

# November 15<sup>th</sup> 2016

# Link road, rail, sea!

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#### **PORTS AND TERMINALS**

#### **BARCELONA LAUNCHES AMBITIOUS ENVIRONMENTAL STRATEGY**

The Port of Barcelona, Spain, has launched a new initiative aimed at improving air quality through 25 actions including promoting liquefied natural gas (LNG) as an alternative fuel and offering discounts to cleaner ships.

The Air Quality Improvement Plan includes projects to support the use of LNG to power ships, terminal machinery and trucks and provide the port with new infrastructure aimed at facilitating LNG fuelling for vessels.

The port is set to run tests to convert two straddle carriers used in the



container facilities from diesel to LNG in order to analyse their performance, efficiency and emission levels.

According to the port, the pilot project will be carried Hutchison's out at Barcelona Europe South Terminal (BEST) and at APM Terminals (APMT)'s facilities (formerly TCB), with the straddle carrier

fleets at both terminals to be gradually replaced if the results are satisfactory.

Other projects include the installation of a flexible cryogenic loading arm at the Enagás terminal to supply LNG to a barge and small boats as well as the adaptation of a barge to supply LNG to larger vessels.

"LNG use cuts NOx [mono-nitrogen oxides] emissions by 80% and stops particulate and sulphur oxide emissions.

In addition, new legislation on greenhouse gas (GHG) emissions is increasingly restrictive and the maritime industry is turning to LNG as a fuel for powering an increasing number of vessels that will enter into service in the coming years," a statement by the port read.

"Both initiatives are under way and receive EU funding, since they are part of the CORE LNGas hive project run by the European Union."

As part of the environmental initiative, the port will ask the Spanish government to amend the Ports Law to implement environmental discounts of up to 40% of vessels' ships, a significant increase from the maximum discount of 5% currently allowed.

José Alberto Carbonell, general manager of the port, said: "The discount applied to port fees is a very important tool, since it is a fundamental instrument for bringing about change in the vessels."

As he added, the proposed change to the current regulations would allow the port to provide environmental discounts at the same level offered by North-European ports such as Rotterdam, Hamburg, Antwerp.

Additional projects to be implemented as part of the port's environmental plan include gradually replacing the port's entire fleet of vehicles with electrical units, with the port aiming to have a 100% electric fleet by 2020.

The port is also planning to introduce electrical connection infrastructure to the parking areas, car parks and public spaces of its precinct.

(from: container-mag.com, November 4<sup>th</sup> 2016)

#### **MARITIME TRANSPORT**

#### OCEAN ALLIANCE UNVEILS PLANS FOR WORLD'S LARGEST CONTAINER NETWORK

Members of the Ocean Alliance today unveiled the proposed network for what it claims will be "the largest shipping alliance in the world", which is due to begin operating in April with a fleet of nearly 350 vessels with around 3.5 million teu in total capacity.

The four partners – CMA CGM, COSCO Container Lines, Evergreen Line and Orient Overseas Container Line (OOCL) – will share their capacity on several routes, together operating 40 services on the East-West trades with around 100 ports of call and almost 500 port pairs on its co-called 'Day One' network.

"The signing of the Day One product marks an important step forward to show just how committed we are in developing the most competitive products to market and the high level of synergy and confidence we share in the partnership," the member carriers said today in a joint statement.

Prior to today's network announcement, container shipping analyst Alphaliner said the proposed Ocean Alliance would outstrip the 2M vessel-sharing agreement of Maersk and Mediterranean Shipping Co on the world's two largest trade lanes, Asia-Europe and Asia-North America.

On the Asia-Europe trades, the Ocean Alliance would have a slight capacity advantage, with a 34.5% market share, against 2M's 33.4%, according to Alphaliner.

But Alphaliner estimates that the Ocean Alliance will have a market share on the Asia-North America trades of almost 39% in terms of capacity deployed, compared with just under 16% for 2M and 45.5% for other participants, according to Lloyd's List.

The alliance said it would "comply with the requirements of global supply chains", while providing higher sailing frequencies, better transit times and greater coverage in terms of loops, ports of call and port pairs.

In terms of seeking the necessary approval from international competition authorities for the alliance, members said that they had filed the Master Agreement (Alliance Agreement) to the Ministry of Transport of the People's Republic of China, and that the US Federal Maritime Commission (FMC) and South Korea's Ministry of Oceans and Fisheries (MOF) had alrady granted their approval.

