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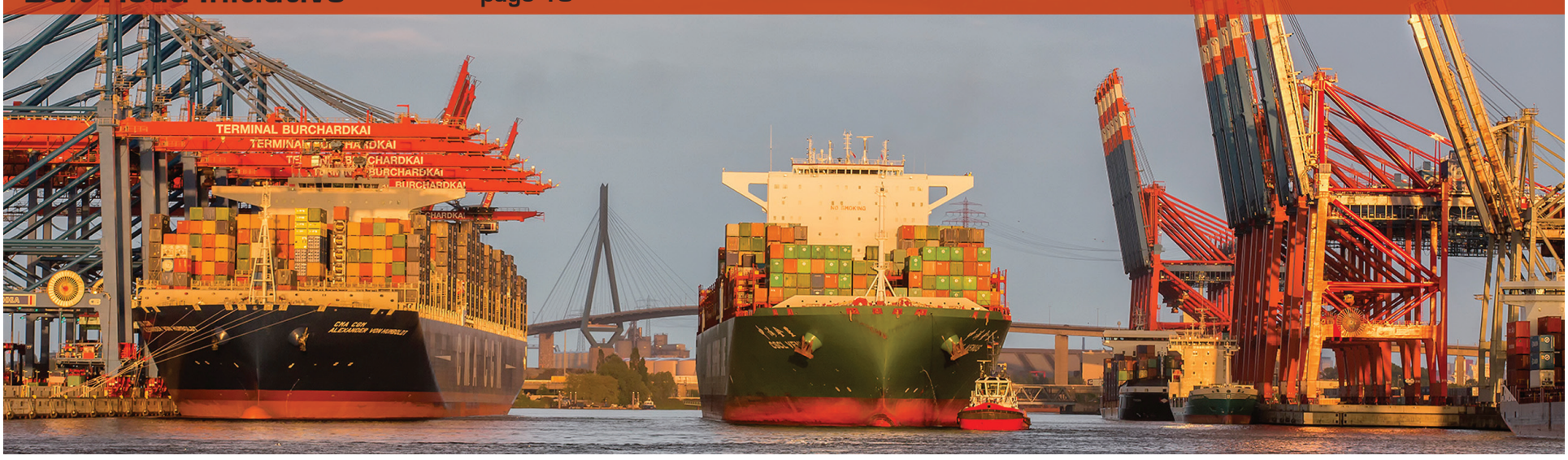
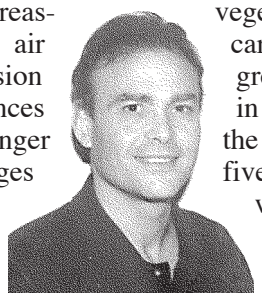


Transporting perishables: ocean or air?

Some products favor air, but ocean has made advances with technology improvements

By Peter Buxbaum, AJOT



In 2014, the shipping consultancy Seabury came out with a report showing shippers were increasingly choosing ocean over air for perishables. That conclusion wasn't a huge surprise: advances in technology made the longer and less-expensive sea voyages more feasible.

But a recent report from Transport Intelligence tells another story. That report concluded that air cargo is growing in the perishables sector, at least inbound to Europe.

How do we explain this paradox?

Crossborder sales of perishable products is one of the fastest growing segments in international trade. With millions of people around the world being lifted out of poverty, they can afford to diversify their diets with more meat, fish, dairy, fruits, and vegetables. This is especially true in lower-income countries, where demand is increasing at a 17% annual clip. The expansion of crossborder trade in fresh foods creates opportunities for farmers and exporters as well as the transportation and logistics services providers that move the goods.

Advances in cold chain technologies and transportation enable foods to stay fresh while moving efficiently across long distances. The use of refrigerated containers has particularly helped, accounting for more than 50% of global refrigerated cargo. In the maritime sector, the share of containerized refrigerated transport capacity climbed to 72% in 2013, up from 33% in 1980, according to research from the University of Calgary.

These facts tend to support the conclusions reached by the Seabury report, which found that "a pronounced shift is taking place from air cargo to ocean transport."

"A decade ago, tomatoes were just as likely to be transported by air as in a reefer container," said Derek Brand, a Seabury maritime advisor, who authored the report. "Today, tomatoes are transported almost entirely in containers. The same holds true for numerous other perishable commodities."

Perishable Shift

The shift identified by Seabury translated to about 100,000 TEU, or 5.4 million tons of cargo per year, going by ocean instead of air, a fact which, according to Brand, accounts for the 2.6% average growth in air cargo since 2000. Without the modal shift identified by Seabury, air cargo would have grown at an average annual rate of 4.5%.

One possible explanation for the discrepancy between the Seabury and Ti findings is the latter uses data for three specific agricultural sectors—flowers and trees, vegetables, and fruits—and not for refrigerated trade as a whole. The report noted that Europe's cold chain market "had a slow year in 2016" with growth in extra-EU trade of agricultural products estimated at 0.7 percent. But the three subsectors examined in the report grew nicely—at 33.6%, 6.4% and 2.8% respectively. That means that the data generated by trade in flowers and trees, vegetables, and fruits aren't necessarily reflective of the perishables sector as a whole.

Furthermore, the data presented by Ti shows that, in the case of vegetables and fruit, volumes carried by both air and ocean grew between 2012 and 2016, in both cases pretty much at the same rate. In 2012, around five million tons of vegetables were carried by sea in the EU trades while 250,000 tons went by air. In 2016, a little over six million tons went on ocean carriers while around 310,000 tons were loaded on aircraft.

In the case of fruit 10 million tons went by ocean in 2012 as opposed to 175,000 tons by air. In 2016, 13 million tons were carried on the waters, while around 200,000 tons were carried in the skies.

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Grove Services' Iacopella is coolly meeting temperature-controlled logistics challenges

Industry Profile

By Paul Scott Abbott, AJOT

As director of logistics for Grove Services Inc., Nick Iacopella coolly meets challenges of temperature-controlled logistics for one of the top three U.S. poultry exporters.

Iacopella advances a straightforward, creative approach, relying on personal relationships and technology alike, including applying experiences from a family warehouse business at Port Newark and a stint hunting submarines from Navy aircraft.

In an interview at his office in Atlanta, the transplanted New Yorker also talks with the *American Journal of Transportation* about his Italian roots and his very personal involvement with Cystic Fibrosis Foundation.

How has the challenge of securing sufficient containers been exacerbated since rollout of the new ocean carrier alliances, and why is this of particular concern to the temperature-controlled logistics sector, which has shifted largely to containers from breakbulk mode?

When you're planning around equipment availability levels, there's always a challenge. It's especially true for temperature-controlled.

As a frozen protein exporter, we're always competing with other seasonal commodities. Equipment is in high demand certain times a year because of other commodities coming online. There's always some seasonal adjustment you have to navigate.

With the new alliance structures, I think the steamship lines have done a pretty good job trying to coordinate that. But with the new alliances come port changes and schedule changes, and it stands to reason they're going to have challenges positioning equipment.

By having a strong personal relationship with our carriers, we can forecast. They're very upfront with us about when they are – and aren't – going to have equipment. Knowing what you're dealing with is half the battle.

What else are you doing at Grove to respond to temperature-controlled logistics challenges?

Specifically with temperature-controlled, it takes lines a longer turnaround time to pretrip [inspect and prepare] the boxes. Also, it's more difficult for them to match import commodities with where export commodities are coming from.

We're trying to work with line partners in telling them where we want to go out of and see what they might be able to bring in.

How are you keeping pace with the westward move of U.S. poultry production and increasing demand from Asian markets?

From the U.S. Gulf to Asia, we're trying to marry, even from a point of where we're selling to, to have reciprocity with two-way traffic, so they can commit to the exporter overseas, and we can commit to them that we can get the equipment to where they want it to go as well.

We have to get creative. We're always looking for new ways to route cargo. If it's not cost-effective to go over the East Coast or to rail through the West Coast and we have to go out of the Gulf, where ocean freight rates to Asia have been increasing, with a lot of the production further west in the South, we have to be creative on how we route the cargo.

What role is technology playing?

I'm a strong advocate of personal relationships, but you'd be a fool to say technology isn't essential to

*(**PROFILE** – continued on page 8)*

Nick Iacopella, director of logistics for Grove Services Inc., exudes a passion for temperature-controlled logistics.

Perishables imports to Southeast seen as game-changing saver of time, money

By Paul Scott Abbott, AJOT

The expanding program allowing many Latin American perishables to enter the United States through Southeast ports is a transformative advance that should continue to grow in scope and commensurate savings, according to a commercial banking expert on logistics.

