Transport, Handling, Warehousing and Distribution of Forest Products

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DIGITAL TOOLS TRANSFORM THE FOREST PRODUCTS INDUSTRY

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Impact of Covid-19

Port of Rostock, the Baltic Sea traffic junction

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Will Covid 19 accelerate digitalization in shipping?

By SUSANNE HAASE, Editor

When physical contact between members of the crew on board ship and workers at the quayside needs to be kept to a minimum, new routines are required and have to be implemented quickly.

As a result of the Corona outbreak, the majority of ports throughout the world have been forced to re-examine their routines. Greater use of digital tools has been part of the solution in an effort to maintain an efficient workflow. At the same time, it takes slightly longer at the quayside when the new routines are being introduced.

Even though a great deal of the work takes place remotely during an approach, once the vessel is at quayside a whole range of physical interactions is normally required between the crew and the dockworkers. This could involve everything from inspecting the quality of the cargo to going through permits, safety checklists and notices of readiness before loading or discharging.

The Port of Gothenburg in Sweden is just one harbor amongst others where clear indications of how the Corona pandemic could accelerate digitalization in what is an otherwise conservative shipping industry can be observed.

In Gothenburg, the practices around vessel calls have been adjusted to avoid the effects of the virus. In general, widespread reluctance in many countries to allow crews to go ashore is matched by the reluctance among ships' crews to receive visitors on board. On-board access to incoming ships is limited to key individuals such as pilots and service technicans. It is helpful that most things can be dealt with using IT systems and email exchange.

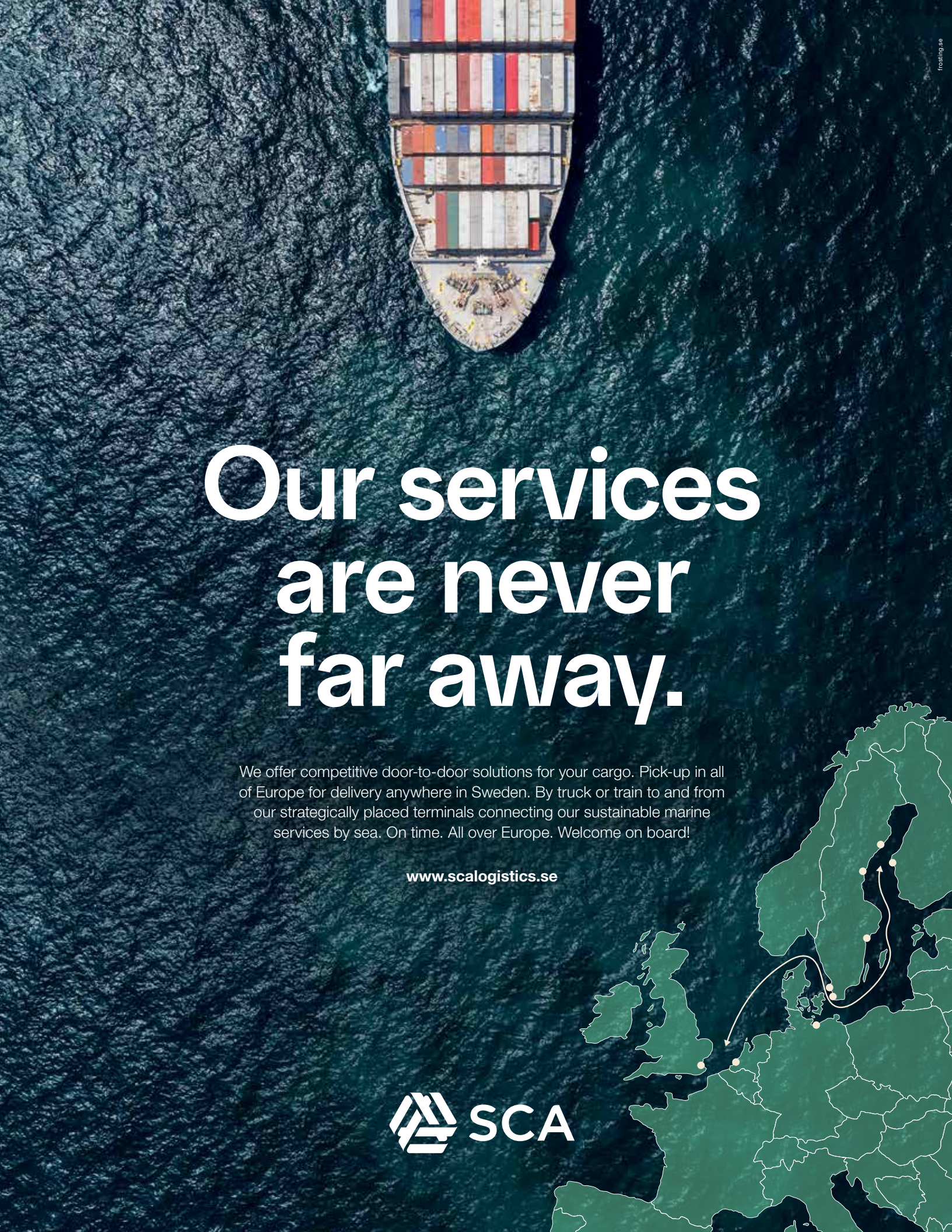
Loading and discharge are traditionally based on human contact. The entire system has been refined over the years. Changing the whole structure so quickly may result in a loss of time and momentum. However, by introducing new routines and new systems, and ensuring more tasks are carried out simultaneously rather than consecutively, the Port of Gothenburg could probably become even more efficient in the long run, said one port represenative in a statement.