The alliance has also completed its EU self-assessment compliance review, announcing itself "satisfied that its agreement and services are compliant with EU regulatory requirements, following satisfactory completion of a self-assessment of its activities under EU competition rules and discussions with the EU Commission".

It added: "Moving forward, the Ocean Alliance will continue to work closely with all the authorities to ensure full compliance with applicable laws and regulations and secure the necessary regulatory approvals for the Ocean Alliance to commence operations from 1 April 2017."

As the largest contributor to the Ocean Alliance, the CMA CGM Group will

deploy 119 vessels with a 35% capacity share.

Rodolphe Saadé, vicechairman of the CMA CGM Group, commented: "Ocean Alliance is the largest operational agreement ever made between shipping companies.



With more than 40 maritime services, we will be sharing our fleet with the largest Asian shipping companies.

This new offering is a cornerstone of our strategy as it reinforces our competitiveness and strengthens our position as a key player in the shipping industry.

By offering more ports and more direct calls, as well as better transit times, we will provide our customers with unmatched quality services."

On the individual trades served by the alliance, CMA CGM said the transpacific trade would have 20 loops, 145 weekly calls and 52 ports, providing "the most comprehensive market coverage and geographic consistency by loop, for optimised transit times to main markets".

CMA CGM Group will be the largest player with its CMA CGM and APL brands.

On the Asia-Northern Europe trade, the alliance will operate 6 loops, 79 weekly calls and 31 ports, with CMA CGM claiming customers will benefit from the better frequency and improved coverage.

On the Transatlantic trade, it will operate 3 loops, 34 weekly calls and 21 ports, including "a comprehensive coverage of Northern Europe, with direct services from all West Mediterranean countries, a wide Mexican intermodal solution and a connection to the East Mediterranean, Adriatic, Black Sea and North Africa through the Malta hub".

On the Asia-Mediterranean trade, it will operate 4 loops, 67 weekly calls and 33 ports, with customers benefiting from "seamless connections to all Mediterranean outports through an extensive feedering network allowing, connections with 4 loops in the CMA CGM dedicated hub in Singapore and coverage to North Africa with 13 feeders and 15 weekly calls".

On the Asia-Red Sea trade, it will operate 2 loops, 21 weekly calls and 12 ports.

And on the Asia-Middle East trade, it will operate 5 loops, 55 weekly calls and 25 ports.

CMA CGM said: "There will be full trade coverage and the best transit times on the market with direct calls in Korea, China, Taiwan and more ports in South East Asia.

There will be direct calls in the Middle East Gulf serving 8 countries and giving access to an extensive feedering network ensuring smooth connections."

According to CMA CGM, the service rotations for the 'Day One' product are those which can be seen at the website:

http://www.lloydsloadinglist.com/freight-directory/news/Ocean-Allianceunveils-plans-for-world's-largest-containernetwork/67916.htm#.WBxPPF9d670

(from: lloydsloadinglist.com, November 3<sup>rd</sup> 2016)

#### **RAIL TRANSPORT**

#### **SBB CARGO TO RESTRUCTURE SINGLE WAGONLOAD TRAFFIC**

Swiss Federal Railways' freight subsidiary SBB Cargo plans to introduce a synchronised timetable for its single wagonload traffic sector at the timetable change on December 11, with up to three daily shifts at its main marshalling yards instead of just one.

Customers will be able to reserve slots for collection and delivery at specific times and locations.

The aim is to modernise its single wagonload operations to keep pace with current practices in the logistics market.

With the new schedule, handling operations will be spread over 24 hours



spread over 24 hours instead of only at night, and customers will be offered the possibility of more overnight express services.

The timetable is designed to have minimal impact on the

morning and evening rush-hour passenger traffic.

Regular connections will be made between the main shunting yards at Limmattal, Lausanne Triage, Basle, Buchs and Chiasso.

The new scheme was designed over the last two years in cooperation with major customers, who include the cement company Holcim, Feldschlösschen brewery and the road transport company Planzer.

At the moment SBB Cargo is market leader for all road/rail transport operations in Switzerland, accounting for 25% and carrying an average of 205,000 tonnes a day.

As well as offering improved services, SBB Cargo expects to improve rolling stock operating efficiency and reduce the number of drivers required.

This in turn will help cut expenditure: SBB Cargo recorded a loss of CHF 22m (\$US 22.25m) last year as a result of the weak Euro, but CEO Mr Nicholas Perrin is confident that figures will be better this year.

"We are facing the biggest change in schedule in the company's history," Perrin says.