"This is a game-changer for South Atlantic and Gulf Coast ports," Taylor Howerton, senior vice president and ports and logistics industry manager in the commercial banking sector of Atlanta-based SunTrust Bank, told the *American Journal of Transportation*.

Indeed, the U.S. Department of Agriculture's Animal and Plant Health Inspection Service already has added several ports to its in-transit cold treatment pilot program since rolling it out four years ago at a pair of South Florida seaports.

This year's additions to the program include Central Florida's Port Canaveral, joining such Florida ports as PortMiami and Port Everglades, both of which were in on the 2013 launch, as well as Port Manatee and Port Tampa Bay, both on Central Florida's Gulf Coast, and North Florida's Port of Jacksonville, each of which gained program approval in 2015.

Whereas the pilot program has been championed by the not-for-profit Florida Perishable Trade Coalition, beyond the Sunshine State, the Port of New Orleans garnered federal approval this May as well, while the Georgia's Port of Savannah and South Carolina's Port of Charleston have been cleared for participation, respectively, since 2014 and 2016.

In the May announcement from the Port of New Orleans, the port's president and chief executive officer, Brandy O. Christian, termed pilot participation "a significant gain," pointing to its potential for presenting options to reduce transit time from origin to consumer compared with traditional routings via U.S. Northeast ports.

Before the pilot program, USDA, as a safeguard against unintended importation of hitchhiking fruit flies and other pests, required perishables from Latin America to arrive by ship at U.S. ports in cooler climates – north of the 39th parallel – meaning produce has a long history of streaming into ports such as those of Philadelphia, Baltimore, New York and New Jersey, and Wilmington, Delaware.

By deploying modern technology in treating produce for 15 days when in transit on ships from Latin America and allowing it to enter ports farther to the south, five to seven days typically can be shaved off

*(**SAVER** – continued on page 8)*

Taylor Howerton, senior VP and ports and logistics industry manager for SunTrust Bank, is enthusiastic about anticipated further expansion of a federal program that allows certain perishables imports to enter Southeast ports. (Photo by Paul Scott Abbott, AJOT)

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Cold storage design catching up with supply chain

By Matt Miller, AJOT

These are heady days for Tippmann Innovation, which designs and builds cold storage facilities. Near the end of June, company president Rob Adams hopped from a ground-breaking ceremony of an extremely large, refrigerated warehouse in Sioux Falls, South Dakota, to a ribbon-cutting ceremony, which marked the opening of an even more massive, newly completed cold storage facility near Seattle's Sea-Tac Airport.

"We started one on Thursday. We opened one on Friday," said Adams, back the following week in his Fort Wayne, Indiana office.

The boom in the construction of mammoth, dry-goods distribution warehouses is well chronicled. This decade-long upsurge reflects everything from the outsourcing of warehousing and growing dominance of 3PLs to the rush of Amazon and other ecommerce giants and the needs of "last mile" delivery.

Cold storage in the US has been in many ways a bit of a laggard. That appears to be changing. Data compiled by the research group Industrial Info Resources at the beginning of 2017 reported that 24 greenfield refrigerated warehouses projects would break ground this year, at an investment cost of $948 million.

"What we're finally seeing is [cold storage] playing catch up," said Jack Ampuja, president of the consultancy Supply Chain Optimizers, and a veteran in food industry logistics.

Several trends are converging to push for new refrigerated warehouses. Anthony Lydon, a Phoenix-based managing director at real estate services and investment management company Jones Lang LaSalle, or JLL, and member of the firm's supply chain and logistics group, ticked off a half-dozen:

• Population growth. There are just more people to feed in Metropolitan Phoenix and other sun-belt cities.

• Product proliferation. Glutton-free, fat-free, organic are all examples of what Lydon called the "segmentation" of fresh foods. Add to that the whole issue in grocery stores of fresh and refrigerated versus canned. Canned is losing the battle. "Look at any supermarket," said Adams. "Look at the refrigerated and frozen sections. Those are the areas that are growing."

• Ecommerce. While fresh and frozen food may lag dry-goods ecommerce, that segment of the marketplace is growing, and quickly. "More and more people are ordering food to be delivered to their home," Lydon said. With it come new demands for cold storage infrastructure that is materially different from the past, where supermarket chains delivered to retail outlets, so-called "direct to store distribution," and wholesalers made their rounds to retailers as well. Services now include home grocery delivery such as Peapod and FreshDirect. But Lydon also cited services like Freshly, a company that cooks and delivers some 120,000 fresh meals weekly from a kitchen/distribution center in Phoenix. "That's a brand new vertical market that didn't exist before," he said. Add to that Amazon's announced acquisition of Whole Foods supermarkets, which could rocket the ecommerce giant into fresh food home delivery.

• Food importation and seasonality. Americans increasingly demand fresh fruits and vegetables year-round. Producers in Mexico and Latin America are happy to provide the produce. Mexico, alone, exported to the US last year almost $12.5 billion worth of fresh fruits and vegetables. Mexico is now the source of a majority of the US's fresh produce during winter months. Aggregating and stockpiling that produce in the US, as opposed to shipping it directly from Mexico to customers in the US, is making more and more sense, especially as the Trump administration rails against Nafta and foreign trade. Tippmann Innovation just broke ground on a

*(**DESIGN** – continued on page 14)*

Why did Amazon acquire Whole Foods?

"All of the above"

By Peter Buxbaum, AJOT

Amazon's acquisition of Whole Foods may have generated screaming headlines and stock market convolutions, but it really shouldn't have come as a huge surprise. Amazon has been trying to gain a foothold in the grocery business for years.

The pairing of an e-commerce giant and a grocery store may seem odd at first, but close observers of Amazon know CEO Jeff Bezos has been trying to gain market share in this retail subsector for years, not only in the United States, but internationally. But the Whole Foods acquisition gives Amazon much more than a source of groceries. It provides the e-commerce giant with a logistics network, including 15 food-grade distribution centers as well as hundreds of retail outlets through which Amazon can execute an omnichannel retail strategy, today every retailer's dream. Amazon currently operates less than 100 distribution centers in the U.S.

Amazon has sought entry to US grocery retailing for a decade, but in those years has garnered a market share of less than one percent. Elsewhere, Amazon has started up grocery initiatives in several international markets, including the United Kingdom, Spain, Italy, France, Germany, and Japan. In Milan, Italy, Amazon delivers 30 kinds of fruits and vegetables that traditionally would have been bought at local open-air markets.

In India, Amazon is in preliminary acquisition talks with BigBasket, the country's largest online grocery, and the word is that the Indian government will soon grant Amazon the right to begin delivering groceries. In Paris, where Amazon introduced Prime Now to deliver fresh and frozen groceries,

*(**ACQUIRE** – continued on page 18)*

(**PROFILE** – *continued from page 4*)
everything we do.

When I came from Janel [Group, in October 2016 after 11 years with the Lynbrook, New York-based integrated logistics provider], I spent a lot of time with compliance, with [U.S.] Customs and Border Protection with the ACE [Automated Commercial Environment] transition. A lot of our success there was in navigating the new ACE environment.

One of the challenges faced by a BCO [beneficial cargo owner] or exporter relates to the changing face of compliance regulations. Using technology with education of our staff to stay ahead of the compliance curve, we pride ourselves on being highly compliant.

We need to have electronic visibility of our supply chain. The better technology we have, the better the visibility and the better we can get that information into the hands of the people who need it.

In fact, we're going to a more advanced IT [information technology] platform to better suit our needs.

I can't help but notice how well you talk with your hands. Where are your family roots?

My father's family is from Sicily and my mother's family is originally from Naples, but they were born here. Iacopella is Italian for Jacobson. We found our family name in Sicily back to the 1700s.

How has your background with container freight station, trucking and third-party logistics providers – and your eight years as a U.S. Navy Reserve air crewman – helped shape your approach?

I started out in the CFS business – the brick-and-mortar aspect of the industry – in a warehouse in Port Newark, so I learned early on how cargo physically moves, which helped me learn time elements you need to factor into the equation when you look at efficiency, like how many moves a trucker can do in a day.

That's why I'm a big fan of port tours and for office personnel physically seeing the warehouse and how long it takes someone to pull a product off the shelf and communicating throughout the various aspects of the supply chain.

Flying in the Navy was a great experience, something I'll cherish forever. I learned a ton of lessons on a P-3 Orion, basically hunting submarines from the air. Processes like that at an early age helped me focus on how to do my job in logistics better.