That's why increased automation and digitalization are once more a top priority in Gothenburg. The majority of the initiatives that have already been introduced have proved to be particularly constructive during the Corona pandemic. The digital system Permesso, which was introduced in 2019, has resulted in a significant reduction in administration and face-to-face contact when issuing work permits to contractors. The automatic gates for trucks introduced by APM Terminals at the container terminal are another example of a more efficient operating procedure, reducing the need for physical interaction.

Furthermore, Gothenburg Port Authority is currently examining how artificial intelligence can make use of historical data to predict events and speed up the decision-making process. Planning could be improved through data-driven decisions, identifying trends, and predicting events, creating a platform for more efficient freight flows and transport movements on land and at sea.

Malin Collin, Deputy CEO, Gothenburg Port Authority, is responsible for the digitalization process and she said that enhanced digitalization will benefit everyone. Nevertheless, if it is to produce the desired outcome, more people in the transport chain need to link into common systems and share information with each other. Collin's impression was that the level of acceptance is rising, particularly now when faced with the Corona crisis.

But she also pointed out that someone needed to take the initiative, act as a driving force, and offer effective alternatives that more people want to adopt.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A spark that is missing

By ALAN BOG, IFPTA President

We are indeed living through strange times, with much of the world in lockdown. Many of us, including myself, are working from home. For many this is a new experience and demands a different attitude to work. To find a way to separate your work from your home life is not necessarily a given, when work invades the home environment. Some adapt easily, probably more so those of us who travel so regularly that our hotel room often doubles up as our office. Some find it harder, and it must be problematic for those who are trying to reconcile work and home-schooling for their off-spring.

Many of us have got much more adept at the use of video conferencing set-ups. Indeed I have had a number of video conferences with people from all continents all of whom are working from home.

What I have seen, is that while this medium certainly fills a gap, it definitely does not replace eye to eye contact and meetings. I was recently involved in a video meeting with a customer. The exchanges were good and we covered a lot of ground. However it was clear that the spark was missing that would have brought us to a satisfactory conclusion for both of us. That spark was the casual and social side to business that we find when we go for a relaxing beer or dinner after a formal meeting.

COVID-19 has deprived us all of many opportunities to travel and to meet this year. Shanghai Pulp Week was cancelled in March. International Pulp Week in Vancouver in June has also been cancelled, as a result of which we have of course lost the opportunity to hold our popular IFPTA on the Road event. The next event will be held in London in November during London Pulp Week.

During International Pulp Week we normally hold our IFPTA Board meeting. The physical meeting has of course been cancelled, although we are planning to hold this meeting by video link in early June. This is an important meeting as it is now that we start to get the ball rolling for the Transport Symposium in Jacksonville in September 2021. We will publish an update on progress in due course.

I hope you have had an opportunity to visit our web-site. This has been brought up to date by our new association managers Paperage. You will also have received an IFPTA newsletter. It would be great to get some feedback on both of these.

Please stay safe and we look forward to seeing you hopefully in London in November.

"THE MARKET WAS FULLY TAKEN BY SURPRISE"

By SUSANNE HAASE, Editor

IPFTA Journal spoke with Ragnar Johansson, Managing Director, Wallenius Sol about the newly established shipping line, current challenges and future perspectives.