"Rail is at the moment relatively dumb, but this is changing with the introduction of innovations such as asset intelligence, mobile devices, automation in shunting yards, automatic brake tests, predictive maintenance, automatic coupling and wayside technology.

We are working on all of these facettes."

(from: railjournal.com, October 31<sup>st</sup> 2016)

#### **ROAD TRANSPORT**

### UBER'S SELF-DRIVING TRUCK COMPANY JUST COMPLETED ITS FIRST SHIPMENT: 50,000 CANS OF BUDWEISER

In the early morning hours of October 20th, an 18-wheeler tractor trailer pulled into Colorado Springs, Colorado, bearing 50,000 frosty cans of Budweiser beer.

Normally, this would not be a noteworthy occurrence, but this truck was driving itself, marking the first time that commercial cargo was shipped by a self-driving vehicle.

The journey began 120 miles away at an Anheuser-Busch facility in Loveland, Colorado.

The truck — a Volvo big rig equipped with cameras and sensors — was one of five owned by Otto, a San Francisco-based self-driving truck company acquired by Uber in August.

A human driver piloted the truck to a weigh station in Fort Collins.

From there, it drove 100 miles without human intervention to Colorado Springs, with the driver monitoring the two-hour trip from the sleeper berth.

But once it entered the city limits, the driver took control.

"There were people in Colorado Springs this weekend drinking a Budweiser that was delivered by a self-driving truck," James Sembrot, senior director of logistics strategy at Anheuser-Busch, told The Verge.

"So that's pretty cool."

(The cans even bore a message that read: "First delivery by self-driving truck.")

Colorado transportation officials were briefed on the shipment and helped plan the route, said Otto co-founder Lior Ron.

A Colorado state patrol vehicle followed the beer-laden truck from a distance to monitor the journey.

The truck maintained an average speed of 55 mph throughout the trip.

According to Ron, the state patrolman who followed the truck said it was "super nice" to see a truck stay safely in its lane for most of the trip.

Anheuser-Busch got in touch with Otto soon after the company launched in January.

Otto started out with 40 employees, most of them from companies like Google, Apple, Tesla, and Cruise Automation, with the goal of turning commercial trucks into self-driving freight haulers.

Ron, an Israeli-born engineer, was head of products for Google Maps for five years, while his partner Anthony Levandowski came from Google's self-driving car team.

Then in August, Otto was acquired by ride-hailing giant Uber for a reported \$680 million.

The timing wasn't coincidental: Uber was in the midst of preparing to launch its own high-stake self-driving experiment in Pittsburgh.

As part of the deal, Levandowski took the helm of Uber's selfdriving team, while Ron



would continue to run Otto with the goal of launching a self-driving "Uber Freight" service in the months to come.

Ron said that while Uber CEO Travis Kalanick was "aware and excited" for Otto's first shipment, the ride-hailing company was not involved in the logistics.

"We're very independent here at Otto," he added.

Instead of building its own trucks, Otto designs hardware kits for existing truck models.

The truck that completed the beer delivery was equipped with this setup: two cameras for lane detection, a LIDAR sensor to create a 3D environment, two front-facing radar sensors to detect obstacles and other vehicles on the road, and a GPS sensor to help pinpoint the truck's location.

Otto also mapped the route by driving one of its kitted-out trucks back and forth along Interstate 25 in advance of the delivery.

Ron said that Otto's mission is to make the trucking industry safer.

"Ninety-four percent of fatalities are caused by human error," he noted.

Self-driving trucks could also lead to lower insurance premiums and higher fuel efficiency through the elimination of unnecessary acceleration.

"We fully intend to dive deeper."

And while the law requires a human to be present in the truck for the time being, Ron said Otto's technology will allow truckers to catch up on sleep during long-haul deliveries.

And the ultimate goal, of course, is to eliminate the trucker altogether — an eventuality that is sure to delight suppliers as much as it horrifies truckers and labor groups.

"We fully intend to dive deeper: more types of highways, more weather conditions, more traffic patterns, and obviously more partnerships in the future," Ron said.

He also intends to celebrate Otto's first successful shipment, but wouldn't say whether or not it will be with a cold can of Budweiser or some other inferior beer.

(from: theloadstar.co.uk/theverge.com, October 27<sup>th</sup> 2016)

#### **INTERMODAL TRANSPORT**

#### ENVIRONMENT PARTNERSHIP WITH HAPAG-LLOYD SAVES 130,000 TONNES OF CO2

What started out as a joint pilot project for a green supply chain from Sweden to China back in 2006 has meanwhile involved into a strategic partnership in the field of climate protection on the oceans.