I had the privilege of flying with three Navy commanders who taught me a lot, but one thing stood out. One of them told me, "Nick, if you want to know if you're doing a good job as a leader, you should turn around and see if there's anyone following you."

It's that straightforwardness I try to bring to everything I do now. It doesn't matter how good you think the plan is. You need to constantly check it against your results. And if the results aren't there, you need to change something.

What led you to first become involved in the logistics business?

My father owned a container freight

(**PROFILE** – *continued on page 14*)

(**SAVER** – *continued from page 5*)
overall transit times to Southeast consumers who previously had to wait for the goods to be trucked back southward. Total transport cost savings have been pegged at as much as $3,000 to $3,500 per container.

"Obviously," SunTrust's Howerton said, "if you can eliminate that transportation move of trucking that product down to end destinations that are in the Southeast and instead have an all-water service effectively move the product to a South Atlantic port or a port in Florida, you reduce the total landed cost of the shipment.

"It's been aligned with technology as well," Howerton added, noting progressive capabilities for in-transit treatment and the development of suitable infrastructure in and around Southeast ports, from large contingents of on-port refrigerated container racks and chassis plug-ins, known as reefer plugs, to a burgeoning number of on- and near-port cold storage facilities.

Also, he said, ports are advancing marketing strategies aimed specifically at attracting such cargos, one example being PortMiami's "Faster Is Fresher" campaign.

And others points to environmental benefits achieved because fewer truck miles driven translate to decreased harmful emissions.

Howerton said he believes it may not be long before the pilot program moves forward to a more permanent status.

"They [USDA] would not be adding more ports unless they're having success with the ones that they've been monitoring closely," he said. "If one solidifies the sustainability of the pilot program, it's probably moving beyond what they might define as a pilot phase into a more permanent phase as well.

"You wouldn't think they'd be adding additional ports if they had concerns about the initial phase," he said. "So I would think it's probably likely at some point that it would move from pilot to more permanent, because they have to recognize there's a lot of capex [capital expenditures] going into the systems on the ports, as well as private funding of cold storage capacity, which is expensive warehousing to develop.

"It's a tremendous opportunity for more capacity to be built in the Southeast," Howerton added. "You wouldn't want to roll back something like this, given the amount of investment that's going in."

In fact, Howerton said he anticipates the roster of approved port participants to grow, along with the list of items and countries the program encompasses.

Commodities currently included in the program are blueberries, citrus and grapes from Peru; blueberries and grapes from Uruguay; and blueberries, apples and pears from Argentina. When the program began in fall 2013, it only included imports into PortMiami and Port Everglades of cold-treated blueberries and grapes from Peru and Uruguay.

While this business is expected to keep growing at ports to the south, more directly serving consumers in the increasingly populous Southeast, ports of the Northeast should continue to receive plenty of perishable cargos.

"There's certainly still business," Howerton said. "Just given the dense population in those areas in the Northeast, there's going to be plenty of opportunity for those ports. There's going to be plenty of business for everyone; it just might not be in every single segment."

Howerton said he anticipates overall U.S. demand for fresh produce will keep rising, not just on the part of supermarkets but also fast-food establishments and school cafeterias.

The logistics of food trade: watch out for chokepoints

Disruptions in food supply chains can have impressive consequences on the global stage. Export bans on wheat from Black Sea countries are said to have contributed in part to the Arab Spring a few years ago.

Foodstuffs, like oil, for example, can be considered a strategic commodity. But, while the petroleum industry has been mapping the risk of logistics chokepoints for years, it has been overlooked in the case of food supply chains, according to a recent report from the think tank Chatham House.

There are significant and underappreciated risks in the global food trade and key physical chokepoints are where things could go wrong. The report urges policymakers to take action to mitigate the risk of severe disruption at certain ports, maritime straits, and inland transportation routes.

The report, "Chokepoints and Vulnerabilities in Global Food Trade," identifies fourteen chokepoints that are critical to global food security. Of these, eight are maritime—including the Panama Canal, Suez Canal, and the Turkish Straits. Three are inland—and include US inland waterways and Brazil's road network, and three coastal chokepoints include the Black Sea ports and the US Gulf Coast ports.

The report warns that incidents or delays at these chokepoints could disrupt supply, and push up food prices. "The increasingly interrelated nature of the global food trade means that disruption to one trade route could have knock on effects for others," the report noted. According to the report, 54% of the global trade in soybeans, cereals, and fertilizers passes through at least one maritime chokepoint. Of the 14 chokepoints identified in the report, all but one has been subject to closure or restrictions in the past 15 years.

"Often, responses taken by governments that have short term, national interests in mind can exacerbate the global problem," said Laura Wellesley, one of the report's authors. "Climate change is going to make things worse by increasing the frequency of extreme weather events, fueling conflict, and damaging already-weakened infrastructure."

Global food security depends upon trade in four staple crops – corn, wheat, rice, and soybeans – production of which is concentrated in a handful of exporting breadbasket regions. The US exports 30% of the world's corn supply, and 29% of its soy, while Brazil is the largest exporter of soy globally and accounts for 48% of China's soy imports.

The degree of risk faced by food importing countries depends on the proportion of their imports that passes through a chokepoint. The Middle East and North Africa region is encircled by maritime chokepoints and depends heavily on wheat imports from the Black Sea. Over a third of all grain imports to MENA passes through at least one maritime chokepoint for which there is no alternative. "The risk of disruption," the report concluded, "given the political situation in the region, is high."

Low-income net-food importers in sub-Saharan Africa are also very exposed, as are Japan and South Korea. China also a major importer, has done the most to mitigate its exposure to chokepoint risk.

The report urges governments to strengthen global rules and cooperation and invest in climate-resilient infrastructure. It suggests policymakers should integrate chokepoint analysis into mainstream risk management and security planning.

*(**TRANSPORTING** – continued from page 2)*

The market for trees and flowers tells a different story. In that case, around 350,000 tons went by sea in 2012, peaking at 400,000 tons in 2015 before dropping off to around 350,000 tons in 2016. In the case of air, 250,000 tons of trees and flowers were carried in 2012; 400,000 in 2015; and around 420,000 in 2016.

It appears that only in this subsector—by far the smallest of the three considered—was there an arguable modal shift from ocean to air. In the case of the other two, air is carrying more, but so is ocean. Still, given the growth in air, the report's conclusion that "each product category shows an increasing emphasis on the importance of air transport" is justified.

Impact of Technology

The Ti report allows that technological innovations would tend to support an increase in ocean transportation for perishables over air. The explanations for the growth in air in the subsectors studied are particular to the trade involved. European consumers understandably appreciate buying flowers from Kenya, for example, within 48 hours after they are cut. Kenya, at over 160,000 tons, was the largest exporter of flowers to the EU in 2016, and improvements at Nairobi's Jomo Kenyatta International Airport means that shippers have a quicker way of transporting their produce.

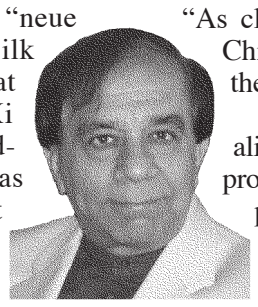
Short-term factors also have contributed to the increase in air-freight volumes. When shippers see port congestion, they look to the skies for an alternative. "Poor harvests and crop yields can also make a difference," the report noted. "It means retailers have to look to different parts of the world to get their products and air freight is the quickest way of shipping replacements quickly. Events such as the El Nino weather phenomenon have caused disruption in the farming sector in recent years, impacting the global agricultural supply chain."

The bottom line is that, while the conclusions of the Ti report may be encouraging for air cargo carriers, they don't predict a long-term trend without further data and a broader look at the perishables marketplace. "Strong global trade...is set to continue," the report noted, "and this will aid volumes both modes of transport."

As things stand now, the traditional factors that play into modal choice still prevail, including distance between origin and destination, the size and weight of the shipment, the required temperature environment, and the perishability of the product.

Despite the hype, Europeans skeptical about the real motives behind China's ambitious Belt-Road-Initiative

By Manik Mehta, AJOT



The German term "neue Seidenstrasse" (the new silk road) is used to refer to what the Chinese President Xi Jinping calls the Belt-Road-Initiative (BRI), which was originally called One Belt One Road project.

Is the BRI an ambitious vision that could open up greater trade opportunities or is it a chimera?

European critics feel the BRI initiative will not be smooth sailing for the Chinese despite their strategic moves to open up global markets by offering to build infrastructure in the BRI member countries which stand to benefit but which, many fear, will eventually become "pawns" in China's hands.