IFPTA Journal: Wallenius Sol was formed a year ago, in April 2019. Which have been the most important milestones within the last 12 months?

Ragnar Johannsson: Actually the most important milestones happened more or less at the same time. We founded the company, signed newbuilding contracts for two mega ships and signed the contract of affreightment with two major players in the forest industry - all in just a few weeks. As you might understand we have prepared all this for quite some time before. But: The funny thing was that the market was fully taken by surprise. We have succeeded to keep our project totally in the dark although we had been working with it for almost two years. The announcement last spring created a lot of publicity and a massive interest from potential clients! So a lot of my time has been spent on visiting potential clients since then.

Which customers do you serve by now?

The main clients that we initially signed contracts of affreightment with were Stora Enso and Metsä Board. Billerud Korsnäs has been a customer to us for a long time and will also follow into the new system. In November last year we signed a contract with Wärtsilä and added the Finnish port of Vasa into rotation. Besides the ones mentioned we have a number of small and medium sized clients.

Which are the routes and ports you ship to and from?

The Northern ports are Kemi, Oulo, Pietasaari, Kaskinen and Vasa in Finland and Husum in Sweden. The Southern ports are Lü-

When the ships are ready in 2021, they will be the world's largest RoRo vessels with ice class 1A Super

Picture: Wallenius Sol

beck/Travemünde in Germany, Zeebrugge and Antwerp in Belgium and Tilbury in the UK. We can and will defintely add more ports as we bring in more customers in to the system.

Which are the most important product segments?

The most important forest products are fine paper, board and pulp. This is and will be the main segment and constitutes about 65 percent of the total cargo volume. Our aim is to broaden our customer base to other industrial segments, were Wärtsilä (a finnish supplier of smart technologies and complete lifecycle solutions for the marine and energy markets, editor's note) is the first representative.

Ragnar Johansson, Managing Director, Wallenius Sol

Picture: Anna-Lena Lundqvist

The first year has been marked by extraordinary events, predominantly the strikes at Finnish paper mills and the spreading of the corona virus. Let's take a look at the strike first. How did you have to cope with that?

Well, we had to lay up vessels for a few weeks as the cargo flow totally stopped. However, things like that happen in shipping so that is something you have to be prepared on. Next time it might be the ports that go on strike.

Then there is the corona virus which has heavily infected the world's economy as well, especially hard in Europe within the last months. What does this mean for your operations?

Actually we have not been much affected so far. Products like board and pulp seems to have a high demand even under the present circumstances. Fine paper seems to be more affected.

Let's come back to the initial idea behind Wallnius Sol: You saw a window of opportunity for this cooperative enterprise. Please explain your strategy and how it fits with the development of the Scandinavian forest industry?

Very much due to the remote locations of the Swedish and Finnish mills it has been hard to attract commercial shipping lines to the mill ports. Therefore, the Swedish and Finnish paper industry has to a large extent been forced to solve their transport needs themselves with chartered tonnage. But they all have the same destination areas for their products, for example Northern Germany, Benelux countries and the London area in UK.

Our idea is that if we as an independent service provider can bundle the volumes together in one system from several customers it will be much more efficient. When our new transport system starts, Stora Enso will get rid of four chartered vessels and Metsä of one. For them it means that they can get a lot of capital off their balance sheets and they will also be able to eliminate all the risks attached to having their own vessels. The transport system we are creating is impossible to create by yourself. It is only possible when several big players realize the benefits and do it together. We are convinced that the Scandinavian forest industry will prosper also in the future. The proof of that are all the investments that have already been decided and planned and the majority of all these investment will be located around the Northern Baltic Sea. Wallenius Sol will provide the infrastructure for that!

From your point of view: What makes your company stand out in comparison with competitors?

Our mission is to create an efficient sustainable infrastructure for the Finnish and Swedish industry in the Northern Baltic. I cannot recall that any competitor has been that focused on the industry. Normally the bread and butter for a short sea RoRo shipping line are consumer products in trailers to highly populated areas. The industrial volumes are more piggy backing on those flows. One other important difference is our sustainability focus. Our newly built ships will be the most environmentally friendly RoRo, in Northern Europe when delivered. We chose Liquefied Natural Gas – LNG – which as fuel gives us outstanding performance. When Liquefied Bio Gas – LBG - is available the vessels can be totally fossil-free. And that is very much appreciated by the forest industry today and surely a prerequisite in the future!