The transportation and logistics provider DB Schenker and Hapag-Lloyd shipping company can meanwhile look back on ten years of intensive cooperation which has made a significant contribution to reducing carbon dioxide.

Over the last decade, they have succeeded in reducing carbon emissions by 130,000 tons.

"As a provider of logistics services, we have a special responsibility when



a special responsibility when planning and carrying out our high-emission transports.

Ocean freight accounts for 22 percent of the direct and indirect carbon emissions at DB Schenker.

We have consequently always attached great importance to investing in environmental protection together with the shipping companies in order to achieve our climate

protection targets," says Andrea Dorothea Schön, who is responsible for climate protection and CO2 controlling at DB Schenker.

Thanks to self-imposed obligations, it will be possible to reduce the emission of harmful gases for each container carried for DB Schenker by up to 23 percent compared to 2014 per standard container (TEU) by the year 2020.

The partners first stipulated climate protection targets as a contractual obligation in 2015.

The Hamburg shipping company undertook to save approximately a further 20,000 tons of carbon dioxide emissions from the containers transported for DB Schenker by 2020.

"We can achieve these targets by sailing at speeds which reduce fuel consumption.

Our vessels not only have optimized hulls, but also efficient propulsion systems and state-of-the-art engines," says Erika Sagert, who is responsible for environmental protection and sustainability at Hapag-Lloyd.

Proactive, weather-dependent navigation and route optimization play a key role in minimizing fuel consumption during the voyage.

DB Schenker designed the first climate-friendly products for its customers in cooperation with Hapag-Lloyd as early as 2006.

At that time, Hapag-Lloyd was already using vessels with speed restrictions on the sea route from Sweden to China.

The total reduction in carbon dioxide could be reported because the shipping

company was one of the first to have a calculation method which was recognized by the Clean Cargo Working Group.

Two years later, thanks to the specific data provided by Hapag-Lloyd, DB Schenker was able to calculate the first binding marine carbon footprint for certain shipping routes.



A further milestone in the cooperation between the two companies was the rollout of the EcoTransIT World emissions calculator.

In 2010, in collaboration with further partners, Hapag-Lloyd and DB Schenker developed a tool for the transparent and exact calculation of the environmental impact of transport chains on worldwide routes.

The tool is meanwhile a generally accepted standard for the reliable calculation of energy consumption and the emission of CO2 and other harmful gases for any given freight transport. "Leading shipping companies such as Hapag-Lloyd have played a major role in improving our carbon footprint, not least thanks to the transparent reporting of emission reductions.

A successful and lasting business relationship has to be based on trust and fairness when it comes to achieving quality and environmental targets.

These agreements are milestones, as they enable us to integrate sustainability aspects into our business relationships," continues Andrea Dorothea Schön.

DB Schenker has agreed on these climate protection targets with another six globally operating shipping companies.

DB Schenker ranks in 3rd place in the world ocean freight market.

In 2015, DB Schenker carried more than 5.400 containers a day for its customers, with a total volume of almost 2 million TEU.

The company's ocean freight network covers 130 countries with roughly 600 DB Schenker locations throughout the world.

(from: transportjournal.com/dbschenker.com, November 3<sup>rd</sup> 2016)

#### **TRANSPORT & ENVIRONMENT**

#### ANGER AT IMO 'BETRAYAL' AS IT DELAYS ENFORCING CO2 EMISSION CUTS FOR SEVEN YEARS

Environmental groups and European politicians have rounded on the International Maritime Organization (IMO) over its apparent failure to address shipping's CO2 emissions.

While the UN body resolved to move ahead with more stringent sulphur oxide (SOx) emission regulations last week at the annual meeting of its Marine Environmental Protection Committee (MEPC), as reported by The Loadstar, it took a far softer line with CO2 emissions.

It ruled only that vessels of 5,000gt and above – about 85% of the world's

fleet – will have to collect consumption data on type of fuel used.

A statement from the IMO said: "The new mandatory data collection system is intended to be the first in a three-step approach, in which analysis of the data collected would provide the basis for objective, an transparent inclusive and policy debate in the MEPC".



"This would allow a decision to be made on whether any further measures are needed to enhance energy efficiency and address greenhouse gas emissions from international shipping.

If so, proposed policy options would then be considered," it added.

Data collection will run from 2017 to 2023.

The decision was slammed by environmental lobbyists and European politicians.