Geopolitical Ambition

However, the Chinese should be credited for being the first to act on this massive scale to tap the opportunities inherent in the e-commerce boom and also for their strategy to build a new trading network between Asia and Europe. Global online trade has posted robust growth in recent years, growing by some 25%, according to one market analysis study by McKinsey.

The international e-commerce boom has led to strong growth in sea and aircargo trade, as well as in rail transport which increasingly plays an important role in China-Europe trade.

While China's BRI is supported by $3 trillion of foreign currency reserves and state-owned enterprises, and while the project professed aim is economic development, it also reflects China's geopolitical security ambitions with its leadership trying to shape and dominate the order of half of the world's geography; this is causing concern among some nations, including BRI participants.

It was not a coincidence that soon after US President Donald Trump announced the US withdrawal from the Trans-Pacific Partnership (TPP), Beijing organized the gargantuan Belt Road Forum, attracting a large number of world leaders. However, many European and Asian leaders stayed away because of China's lack of transparency and other reasons. Some European delegates feel the BRI is China's "Trojan horse" to gain political influence across the world.

EU representatives at the BRF were skeptical about China's willingness to provide the required transparency and ensure economic advantages for all the participants and stakeholders. The EU states refused to sign the final communique on trade issues after the dialogue because China did not address Europe's concerns. Besides transparency, Europeans want issues of public tenders and adherence to social and environmental standards to be addressed.

German Economics Minister Brigitte Zypries led the charge in Beijing; in her speech before hundreds of delegates, she championed free trade and open markets, urging China to open up its market to stimulate economic growth and development. "As close partners, we encourage China to push reforms and open the market," she said.

To keep the BRI momentum alive, China held out the prospect of investing billions in ports, roads, railway lines and other infrastructure projects. It made a similar pitch recently at the Asia Society in New York where a high-profiled Chinese delegation courted US companies to avail of the investment opportunities BRI offers.

Visibility on the Silk Road

The BRI, as a concept, is quite promising, and can open up new business opportunities, giving development impulses, particularly in the Eurasian region, which should also be in Europe's interests. The

*(**SKEPTICAL** – continued on page 12)*

The Duisburg connection

By Manik Mehta, AJOT

From its former provincial character, the Duisburg port in the German state of North Rhine Westphalia is becoming a player in international shipping, its significance receiving a big boost with the recent focus on the Belt-Road-Initiative in Beijing.

To strengthen its role in international shipping, Duisburg port has ironed out a strategic partnership with the port of Trieste.

Duisburg port in the German state of North Rhine Westphalia

"This will enable us to expand our European network as well provide us access to China through the Suez Canal and through the land way via Turkey and Iran," Duisburg's chief executive Erich Staake has been telling the media.

Duisburg has become an important point for transporting goods by rail to and from China. "We already have 25 trains leaving each week to several destination points in China, contributing to a rise in throughput in both ports," Staake says. Duisburg and Trieste both want to invest in dry ports in the region.

But many say that the rail or road transportation from China to Europe will have a specialized – a niche - character, and as such will pose no major competition to sea cargo. Due to the disproportionate throughput between China and Germany – some 2.4 million tonnes were exported in 2016 from Germany to China while 3.4 million tonnes are imported into Germany from China – rail transportation does make economic sense because it is quicker than sea cargo and cheaper than air cargo. Indeed, this becomes obvious in the case of time-conditioned goods such as clothing, electronics and autoparts.

But such products are not necessarily headed for China but can also be offloaded on the way in countries and markets that will be part of the BRI, particularly in Central Asian markets.

The new Silk Road, as the BRI is also known, will undergo further expansion between China and Duisburg from 2018. The Chinese are setting up a trade center with offices, a hotel, restaurant, conference and exhibition hall,

*(**CONNECTION** – continued on page 13)*

*(**SKEPTICAL** – continued from page 10)*

forum in Beijing showed that the EU members pursued their own economic interests, and were deterred by the project's lack of transparency in several issues, including the renewal and integration of Central Asian energy networks. On the other hand, Germany's automobile industry, for example, is already benefiting from the railway connectivity to Eurasia, allowing it to ship cars. German logistics experts believe China will provide new stops in the future to attract greater Western involvement in the BRI.

While the BRI seeks to establish China's supremacy on the sea routes, particularly, from the western part of the country through Euroasia to Europe, the Chinese leadership has, apparently, recognized the strategic importance of building a huge railway network connecting major trading regions outside the country.

Rail freight traffic between Europe and China has grown dramatically over the years. Besides Russia, Kazakhstan serves as an important transit country, bordered on the west by the Caspian Sea, though its potential in context of trade and freight traffic lies in the East. The country's proximity to China is another advantage. Kazakhstan has established near the province Xinjiang the dry port of Khorgos which has become since 2015 an important transit point for rail cargo between Russia and China. The Khorgos center is administered by DP World which operates the Jebel Ali cargo port and the connected free trade zone in Dubai.

The rail freight volume between the 28 EU member countries and China has risen sharply; according to Eurostat, the European statistics office. Chinese exports from 2012 to 2016 surged from 275,000 to 610,000 tonnes, whereas European exports to China grew from 83,200 to nearly 400,000 tonnes.

China has traditionally shipped goods to Russia and then to Europe by rail. According to European experts, the freight volumes have been growing since ten years. But the new feature is that traffic has been growing in the opposite direction – to China. Duisburg in Germany has already been seeing off freight trains passing through Kazakhstan to Kasgar in Western China.

The railways will play a greater role in the future as an alternative to the more expensive airfreight and the slower mode of transportation by sea. Germany's railway, Deutsche Bahn, transported last year through diverse routes over 40,000 TEUs between China and Germany, an increase of more than a tenth. By 2020 the projected volume will be 100,000 TEUs, and this will require greater investment in railway infrastructure in Russia, Kazakhstan, etc.

China announced in mid May at the BRF in Beijing that it was pledging, as a start, more than 100 billion Euro for the BRI projects. China wants to connect Europe and Asia, as well as parts of Africa by road and rail, and also invest in power plants, pipelines and computer networks, ports and container terminals, etc. According to the Asian Development Bank, the BRI will need by 2030 an investment volume of some 26 trillion Euro, with China providing a large part of it. Germany's engineering companies see windfall business in the infrastructure development.

*(**SKEPTICAL** – continued on page 13)*

TCO goes for rail – taking containers from Hamburg to China

Rail is continually picking up speed in container transport to and from China. This trend has now been apparent for some years. The players involved include rail transport via the Silk Road in their planning more and more frequently. For TCO Transcargo, the Hamburg-based service provider for cargo handling, warehousing, distribution and container logistics, trains for/from China are meanwhile part of everyday operations. Since TCO entered the field over twelve months ago, this business has developed remarkably. The opportunities have by no means been exhausted and further potential is still there.

For China, the new Silk Road is one of its largest development programs for years. With the slogan 'One Belt, One Road', the Beijing government is ambitiously promoting the project and backing words with deeds: Billions are being invested in infrastructure and building up train services. Just between Hamburg and the Middle Kingdom, 177 weekly container block train links are meanwhile available. Based in the Hanseatic City, TCO Transcargo entered the China-by-rail business at least twelve months ago.

"We primarily handle containers for export to China. That started with three or four 40-ft containers per week," recalls Thomas Wolnewitsch, TCO's Managing Director. Meanwhile, the firm is handling 25 containers per week, and these rail containers to China constitute between 10 and 15 percent of TCO's business.

The main activities of the port operation in the heart of the Port of Hamburg are cargo handling, container stuffing and secure packing of freight for China. Here TCO has had to adapt and learn a lot, since some of the requirements are quite different from those for seaborne containers. "With containers going by rail, sudden acceleration can occur, and forces work horizontally. Freight is also exposed to constant shaking and vibration. This all calls for special cargo lashing. At destination, the Zhengzhou rail terminal, stringent regulations apply on how containers

*(**RAIL** – continued on page 16)*

Rotterdam's new city terminal entrance improves accessibility of Rotterdam's city and port

On June 22nd, the redeveloped entrance of the City Terminal on Eemhaven (Gate Reeweg) was officially opened by Floor Vermeulen, Member of the Provincial Executive of Zuid-Holland. The new entrance and the surrounding infrastructure will considerably improve the accessibility of both the city and the port area. In time, the new gateway and the accompanying internal circuit will be able to handle some 3,000 trucks per 24 hours, including peaks of up to 450 trucks per hour. This high capacity is by no means a luxury, since soon the City Terminal will be accommodating a multi-purpose port and industrial area for both shortsea and breakbulk cargo – with throughput and traffic volumes that are substantially higher than previously handled in the area.