Your company has a lot of know how in designing and building smart, environmentally friendly vessels. To which extend will this create another competitive edge?

The knowledge and competence held by Wallenius Marine is essential when designing and building new vessels. Imagine that those vessels should operate for the next 30 years. There are a lot of decisions during the design phase that have a huge impact on future performance. So being on the technical forefront today will pay off in 20 years' time.

You ordered a couple of new ships to be delivered next year. Is the construction on time and when will be put in operation and on which routes?

Yes, the construction is on time. First one will be delivered in August 2021 and the second one three months later.

Where do you see Wallenius Sol in five years from now?

We have developed our traffic connecting more ports to our traffic system. We like to build business on long term partnerships and I'm sure that we have a few more by then.

You were born and raised on the Swedish West Coast, went to sea at age of 17 and became a captain in 1986. From your point of view: Why is the shipping industry fascinating?

First of all that is the only industry I know and I have never had the urge to change. Shipping is exciting. It is international, it is extremely risky and can be extremely rewarding and requires a lot of courage. There is not one dull grey day in this business.

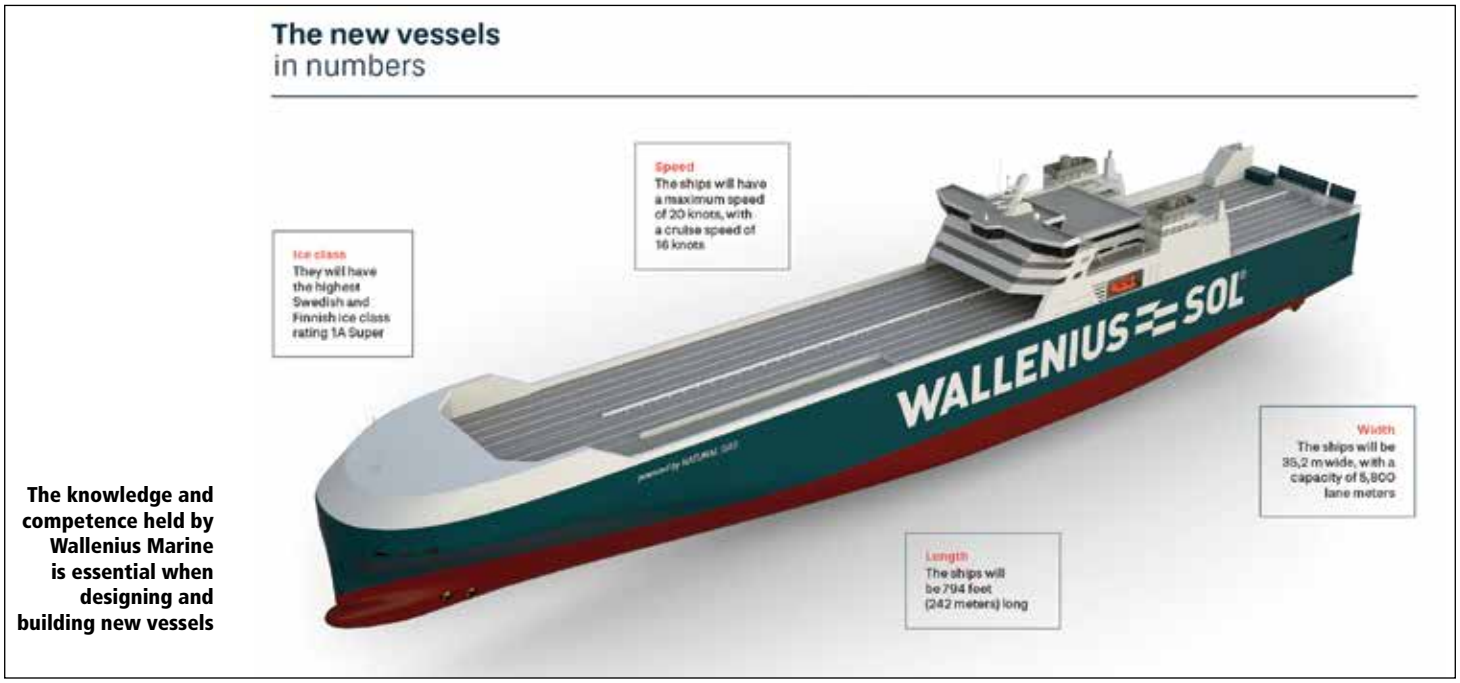
What are the similarities and the differences between the shipping industry and the forest based products industry?