According to lobby group Transport & Environment, shipping is set to account for 17% of global transport emissions by 2050, and it argued that "efficiency improvements are being blocked by keeping efficiency and emissions data secret", with the IMO confirming that the collected data will be kept confidential.

"The IMO's decision this week to delay by at least a further seven years any agreement on reducing greenhouse gas emissions from shipping constitutes an abject failure by national governments and the shipping industry.

The IMO first established a work plan on GHGs in 2003, but this week it decided to create a fresh process for yet more talks – betraying the Paris agreement's call for urgent action to limit global warming at 1.5/2°C," a statement from the organisation said.

And MEP Jytte Gutland argued that the EU should press ahead with its own ship emission regulations.

"The shipping sector must play its role in Europe's transition to a low-carbon society.

But time is of the essence and, in the absence of IMO action, the EU must include ships' emissions in its 2030 climate target.

By setting up a climate fund for shipping, Europe can help industry cut CO2 in a cost-effective way."

Liberal MEP José Inácio Faria, ex-rapporteur for the EU ship CO2 data collection regulation, added: "The IMO's data collection system fails to meet transparency standards provided for in EU law and applied to other transport modes.

It also falls short of accurately measuring the real energy performance of ships.

Calls to dump transparency from the EU system need to be firmly rebutted.

The EU must provide citizens, ports and shippers with quality data on individual ship energy performance if market forces are to play a role in decarbonising the sector."

However, the IMO road map was welcomed by shipowner representatives, who argued that "CO2 reduction from shipping is a global challenge which can only be solved meaningfully by global agreement not at regional level", and criticised calls for the EU to develop its own regulations ahead of the IMO findings, due in 2023.

International Chamber of Shipping secretary general Peter Hinchliffe said: "Unfounded criticism of the consensus that governments have achieved, in very difficult political circumstances, serves to polarise the IMO debate, making the support of developing nations for additional global measures even more complicated to achieve."

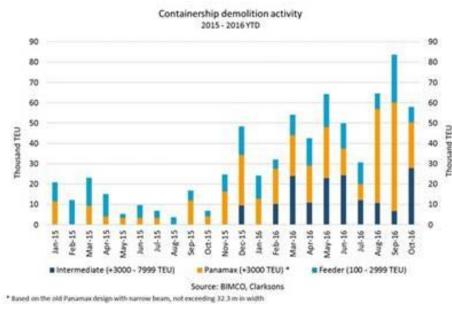
(from: theloadstar.co.uk, November 1<sup>st</sup> 2016)

#### INDUSTRY

#### **RECORD CONTAINERSHIP DEMOLITION EXCEEDS 500,000 TEU**

BIMCO have throughout 2016 focused on the level of demolition in the container shipping industry and the high level of demolition activity has continued its pace and exceeded our expectations.

BIMCO's Chief shipping analyst Peter Sand comments: "The demolition activity in the last three months' surprised BIMCO positively and it exceeded our initial expectation based on the appalling 2015 demolition activity.



The advance is a push in the right direction, as demolition activity is one of the

essential measures needed to be taken to rebalance the container shipping industry".

Peter Sand adds: "It is important that the demolition of excess capacity comes sooner rather than later, as there is still a huge delivery schedule hanging over the container shipping industry for

the rest of this year and well into 2017-2018.

However, the high demolition activity is currently softening the net supply growth rate of the container shipping capacity and will prevent a darker outlook for the years to come, if maintained".

So far 500,000 TEU have been scrapped, this is 4.2 times more TEU than the scrapping activity for the same months in 2015.

With the last 3 months accounting for more than 41% of the total demolition in 2016, the activity is picking up and is primarily generated by the Panamax container ships.

The demolition of Panamax containerships in TEU accounts for 47% of the total demolition in 2016, while TEU scrapped from intermediate and feeder containerships account for 30% and 23% respectively.

The demolition of Intermediate container ships has had a great return from only being scrapped one month in 2015.

The demolition of Intermediate containership is a strong signal, for the measures taken in the container shipping industry, as they generally are bigger and younger than the Panamax and Feeder containerships.

The high level of scrapping comes in the aftermath of BIMCO reporting the lowest level of newbuilding contracts in 20 years.

Container contracts, based on CGT, were down 84% for the first eight months of 2016 compared to the same period in 2015.

Chief shipping analyst Peter Sand comments: "The events in 2016 have shown, that the tools to turn the container shipping industry around are being used and are working.

The recommendations to consolidate fleets and demolish ships are being taken serious within the industry".