The redevelopment of Gate Reeweg is in line with the large-scale restructuring of the terminals and infrastructure at ECT's former Home Terminal. The area's rejuvenation will create a unique, multimodal shortsea cluster that offers outstanding access to the various markets in the European hinterland via inland shipping, rail and road. "The development of this new gate and the City Terminal fits in with the Port of Rotterdam Authority's overall policy, which is geared toward ensuring that the port remains accessible while revitalising and making new use of former port areas near the city," says Port Authority COO Ronald Paul. The new entrance to the City Terminal was realised in part thanks to the financial support of the Province of Zuid-Holland and the Municipality of Rotterdam: "The new terminal enhances the strengths of the port of Rotterdam. This is good news for the economy and employment. Not

*(**IMPROVES** – continued on page 15)*

*(**CONNECTION** – continued from page 12)*

e-commerce center, etc., in the Businesspark Niederrhein, with an investment of 260 million Euro, according to an investing company Starhai. The China Trade Center Europe, as the project is being called, will pave the way for Chinese companies wanting to set up business in Duisburg, according to Rolf Sasse, who heads the marketing operations at Starhai.

Experts recall that the Duisburg authorities had ceremoniously welcomed in 2013 the train arriving from Chongquing in China in Duisburg, after completing a 10,300 km (6,400 mile) long journey in 16 days.

Meanwhile, Duisburg port is also expanding its train connectivity and freight rail traffic with the JadeWeserPort. The port authority of Duisport recently said that a container train was operating once a week between Duisburg port and the JadeWeserPort in Wilhelmshaven. The deep-water JadeWeserPort's management says that is the only German port which can be reached by the world's mega container ships carrying 18,000 TEUs and more. Duisburg already has about 400 train connections to 80 destinations worldwide, including China.

Duisburg port transported in 2016 a volume of 55.1 million tonnes, up 2.1% over 2015. The goods transported comprise, mainly, iron ore, stones and earth, mineral-oil products, coal, crude oil and chemical products. Although an inland port, Duisburg's inland shipping plays a secondary role. According to the German Statistics Bureau, only about 5 percent of the total goods traffic in Germany was accounted by the inland shipping in 2015, with nearly 80% accounting for road transportation traffic.

*(**SKEPTICAL** – continued from page 12)*

While it is tempting to think of the BRI as a business-generating machine, European critics recommend caution in a venture that possibly camouflages China's goal of establishing its control of global shipping and trade.

New on-terminal reefer service area opens in Charleston

South Carolina Ports Authority has opened a new refrigerated container service area in the Port of Charleston, marking a $14 million investment to support growing cold chain business in the Southeast.

A new six-acre refrigerated container service area at the Wando Welch Terminal features a 12-lane service canopy, on-site storage and staging for gen-sets and container washing stations. The area greatly enhances reefer processing for shippers, truckers and ocean carriers.

The Port has four new five-story refrigerated container racks that provide 120 more reefer slots on terminal, bringing the portwide total to 1,700 plugs. Four additional racks of the same size are under construction, slated for completion in January 2018.

SCPA's loaded refrigerated cargo volumes have grown 86 percent since 2011, driven by proximity to export pork and poultry producers; access to a deep-water harbor, which allows ocean carriers to load ships heavy with frozen exports; and growing regional demand for import reefer commodities.

"Expansion of refrigerated cargo is a strong driver of SCPA's overall volume growth, and our capital investment in refrigerated cargo infrastructure reflects a strategic commitment to our cold chain customers," said Jim Newsome, SCPA president and CEO. "We look forward to capably serving the continued growth of this business segment."

Complementing SCPA's on-terminal investments are more than 660,000 square feet of cold storage and blast freezing capacity that have been built or committed by the private sector in response to SCPA's cold cargo growth. Local cold storage providers include Agro Merchants Group, Lineage Logistics and New Orleans Cold Storage.

*(**DESIGN** – continued from page 6)*

60,000 square feet refrigerated warehouse to be constructed in Pharr, Texas, which is connected by bridge to Reynosa, Mexico. The facility will be dedicated to storing, staging and distributing one item-- avocados.

• Design. Cold storage facilities are not only getting bigger, they're getting much taller. This maximizes storage, which is measured in cubic feet and pallet positions, not square feet, and enables automated picking and robotics. Capacity and efficiency are the watchwords of the day. The Win Chill facility in Sioux Falls and the Western Distribution Facilities in Washington both have 50-foot vertical clearance, double the old warehouse designs of 20 years back. Target operates a cold storage distribution facility in Southern California that has a phenomenal 110-feet high vertical clearance.

•Technology. This includes everything from new, energy-efficient blast freezing and refrigerated loading docks to LED lighting, state-of-the art insulation panels and advanced pallet racking. Flexible architecture and temperature control enable food to be stored anywhere from 40 degrees F to minus 20 F, and in a stable, constant, climate-controlled environment. Food producers, distributors and retailers demand the highest degree of cold chain integrity, which this new technology can now bring.

Cold Cash

Of course, all this new technology and larger warehouses carry with them a cost. A 2014 study by JLL said cold storage construction costs averaged $150 to $170 per square foot, or about triple the amount necessary to build a dry warehouse. The Win Chill South Dakota cold storage project is estimated to cost $40 million. Industrial Info cited a plan by the Philadelphia-based logistics company XTL, which focuses on ports warehousing, to build a $60 million cold storage facility in Houston.

These kinds of oversized price tags favor the well-heeled investors and large dedicated companies with necessary capital. What's more, industry consolidation is accompanying the push for bigger and more state-of-the art refrigerated warehouses. In its 2014 study, JLL tallied more than 600 operators in cold storage in the US. But the top ten, it said, controlled 80% of the market, a trend that is expected to increase over time.

"Warehousing, dry or frozen, used to be dominated by families," said Ampuja. Not anymore. "A lot of family companies are selling out, saying there's no way they can compete with big companies," he said.

One example is Lineage Logistics. Lineage, based in Novi, Missouri, rolled up 20 separate, mostly family-owned companies since its founding in 2008. It says it now controls "over 100 locations and 609 million cubic feet of temperature-controlled capacity." In June, the company moved into Europe. It announced it had purchased for an undisclosed amount Partner Logistics, based in the Netherlands, and with operations in the Netherlands, Belgium and the UK. Partner Logistics, with more than one million cubic feet of space, claims to be the world's largest automated cold storage company.

Major facilities and companies that own several warehouses can spread investment costs over a larger footprint. They can absorb higher operating costs. At the same time, they can attract the giant food companies that no longer want to be in the warehousing business.

The JLL study predicted cold storage facilities could grow on average 3.4% annually between 2014 and 2019. But, if anything, that figure understates the prospect of even more, new refrigerated warehouses. According to Adams, the move toward greater automation dictates new, state-of-the-art facilities. Retrofitting an existing warehouse, especially a dry facility, makes no sense, he believes. "It's economically prohibitive to convert a dry facility," he said.

Demand for new refrigerated warehouses is growing. "Most cold storage facilities are at capacity. Supply is tight," said Adams.

*(**PROFILE** – continued from page 8)*

station in Port Newark, so my summer job, since I was 15, was unloading import containers and driving the hi-low, and I went to college [graduating from City University of New York-Brooklyn College] and worked with my father a little while, and that's kind of how I got bit by the bug.

At a very early age, I was dealing with people from all over the world, and the problem-solving challenges intrigued me. There is something different about this business every day. Just when you think you've seen most of the problems, something comes up that no one saw before, and you have to deal with it. That's what I find exciting. That's why I love what I do.

After spending most of your life in the New York City area, how have you adapted to the South since moving to Atlanta in 2013, initially for Janel and then last October joining Grove Services?

Atlanta is great. I love the South. It's an amazing place right now. The population growth and investment in infrastructure are making the Southeast a magnet for business development. With Janel, I felt the opportunity for growth was greater in the Southeast.

I came to Grove in October. It's been a great experience. Grove is an amazing company with great plans for future growth. I'm excited to be part of that. Our corporate office is in Boston [Wellesley, Massachusetts], but all the operations – logistics and our traders – are done here in Atlanta. We also have our Hong Kong, Brazilian and Zurich locations.

What is your involvement with the Cystic Fibrosis Foundation, and what other nonwork interests do you pursue?