Huge investments and long term thinking: The good thing with that is that we can u nderstand each other's perspective doing business together.

What is your personal relationship with paper and forest based products?

Sweden and Finland are basically built on our forest industries. And I find it quite thrilling that you plant a tree and 80 year later you cut it and transform it into a raw material, the fibre, that you can use for so many applications and in the future so many more - all this while helping mother earth to survive. It is fantastic!

Thank you for the interview!



The knowledge and competence held by Wallenius Marine is essential when designing and building new vessels

Graph: Wallenius Sol

The overseas Port of Rostock celebrated its opening in 1960

All Pictures: Port of Rostock

The trade in forest-based products has more than tripled in five years

"HERE ALL MODES OF TRANSPORT ARE WELL COMBINED!"

By SUSANNE HAASE, Editor

Since its foundation about 800 years ago during the German colonization of the eastern part of the country, the Hanseatic City of Rostock has been a centre of trade and exchange of goods with the regions around the Baltic Sea. The overseas port, however, only celebrated its opening in 1960, and this year celebrates its 60th anniversary. Above all, the forest products that characterize a large part of Baltic Sea traffic play an important role here.

Today, the Port of Rostock is the largest German seaport and traffic junction on the southern Baltic Sea with highly frequented ferry and RoRo connections to Northern Europe. Grain shippers in particular use the existing deep-water berths for the export of their goods, which come from the surrounding area, known as the perfect grain growing location. However, they also benefit from the well-developed rail infrastructure to serve a more distant hinterland.

The universal port's portfolio is rounded off by a very wide range of handling services in the general cargo sector. Special cranes with lifting capacities of up to 1,600 tonnes serve the needs of industrial unloaders in the market segment for large and heavy goods.

TURNOVER OF FOREST BASED PRODUCTS CAME TO 778,000 T

In 2019, a total of 25.7 million tonnes of goods were handled in the overseas port of Rostock, 100,000 tonnes more than in the previous year. The amount of paper loaded was 674,000 tonnes, pulp 47,000 tonnes, plywood 21,000 tonnes, sawn timber 15,000 tonnes. As well, almost 22,000 tonnes of wood chips were handled. In total, the turnover of forest-based products thus came to 778,000 tonnes.

This was a good 51,000 tonnes less than in 2018, but 30,000 tonnes more than in 2017 and even more than half a million tonnes more than in 2014. This means that the handling of forest-based products has more than tripled in five years.

INVESTMENTS AT RECORD LEVELS

In the case of rolling cargo, ferry and RoRo goods, handling also declined slightly after years of steady growth. Thus, the volume decreased by 700,000 tonnes to 16.2 million tonnes (down 4%). The share of rolling freight in the total turnover of the overseas port of Rostock was thus 63%. In total, Rostock was called at 7,744 times last year by ferry and RoRo, tanker, cargo and cruise ships. Of these, 6,181 calls were made by ferry and ro-ro ships. The investment volume also reached a new 10-year high last year at just under 40 million euros (according to the company, several hundred million euros have been invested in improving the port infrastructure over the past 20 years).

Another important factor at the port of Rostock is the handling of goods by rail: about one

fifth of all goods handled come or go by rail. A total of five tracks are served by two curve-capable gantry cranes, each weighing 500 tonnes, 35 metres high and with a span of 76.5 metres. The port site is thus equipped for further volume developments in rolling cargo.

Last year, the handling of intermodal loading units in combined transport (CT) rose to 87,000 units, an impressive 11.5% increase. At present, 30 combined transport trains per week run to and from Italy, the Czech Republic, within Germany and Romania. The high-performance transshipment terminal for rail, road and sea freight was expanded in 2014 by around 30,000 m^2 and now covers an area of around 70,000 m^2.

LONG-TERM GROWTH TREND

Despite slight dents in some segments, the current figures underpin a long-term growth trend: despite the deep cuts brought about by the reunification of Germany and the changes in competition brought about by the market economy (21 million tonnes were handled before the fall of the Wall, compared with 8 million in 1991), the site has managed to reinvent itself and restructure successfully.

Rostock's port industry currently provides about 16,000 direct and indirect jobs at about 150 companies that handle, store, produce or offer services for shipping, transport, handling, storage and goods handling in and around the port of Rostock. About 5,500 people work directly in the seaport.