(from: marinelink.com, Novembre 7<sup>th</sup> 2016)

#### LOGISTICS

#### LOGISTICS M&A ACTIVITY IN ASIA AND AUSTRALIA DRIVING GLOBAL DEAL-MAKING IN 2016

Asia and Australia were at the forefront of M&A activity in transport and logistics in the third quarter.

However, according to new research from accountant PwC, the level of consolidation globally remains well behind 2015 levels.

With 28 deals totalling \$17.6bn, Asia and Australia accounted for more than half of M&A activity by volume – and, year-to-date, seven of the top ten deals.

"Asia and Australia dominated M&A in the sector in the third quarter, largely





driven by infrastructure concessions and participants seeking access to capital," said Darach Chapman, PwC US transportation and logistics deals leader.

The largest infrastructure concession and deal in the sector this quarter was the investment fund-led acquisition of Port of Melbourne Corp for \$7.3bn.

The 50-year concession at Australia's busiest trade gateway, from the state of Victoria, was acquired by the Lonsdale

consortium, a pension fund group comprising mainly Australian, North American and Chinese investors.

Interestingly, despite fronting 20% of the capital, China Investment Corporation's involvement reportedly took a back seat for fear of jeopardising the bid.

Concerns had surfaced a month earlier when the Australian government rejected a Chinese takeover bid for electricity supplier Ausgrid, due to national security considerations.

China features in three of the biggest M&A transport and logistics deals so far in 2016, all in the trucking sector.

Although global M&A activity in transport and logistics has seen more than 50 deals in each quarter, the third was less active and saw 11% less deal volume compared with both Q2 16 and Q3 15.

Overall activity – which includes the sub-sectors of passenger travel, shipping, logistics, trucking and rail – declined 30% in value terms, to \$26bn, and consolidation remains well behind 2015, a record year for worldwide M&A activity.

"It appears general uncertainties related to the US presidential elections and the long-term impact of Brexit and China's economic growth, paired with reduced forecasts of international trade activity, may have impacted recent M&A activity," PwC said.

As a sub-sector, logistics activity bucked the trend, however, recording a 20% year-on-year increase in deal volume in the third quarter.

Deal value grew by more than three times to \$4.8bn.

Similarly, Penn State University's 2017 3PL study, released last month, suggested the value of global 3PL M&A deals nearly doubled from 2014 to 2015, growing to \$173bn from \$87bn, while cross-border deals more than quadrupled in the same period from \$28bn to \$115bn.

"Shippers have mixed reviews of the M&A activity, with 27% reporting that added options and versatility within a provider are good for shippers, and 34% saying that they are concerned about reduced competition based on price," the study says.

According to PwC, M&A activity will continue to be driven by underlying fundamentals such as globalisation, corporate outsourcing of logistics, the global e-commerce boom and the fragmented nature of some industry subsectors.

"Further, we expect Asia to continue to be a strong contributor to this M&A activity," PwC added, "as consolidation of the sector continues in many countries in the region and companies continue to seek access to the capital markets that help them capture these opportunities."

(from: theloadstar.co.uk, November 7<sup>th</sup> 2016)

#### **STUDIES & RESEARCH**

#### **RETROFITTING CONTAINERSHIPS - WHERE THE SAVINGS ARE**

The Canada-based owner Seaspan (SSW) has worked with DNV GL on a series of projects aimed at investigating possible efficiency gains through retrofits.

"We are constantly trying to improve the performance of our fleet, in order to meet current market requirements.

DNV GL's dedicated service for retrofit projects, based on computational fluid dynamics (CFD), formal optimization and high-performance computing has made them a valued partner for us," says Ian Robinson, Project Manager, Technology & Development at Seaspan.

"In one of the most recent projects, we looked at how a 13.100 TEU container carrier could be adjusted in order to minimize its yearly fuel consumption in slow-steaming operations," says Karsten Hochkirch, Head of the Fluid Engineering Department at DNV GL – Maritime.

"Slow steaming is the easiest and most effective way to save fuel, but the fact that this approach has become so wide spread means that large parts of the existing containership fleet operate in off-design conditions, where engine, hull – especially the bulbous bow – and propeller performance is not optimal.

For these ships, retrofitting bows and propellers, which have been adjusted to suit their new operational realities, makes a lot of sense," he explains.

To identify the ideal parameters for Seaspan's 13.100 TEU vessel DNV GL analysed two years' worth of operational data and condensed it to twelve representative clusters of speed-draft-combinations with associated weights reflecting their time share in operation.

Experts also looked at the advantages and disadvantages of retrofitting the bow and the propeller individually or together.