When he was a few weeks old, my son was diagnosed with cystic fibrosis – a chronic lung disease affecting the pancreas and other organs. Being first-time parents, you can imagine it was a very trying experience. We didn't know what to expect as parents, never mind parents of someone with a chronic illness.

The first outreach to us came from the Cystic Fibrosis Foundation. We went through the genetic testing and found – like one in 30 people in the world – my wife and I both are carriers.

Joseph is 9 now, and he couldn't be doing better, mainly due to the fact that we had an early diagnosis and that the CF Center in Stony Brook, Long Island, did an amazing job. Up until about 30 years ago, they told you that, if someone was diagnosed with CF, not to make plans for high school. Right now, we've got people living to their 30s, 40s and 50s with it, so advancements the CF Foundation has made are phenomenal.

We got more involved to help raise money for the CF Foundation. I chaired a committee for a bike ride on Long Island, and the first year we had 200 riders and raised about $150,000. Now we work with the CF Foundation chapter at CHOA [Children's Healthcare of Atlanta], and I'm involved with their bike ride here. There are a lot of logistics involved.

Our girl, Paige, is 5, and my wife [of 12 years] is Cindy, who is an amazing person, and I couldn't imagine navigating this without her.

We're outdoors people. Spending time outside with my family, whether it's on the lake camping, hiking, we enjoy living close to the mountains.

Yildirim to sell CMA CGM stake as plans to buy Ports America

Yildirim Holding AS is seeking buyers for its stake in the world's third-biggest container shipper as the family-owned Turkish company presses ahead with a plan to acquire Ports America Holdings Inc., a U.S. maritime-terminal operator.

Yildirim mandated China Citic Bank Corp. to find investors from Asia or the Persian Gulf for its 24 percent interest in CMA CGM SA, Chairman Yuksel Yildirim said in an interview in Istanbul. Investment banks have valued the holding, which Yildirim bought for $600 million over a period spanning 2010 and 2011, at $2.5 billion to $3 billion based on recent deals in the industry, he said.

"We will either exit our investment completely or remain as an ordinary shareholder," Yildirim said. A plan to sell the stake in the French company back to its majority owners failed in 2015, he said.

Yildirim is seeking a financial investor to join a bid by its Yilport Holding AS unit for Ports America as part of a plan to be among the 10 biggest container-terminal operators in the world by 2025, the chairman said. Ports America, the largest independent maritime terminal operator on the U.S. Atlantic and Gulf Coasts with 42 locations, is owned by Oaktree Capital Group's private-equity unit, Highstar Capital.

Facing Challenges

Yilport, which has $1.7 billion including bank loans and equity to finance its share of the acquisition, is facing difficulties in finding a financial partner for the New Jersey-based operator, Yildirim said. Yilport operates 26 maritime terminals in Turkey, Portugal, Ecuador, Sweden and Malta, among others.

"Alliances and consolidations in the container-shipping industry in the past year have widened the difference between what buyers expect and what sellers are ready to pay," reducing returns for financial investors, he said. Yilport has an exclusivity agreement signed in April with Oaktree that will expire at the end of July, and aims to complete the acquisition by the end of this year, Yildirim said.

Yildirim said he will also hold talks soon with six strategic investor groups in China to sell half of its stake in a $5 billion project to develop a coal mine, build a railway link and a port in Colombia after his Best Coal Co., a unit of Yilmaden Holding AS, bought the assets from CCX Carvao da Colombia SA in 2014.

Best Coal has a lifespan of about 35 years and the coal could be sold to buyers in Turkey, China, Taiwan, Japan and South Korea, he said. "We can even sell a majority stake to the investor if we get a good price for this project."

A series of talks with private-equity firms including companies from the U.S., Europe and China to sell a minority stake at Yilport failed after potential investors adapted a "wait-and-see" policy toward Turkey because of political uncertainty in the country, Yildirim said. JPMorgan Chase & Co., which managed the process of negotiations, is still mandated should a "new window of opportunity opens up," he said.

Yildirim Holding aims to achieve $2.2 billion of sales this year from $1.6 billion a year ago, while its earnings before interest, tax, depreciation and amortization, or Ebitda, is expected to rise to $719 million from $465 million in 2016, Yildirim said. Yilport's revenue is forecast to reach $650 million with Ebitda rising to $208 million this year from $560 million and $140 million, last year, he said.

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*(**IMPROVES** – continued from page 13)*

just in the port, but also in Zuid-Holland's agricultural hubs, the so-called Greenports. The port of Rotterdam is becoming increasingly important for the import of fresh produce – and, in the near future, also the export from the Greenports. That is why we have invested in shared facilities and solid infrastructure in the vicinity of the terminal," says Floor Vermeulen, Member of the Provincial Executive of Zuid-Holland.

Accessibility

In the days of the Home Terminal, you could regularly see congestion developing during peak hours along Reeweg: the road that connects the terminal with the A15 motorway. At the time, a maximum of some 900 trucks per 24 hours would call on the terminal. In the new situation, the Port Authority expects up to 2,500–3,000 trucks to visit the terminal every day. Nevertheless, it expects far fewer traffic jams, thanks to extensive automation, the construction of a considerable number of extra parking spaces, the use of the CargoCard and adaptations to the infrastructure. As an extra measure to ensure that these future traffic flows are settled quickly and efficiently, the Port Authority recently adapted the Reeweg-Bodaanweg intersection on the public road. This junction provides access to and from the A15 motorway. In 2016, an extra lane was added to the intersection and the traffic lights systems were adapted, to better direct the through traffic moving from and to the A15 motorway and traffic turning on or off the road to the City Terminal.

Shortsea Cluster

The substantially upgraded gate is more effectively tailored to the diverse requirements of the City Terminal's different users: SCA (breakbulk), RST (containers), RSC (rail terminal), Kramer (container repairs and storage), the customs office, MRS (container services), and Kloosterboer (temperature-controlled cargo). An agreement has been reached with Steinweg, the owner of the container terminal operators RST and Uniport, regarding a contract extension and the expansion and further growth of the shortsea segment. New agreements with Kramer and MRS outline the realisation of two new empty depots on the site that will also focus on the additional handling of reefer containers. In addition, talks are being held with RSC about possible further expansions.

New facility opens at the Port of Philadelphia

The M/V GLOVIS Comet commenced cargo operations at Pier 122 the Port of Philadelphia last week. The arrival of the vessel from South Korea with its cargo of 2,176 Hyundai and Kia automobiles marks the first vessel to call the pier in twenty years, and gives The Port of Philadelphia a vital second berth for the importation and exportation of automobiles and roll-on roll-off (ro-ro) cargoes.

"This is a true transformation story," stated Jeff Theobald, CEO of PhilaPort. "In conjunction with our customer: Hyundai GLOVIS (Hyundai, Kia) tenant USD Group (Northeast Energy Terminal), the Teamsters and the ILA, we were able to retool the pier and put it back to work."

"The arrival of the first vessel at Pier 122 is a result of our plan and investment for the port in Philadelphia to expand operations, grow jobs and provide even greater benefit for Pennsylvania's economy," said Governor Tom Wolf. "With its major economic impacts throughout the state, my administration understands the value of Pennsylvania's port asset in Philadelphia and will continue to ensure the benefits of this investment and expansion continue to provide dividends to the region and entire commonwealth."

In November, Governor Tom Wolf announced that the Commonwealth of Pennsylvania would invest $300 million into port infrastructure designed to more than double container capacity, creating a total of approximately 17,020 jobs and further establish PhilaPort as a multi-product, full service Port including expansion of finished vehicle cargoes.

Development of a vessel berth directly adjacent to the VPC (vehicle processing center) was a high priority for PhilaPort.

Maher Terminals welcomes 10,000 TEUs ZIM ANTWERP

10,000 TEUs ZIM ANTWERP passed under the elevated Bayonne Bridge in New York, the first of such size to call Maher terminals. Upon arrival, an official ceremony took place on board the ZIM ANTWERP with the participation of Port Authority of NY & NJ, Maher terminals and ZIM USA representatives headed by President George Goldman, to mark the historic passage. ZIM Antwerp's captain received a plaque commemorating the event.

ZIM ANTWERP arrived in New York after calling ports in China, crossing the new Panama Canal and calling the US ports of Savannah, Charleston and Norfolk. It will head next to Halifax before returning to Asia. The ZIM ANTWERP sails the ZIM Container Service Pacific (ZCP), one of ZIM's flagship lines, recently upgraded as part of the company's renewed network. It is part of ZIM's global strategy to operate as an independent company, focusing on trade routes where it has competitive advantages.

