quite unreliable, service quality is low, freight rates are fluctuating and no one is benefiting," Chen says.

On NYSHEX, shippers can view and compare different carrier offers and service levels. If they like what they see, they make a down payment which locks in space, equipment and, importantly, the rate.

This allows the platform to introduce what Chen calls the Price Calculation Date (PCD) at time of contracting, a concept he compares with the hotel industry, whereby prices are lower when you book further in advance since there are more rooms (ie. capacity) available. When used in container shipping, PCD introduces the conspicuously absent market forces of supply and demand into the booking process.

"Containers are usually priced altogether on the shipment date, but this is not the best for both sides. The contract price should instead be on the contracted date," Chen reckons.

With the annual contract season underway, Chen is encouraging shippers to place some of their volume on NYSHEX, which currently allows them to book containers for a specific week, and up to six months in advance.

"They can also discuss rates with carriers and use NYSHEX as a platform to monitor shipments and contracts," he adds.

Chen says the exchange will expand to Asia-Europe and intra-Asia trade lanes later this year.

"Intra-Asia suffers from bigger booking shortfalls and greater unreliability than the deepsea trades, so regional carriers stand to greatly benefit," he adds.

improve efficiency included acquiring terminals, trucking and intermodal companies, but that this is "not enough anymore".

Furthermore, carrier-owned forwarding units were previously kept small to avoid upsetting the big multinational forwarders. Now, however, Podestá says it is "becoming clear they're getting more aggressive", and believes e-commerce, blockchain and digitalisation are "changing the paradigm because carriers see more and more the possibility to start talking directly with shippers."

Podestá has his doubts over whether they will be successful, notably because forwarders have the option to offer services from multiple carriers, and he warns there could be a "strong backlash" if carriers aren't careful in how they approach the situation.

Alphaliner's Tan agrees: "The Maersk strategy, which CMA CGM is now trying to replicate, is not without risks as carriers could alienate a large part of their freight forwarder customers. Results have so far been underwhelming. I also do not see other carriers rushing to replicate the move."

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>
> **Alphaliner chief analyst Tan Hua Joo**

Caterpillar's Nielsen is fairly nonplussed by the logistics integration and the drive by carriers to digitalise. He says the real value carriers can add right now would be if "they worked on the operational compliance in terms of schedule reliability."

He adds: "If it doesn't fit into what the customers need then you can digitalise as much as you want, but at the end of the day when you're running a supply chain the ocean carrier is just a part of that process.

"There's an LCL, an air, cross-border, trucking - there's multiple different moves and modes - but for ocean, there's a lot more parties that have to be in-sync at the right time, and that's the big digitalisation challenge for carriers."He also has an interesting theory regarding the fast-growing feeder lines and regional carriers operating in Asia.

"There's a big opportunity for these players to become integrated by sharing data with shippers directly. I'm not saying they should have contracts with us, but today a lot of information goes from A to B to C, before it comes to D. It's an opportunity not just for the feeders but also for the ports, because the ports are the only ones who have the visibility of where the container is."

For example, he says PIL and SICT have grown from pure feeder operations into competing with the big carriers. "With mobile phones, you had Apple and Nokia and suddenly all these sub-contractors rose to fame. The question is if there are others coming in the ocean carrier space - they'll be key to it all, and I think that could come."

The flow of data is also on the mind of Dachser's Podestá, who says the "battle is changing".

"Digitalisation, connections with customers, and the flow of information will become as important as the flow of goods. Forwarders are still more agile and may have the advantage, but it will be interesting to see how the industry will change - I expect quite a lot in the next 10 years."