"The parametric model for the bow section alone employed twenty free parameters, which led to a wide range of possible bow shapes.

The optimization significantly reduced the volume at the tip of the bow and the height of the bow to get better resistance at low drafts," says Hochkirch.

The new bulb alone would have led to 6.5 per cent fuel savings.

The propeller optimization also resulted in a slimmer new design with 40 per cent less area and 20 per cent less weight, leading to expected savings of 7.5 per cent.

"In these retrofit projects, generally the sum is larger than its elements.

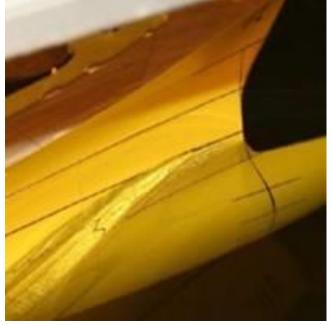
An optimized bow leads to reduced power requirements and a better inflow.

These in turn allow for additional propeller improvement.

In this case, retrofitting both the bow and the propeller led to combined savings of 18 per cent, which was confirmed in independent model tests," Hochkirch explains.

Such efficiency gains are not unusual.

A further project between Seaspan and DNV GL, carried out on an 8500 TEU container vessel, led to combined savings of 14 per cent.



"Larger ships generally have larger savings potential, especially if they often trade in lower draft," says Hochkirch.

In addition to working with DNV GL on retrofit and design projects, Seaspan also utilizes DNV GL's ECO Assistant for trim optimization data and has signed up part of its fleet to the ECO Insight solution to monitor and further optimize the performance of its vessels.

(from: marinelink.com, November 8<sup>th</sup> 2016)

#### REEFER

## FOOD FOR THOUGHT: TOP 5 STRATEGIC RISKS FOR THE REEFER INDUSTRY

Fresh from last month's Cool Logistics Global conference in Bremen, consultant Garry Honey has produced a list of the top five risks facing the reefer industry – and they can be summed up in five different segments of risk: disruption, anticipation, damage, control and value.

In many ways, they are the same risks faced by all participants in the global container supply chain, except for one thing – the value of reefer cargoes and their inherent vulnerability, makes the possible financial impact much greater.

\* \* \*

"As a risk consultant with some experience of supply chain risk across a number of industries, I was recently asked for my views on risk in a growing sector of the container industry, refrigerated containers, commonly known as 'reefers'.

Perishable cargoes which require temperature control include not just foodstuffs but pharmaceuticals also.

These containers require a stable power source throughout their journey from producer to consumer.

Power outage is a big risk, but not the only one.

Here are my top 5 risks for the reefer industry based on the latest Cool Logistics Global conference in Bremen at the end of September 2016.

1. Disruption risk

Any chain is only as strong as its weakest link.

Everybody knows this, but how much attention is given to prioritising it within the industry?

There is a temptation to reduce risk where you can control it, not necessarily where it is most critical, especially if it falls outside your immediate control.

Supply chain thinking needs to be end to end, from producer to consumer; not starting in the middle—you can't design a supply chain from the middle, it just won't work.

The reefer industry needs to manage risk inherent in satisfying demands from both ends of the supply chain: producer and consumer.

Loss aversion, exaggerated optimism and cognitive dissonance: three behavioural risks to collective decision making, as discussed by Chiron's Prof. Garry Honey at Cool Logistics Global 2016.

I recently worked with a Housing Association which found itself in the middle of a supply chain.

It was contracted by a local council to provide and maintain public housing for tenants so had contractual liability risk in delivering this.

The Housing Association had to find reliable and responsible tenants for the council housing to provide revenue for maintenance and development of its housing project: here it had financial risk.

In the middle of a supply chain risk exists as your exposure to parties at each end, front and back or input and output.

2. Anticipation risk

There appears to be a belief that digitalisation, information technology, Big Data, or 4.0 will somehow transform the industry and solve all its problems.

It won't.

More information, while useful, will not address underlying problems.

As one perishable shipper quoted during the conference said: 'Don't give me an App that just tells me how bad my service is'.

TS Eliot put it well: 'Where is the wisdom we have lost in knowledge?

Where is the knowledge we have lost in information?'

More information is no substitute for wisdom.

Think smarter and increase wisdom not data.

I also work in a Financial Services sector called Fintech where Big Data is being heralded as a revolutionary concept in transactional services.

Distributed Ledger Technology, commonly known as Blockchain, offers digital currency to the unbanked masses of the world.