George Goldman, President of ZIM USA: "ZIM is a significant player in this trade and one of the leading carriers serving the Asia-East Coast trade, which is expected to continue to grow following the expansion of the Panama Canal. The trade is also served by another major ZIM service, the ZIM Seven Star Express (Z7S) along with additional complementary lines"

Maher terminals President & CEO, Mr. Gary Cross, said: "Zim Integrated Shipping Services has been a loyal container customer of Maher Terminals dating back to the opening of our first terminal in the early seventies. Now, nearly fifty years later, we are privileged to share in this momentous occasion of the 10062 teu Zim Antwerp calling in the Port of NY/NJ at our facility under the newly raised roadway of the Bayonne Bridge. This event adds to the list of important milestones we share together in our long relationship. We applaud Zim for their continued success and look forward to handling many more of their mega-vessels at Maher Terminals for many more years to come."

JAXPORT Board of Directors unanimously approves start of Jacksonville Harbor Deepening

During its regular monthly meeting and surrounded by a crowd of enthusiastic supporters, JAXPORT's Board of Directors unanimously approved the start of the Jacksonville Harbor Deepening project, allocating the first phase of port funding to the U.S. Army Corps of Engineers for construction.

The federal project to deepen the Jacksonville shipping channel to 47 feet to accommodate more cargo aboard the largest ships is set to begin construction by 2018.

Along with significant state funding already in place, the $484 million, 11-mile project recently received $21.5 million in federal funds along with a new start designation making it eligible for further federal dollars.

"The Jacksonville Harbor Deepening project is the single biggest opportunity to grow our port and reach our potential as a major gateway for international trade," said JAXPORT Chairman Jim Citrano.

Once the project is completed, Blount Island will serve the largest Asian container ships requiring the deepest drafts while Dames Point and Talleyrand will be maximized for containers aboard smaller ships as well as JAXPORT's other lines of business.

The port has recorded an average of 21 percent annual growth in Asian container volumes during the past five years and is now served by the largest international shipping alliances operating between Asia and the east coast of the U.S.

*(**PLANS** – continued from page 15)*

in finding a financial partner for the New Jersey-based operator, Yildirim said. Yilport operates 26 maritime terminals in Turkey, Portugal, Ecuador, Sweden and Malta, among others.

"Alliances and consolidations in the container-shipping industry in the past year have widened the difference between what buyers expect and what sellers are ready to pay," reducing returns for financial investors, he said. Yilport has an exclusivity agreement signed in April with Oaktree that will expire at the end of July, and aims to complete the acquisition by the end of this year, Yildirim said.

Yildirim said he will also hold talks soon with six strategic investor groups in China to sell half of its stake in a $5 billion project to develop a coal mine, build a railway link and a port in Colombia after his Best Coal Co., a unit of Yilmaden Holding AS, bought the assets from CCX Carvao da Colombia SA in 2014.

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*(**RAIL** – continued from page 13)*

are loaded. We receive clear instructions on how containers must be balanced in terms of weight so that they can be transhipped in China," explains Wolnewitsch.

TCO also takes responsibility for delivering containers at Eurokombi's multimodal terminals in Hamburg-Waltershof or DUSS in Hamburg-Billwerder. From there they continue to Malaszewicze on the Poland-Belarus border, where they are transferred from standard to broad-gauge track. They continue via Belarus, Russia and Kazachstan as far as Zhengzhou in the Chinese province of Henan. TCO's partner and customer is the Chinese rail operator ZIH (Zhengzhou International Hub Development).

At least 70 percent of rail containers for China handled by TCO container cars. The remaining 30 percent of the freight consists of machinery, steel coils and boxed/crated export cargo. Currently ZIH trains are leaving Hamburg for China almost daily. The operator plans to further boost frequency in response to rising demand. Wolnewitsch sees the saving of time as one advantage of containers by rail. By water, door-to-door transport currently takes six weeks, by rail it is almost three weeks – or fifty percent – shorter. The aim is for purely rail transport to cover the roughly 11,000-kilometre route within between seven and nine days.

"For time taken, then, rail is currently very interesting in comparison with sea transport. And on price, it is highly attractive compared to air freight," says Wolnewitsch. Nevertheless, he is convinced that the new transport system will not significantly influence transport volume in the sea freight field. For that, its capacities are simply too small. "However, air freight could certainly feel the effects," forecasts the TCO chief. Wolnewitsch is also certain that even if the subsidies from the Chinese side are withdrawn in almost three years' time, no collapse will hit these trains for China: "This system offers too many advantages for that to happen."

AIR CARGO NEWS

American Airlines Cargo opens expanded London pharma room

As part of American's commitment to support the expansion of its healthcare and pharmaceutical services, American Airlines Cargo has announced the opening of a new Controlled Room Temperature (CRT) facility at its London Heathrow (LHR) cargo center. The new room is 1,700 square feet (160 square meters), and is a testament to the airline's dedication to temperature-controlled healthcare shipments.

The new CRT can accommodate up to 16 times more standard euro skid pallets at one time than the previous room, providing airline customers with greater capacity when it comes to moving temperature-sensitive healthcare freight to and from LHR. Both inbound and outbound logistics companies supporting American's ExpediteTC service will utilize the new CRT room. It is a fully monitored and alarmed facility, where the standard operating temperature will be set to maintain passive products at +59°F to +77°F (+15°C to +25°C). Euro Scan software is used to monitor precise temperatures within the facility, which will provide real-time information to the American operations team, and will be used for reporting purposes.

"This is a tremendous service enhancement for our European customers," says Andy Cornwell, regional sales manager for northern Europe. "This new, far larger facility, can meet their needs even more effectively now and in the future. And this will be further improved when our COL +2°C to +8°C (+35°F to +46°F) storage for pharma products comes on stream later this summer."

The newly enlarged CRT room will be of significant value to customers moving specialist pharma traffic between Europe and the U.S. As the second largest carrier from LHR across the Atlantic, American offers up to 20 daily departures to the United States, including two daily flights between LHR and Philadelphia (PHL), home to American's industry leading 25,000 square-foot pharmaceutical facility.

Amazon vision of delivery by drone gets boost from FAA

Amazon.com bid to deliver goods via drone directly to a consumer's doorstep would get a boost under aviation proposed legislation.

The bipartisan Senate legislation to reauthorize the Federal Aviation Administration directs the Department of Transportation to create a carrier certificate allowing for package deliveries by drones, according to a summary. That provision is one of several in the bill aimed at boosting regulatory approval and oversight for drones.

Companies which include Amazon and Alphabet Inc. are racing to develop drones capable of delivering parcels to customers in spite of restrictions on where drones can fly. Amazon in December made its first-ever drone delivery; a television streaming device and a bag of popcorn; to a customer in the U.K., where the company is testing drone deliveries in part because of the strict U.S. regulations.

The FAA measure, unveiled by top Democrats and Republicans that oversee airline policy, also includes restrictions on airlines bumping passengers from flights after they have boarded. It would also keep air-traffic control within the FAA, putting it at odds with a U.S. House proposal to transfer the operations to a private, nonprofit entity.

Airlines, airports may struggle to hit US security deadlines

Airlines and overseas airports will struggle to meet deadlines for implementing broad new security requirements on flights to the U.S., airline industry groups and consultants say.

Airports have a short timeline to comply with a few of the directives the Department of Homeland Security said, according to a memo from the International Air Transport Association to its members. Some technology and even bomb-sniffing dogs required under the measures aren't readily available in each of the 280 airports affected.

"Getting the right equipment is one thing—whether it's canines or X-ray machines. Training people to support those is another," said Michael O'Neill, chief executive officer of MSA Security, which provides security, training and other services. "Then it's going to come down to costs. None of this stuff is cheap. And who is going to be responsible for that?"

DHS didn't detail whether airlines, airports or governments must pay for the upgrades, he said.

The stepped-up standards are in response to intelligence showing terrorist groups have become more sophisticated in their bomb-making efforts and could hide explosives in laptops or other electronic devices. The measures include enhanced screening of electronic devices, more thorough vetting of passengers, increased use of bomb-sniffing dogs and measures to mitigate the potential threat posed by insider attacks, DHS Secretary John Kelly said.

The new procedures, being put in place to avoid an outright ban of large personal electronic devices in airline passenger cabins, cover an average 2,100 flights a day coming into the U.S. and 325,000 passengers, DHS said. Airports that can't fulfill the new requirements by the deadlines might have to force fliers to give up their electronics, or flights to the U.S. may be banned altogether, Kelly said.