'Bitcoins' have existed for over eight years as crypto-currency in the censorship- resistant world of parallel or shadow banking.

There are reasons why Blockchain technology has stalled, it is only as good as the weakest link and this is about control and mutualisation.

Don't rely on 4.0.

#### 3. Damage risk

What does damage look like and who pays if the cargo perishes on route—the carrier or the beneficial cargo owner (BCO)?

There is an increasing dependence on legal contracts of liability, but protection



of interest is not necessarily the best way forward.

A recent case where a leading retailer sued its BCO for perished goods revealed that the cause was down to a change in packaging specification instigated by the retailer, not the BCO.

For the reefer industry a key question at each stage is; who is the customer?

In the UK Financial Services sector there has been a move by regulators to improve customer service through Know Your Customer (KYC); this is driven more by regulatory pressure to prevent money laundering and fraud than a genuine desire to understand market demand.

Despite this, within the reefer market it is important to know your customer and what they expect of you.

Understanding the risk of perishable goods delivery is an important facet of a market in which a third of cargoes perish.

How do your customers view waste and what are you prepared to do with them to mitigate against a risk which costs you both in lost revenue and reputation?

4. Control risk

The Hanjin bankruptcy has highlighted an unpleasant feature of the industry, namely the uncertainty of who exactly is carrying your cargo.

Is the carrier you commissioned actually the one handling your cargo today, or has the consignment been sub-contracted elsewhere to lower cost to increase profit?

At the end of September there were 25 container lines at risk of cargo delays through the Hanjin network and up to 7,000 reefers stranded on Hanjin vessels which could not dock for fear of being impounded by the receiver.

In the reefer market it is important to know your customer and appreciate what their priorities are in terms of price, quality and time.

As a former buyer with a large retail chain I know only too well the pressures forced on suppliers by those who command access to mass distribution.

Every buyer demands goods at the lowest price, highest quality and fastest time.

However, all suppliers know this is unachievable, that compromise must be negotiated, and that chasing lowest cost involves sacrificing quality or speed.

#### 5. Value risk

The interests of intermediaries are not always the same as commercial parties within the supply chain: for example state legislators and EU officials whose regulations may be obstructive rather than helpful.

Adding costs to protect port-worker safety or reduce power consumption ultimately add costs to the end consumer.

Not everyone in the supply chain has the same objective or values as those involved in shipping goods for optimal cost.

Planners need many years to approve a new port facility to handle larger container vessels, similarly the landside infrastructure of road and rail can fall behind shipping capacity due to policy lag.

There are many industries where the regulator acts as a brake to commercial or entrepreneurial activity given the remit of the regulator to protect labour resources or the environment against commercial exploitation.

In the aim to drive down costs this is a reality that must be faced as regulators invariably have the power or suspend the vital 'licence to operate' and thus must be accommodated.

For the reefer market this means looking closely at port facilities, road and rail infrastructure and all non-maritime elements of the supply chain.

These are my top 5 risks, but the message is primarily about how risk is perceived, ideally as uncertainty not a threat to business continuity and potential interruption.

As uncertainty, risk needs to be embraced as an opportunity for innovation, for necessity is the mother of invention, and the reefer market badly needs some creativity in the face of commercial challenges.

To conclude, I like to remind my audiences of the difference between knowledge and wisdom:

Question: What is the difference between knowledge and wisdom?

Answer: 'Knowledge is recognising that tomato is a fruit, wisdom is leaving it out of a fruit salad!' "

(from: theloadstar.co.uk/medium.com, October 26<sup>th</sup> 2016)

#### **ON THE CALENDAR**

:	15/11/16 - 17/11/16 15/11/16 - 17/11/16 16/11/16 - 18/11/16	Rotterdam Rotterdam Istanbul
•	17/11/16 - 18/11/16	Mombasa
•	20/11/16 - 23/11/16	Dubai
•	23/11/16 - 24/11/16	Budapest
•	23/11/16 - 25/11/16	Jakarta
•	05/12/16 - 07/12/16	Dammam
•	07/12/16 - 09/12/16	Guangzhou

Intermodal Europe 2016 Transport & Logistics 2016 Logitrans 2016 16th Intermodal Africa 2016 3rd International Conference on Coastal Zone Engineering and Management in the Middle East (Arabian Coast 2016) Translog Connect 2016 MARINTEC INDONESIA 2016 Saudi Transtec 2016 INMEX China 2016

The Secretariat of C.I.S.Co. is able to communicate detailed information on the programs of all the events and how to participate.