Explosive trace detection equipment required under the new measures isn't readily available on a wide scale, consultants said. Neither are bomb-detecting dogs, said O'Neill, who runs the largest bomb-dog program in North America.

"We believe that the development of the security directive should have been subject to a greater degree of collaboration and coordination to avoid the significant operational disruptions and unnecessarily frustrating consequences for the traveling public that appear likely to happen," Nicolas Calio, president of Airlines for America, said in a statement.

Airlines have had ample opportunity to discuss the measures in multiple meetings with U.S. officials and the vast majority of airports should have no trouble meeting the new requirements, according to Homeland Security.

Security screening needs to be consistent to thwart terrorists who will try other routes if only some airports have stepped-up measures, said Robert Mann, president of aviation consultant R.W. Mann & Co.

Senior sales appointments at Virgin Atlantic Cargo

Virgin Atlantic Cargo has announced two senior appointments to its sales team as it sees soaring volumes, most notably from its home market in the UK.

Ryan Ellis takes up the position of Head of Global Accounts while Ray Wood joins the airline as Regional Sales Manager for the UK.

Ryan joined Virgin Atlantic in 2010 and has previously held the roles of Regional Sales Manager Continental Europe and, most recently, Head of GSA Territory Management. In his new post, based at Virgin Atlantic's VHQ headquarters close to London Gatwick Airport, Ryan succeeds Steve Hughes, who left the airline in April.

Ray, who takes up his new post this month, was previously responsible for Global Key Accounts covering regions in the UK & Ireland and EMEA for IAG Cargo. Earlier in his career, Ray also spent 14 years with Lufthansa Cargo in a number of sales roles, including UK Sales Manager, and gained experience working in the freight forwarding industry.

Steve Buckerfield, Director - Sales at Virgin Atlantic Cargo, said: "In his earlier sales role, Ryan helped to deliver a significant increase in our European business so he brings great experience to the very important post of Head of Global Accounts."

Intermodal & Logistics News

Could Amazon-Whole Foods combination run afoul of antitrust law?

It may seem odd that the acquisition of a grocery chain by an e-commerce giant should raise antitrust issues, but some are suggesting that Amazon has already become a monopoly, although that view is far from unanimous.

The $13.7 billion deal has drawn the attention of one lawmaker, with Rep. Ro Khanna, a Democrat from California, calling on the Justice Department and the Federal Trade Commission to review the antitrust implications of the deal.

Khanna has said the deal would create "downward pressure on wages for employees" and "drive small businesses out." The low prices created by the acquisition, he argued, could prove anti-competitive because smaller competitors could not keep up with the price slashing.

"Amazon's acquisition of Whole Foods raises significant anti-competitive issues that should be deeply concerning to federal antitrust regulators and the public," said Stacy Mitchell, co-director of the Institute for Local Self-Reliance (ILSR), a 42-year-old national nonprofit research and educational organization.

"This deal would allow Amazon to leverage the Whole Foods chain in ways that would expand its monopoly power in online commerce, including by integrating these locations into its rapidly growing logistics and delivery network," Mitchell added. "And it would give Amazon, which already sells more clothing, books, toys, and consumer electronics than any other retailer, a substantial share of an even bigger consumer goods category, groceries. Regulators should block this acquisition."

ILSR's recent report "Amazon's Stranglehold" found that Amazon is monopolizing online retail, capturing half the dollars Americans spent online last year. Amazon's share three years ago was 30 percent.

"Many competing retailers and brands must now rely on Amazon's platform, and submit to its terms, if they want to reach the market," according to the report.

Half of US households now subscribe to Amazon Prime, and, says the report, "belonging to Prime dramatically decreases comparison shopping." Over half of all online shopping searches now starts directly on Amazon. Amazon already sells more books and toys than any retailer, online or bricks and mortar, and, according to the report, is on track to become the leading seller of apparel and consumer electronics this year.

Whether the Trump administration approves the deal—which is necessary for it going forward—will depend on how regulators choose to view it. Is this the combination of a small player in the small US online groceries market with a smallish player in the huge retail grocery market? Or is it a behemoth trying to wreak havoc on yet another area of retail?

Most experts seem to think there is little for antitrust regulators to see here, especially since Trump's nominee for assistant attorney general for antitrust, Makan Delrahim, has a track record suggesting he would not challenge the deal. But might President Trump's personal views play a role?

As a candidate in February 2016, Trump threatened Amazon CEO Jeff Bezos, who also owns the Washington Post. "He wants political influence so that Amazon will benefit from it," Trump said, of Bezos. "And believe me, if I become president, oh, do they have problems."

*(**ACQUIRE** – continued from page 6)*

government officials and local supermarkets have pushed back. Last June, the city's mayor questioned Amazon's impact on local businesses and a local chain went on air with an ad stating "You don't need an app to go shopping."

Cold Chain and Amazon

Amazon's entry to the grocery marketplace has been stymied by a lack of cold chain distribution facilities, notes Philip Evers, an associate professor of logistics, business, and public policy at the University of Maryland's Robert H. Smith School of Business. The Whole Foods deal comes along with 11 distribution centers, plus three seafood-specific facilities and one coffee-distribution warehouse.

"Amazon could always compete on the dry goods side, because distributing dry goods is not terribly different from distributing books," said Evers. "But refrigerated and frozen, that's something that requires significantly different handling."

The network of over 400 retail outlets means quicker and fresher delivery for Amazon's existing grocery delivery service, AmazonFresh, which is offered to the company's Prime members for a monthly fee of $14.99. That service is now available in only 20 U.S. cities, but the addition of the Whole Foods stores to the logistics equation puts Amazon a lot closer to more potential customers.

The stores are, in effect, hundreds of refrigerated warehouses within 10 miles of 80 percent of the U.S. population, according to Michael Pachter, an analyst for Wedbush Securities. "More importantly," he added, "it puts refrigerated distribution within 10 miles of probably 95 percent of Prime members."

Whole Foods operations can benefit as well, from a logistics standpoint, as it has struggled to manage its supply chain and has been reluctant to adopt technology. Amazon, by contrast, has made managing a rapidly-growing logistics system one of its core competencies, with the lease of air cargo and trucking fleets and acquiring licenses to operate as a non-vessel operating common carrier (NVOCC).

In fact, it was Whole Foods' supply chain and distribution challenges— challenges that Amazon is already meeting — that are part of what put the supermarket chain in a position to be acquired in the first place. Jana Partners, an activist investment firm, has been agitating for Whole Foods to change and was calling for an overhaul of the grocer's supply chain and distribution strategy for months.

Brick & Mortar in an E-world

Whole Foods stores now also provide Amazon with an omnichannel presence with its network of 436 brick-and-mortar stores, capable of fulfilling online orders and serving as pick-up spots for any product sold on Amazon. Important to the omnichannel strategy—the latest in retail, in which companies integrate different methods of shopping such as online, physical stores, and over the phone—is the demographic overlap between Amazon Prime and Whole Foods. Research from NPD Group shows 20 percent of Amazon consumers bought at least one item from Whole Foods in the last year. With access to Whole Foods data, Amazon can analyze customer offline behavior in addition to online trends.

"Whole Foods currently records around eight million weekly customer visits and has 30 million customers," notes a report from JP Morgan, "which we believe overlaps significantly with Amazon's projected 60 million domestic households. With Whole Foods, Amazon now has 464 stores in markets that we believe have significant overlap with Prime customers as the broader grocery market transitions online at what we believe is likely to be at an accelerating pace."

There is also a place where concerns over customer demographics and supply-chain management intersect. Amazon CEO Jeff Bezos told Forbes in a recent interview that "there's a subset of customers...that when you're talking about things that go in or on your body, or in or on your children's bodies, they really care about that supply chain." To that end, Amazon offers a premium product line called Elements that comes with a code that customers use to track ingredients, including its place of and date of origin. The acquisition of Whole Foods—the chain that made organic food mainstream—seems like a good philosophical fit.

So why, then, did Amazon acquire Whole Foods? The best answer is probably, all of the above. Amazon seeks to expand its grocery business by adding bricks-and-mortar supermarkets and by expanding its core e-commerce efforts in this category in a synergistic way. The deal provides an opportunity for both Whole Foods and Amazon to reimagine their supply chains, from procurement to fulfillment and to break new ground developing omnichannel retailing strategies for an upscale demographic.

It will be interesting to follow the progress of the two companies' integration. The story will likely provide a useful case study on how companies can transform supply chains and adapt to emerging market trends.