The owner of land, quays and port area is Rostock Port GmbH which acts under the authority of the federal state of Mecklenburg-Western Pomerania (25.1%) and the Hanseatic City of Rostock (74.9%). As shareholders, they have commissioned Rostock Port GmbH to develop the port. The company is the sole operator of the ferry and cruise ship port as well as shareholder of the operating company of the terminal for combined cargo transport.

EXPANSION AND MODERNIZATION

Two berths are currently being converted in order to be able to handle ships with a length of up to 220 or 250 metres in the ferry and RoRo area. The renewal of the cross quay at port basin

Last year, the amount of paper loaded was 674,000 tonnes

Dr Gernot Tesch, Managing Director, Port of Rostock

Karsten Lentz, Managing Director, Euroports Germany

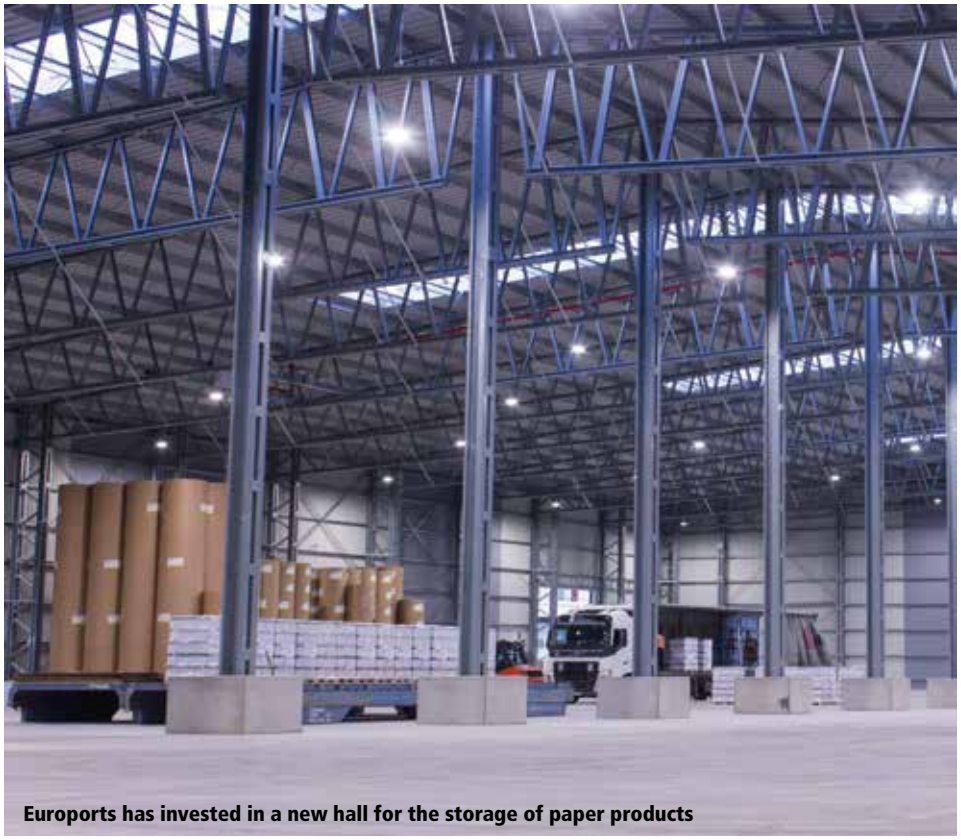
The handling of forest-based products has more than tripled in five years

A will also enable RoRo ships with a length of up to 250 metres to berth and handle in the future.

One of the two managing directors of Rostock Port is Dr. Gernot Tesch. Together with Karsten Lentz, the managing director of the Euroports Germany Group, and his colleagues Dr. Christian Horn, managing director and terminal manager of Euroports Papier- Lager- und Umschlaggesellschaft mbH, and Martin Rotbarth, commercial manager Euroports Germany, the *IFPTA Journal* met Tesch to discuss the development of the location and the trade in forest-based products.

Tesch emphasized, "The port of Rostock has extremely short distances to the open sea and offers a high-quality hinterland connection. Traffic to various hinterlands can be effectively bundled here. A major paper customer, for example, has also recognized this".

Lentz pointed out the high flexibility of the port: "On the one hand, we have not had a strike for 20 years, on the other hand we have a great will to change. If something doesn't fit, we offer another solution and implement it!"



Euroports has invested in a new hall for the storage of paper products

HIGH FLEXIBILITY AS AN ARGUMENT

The Euroports Germany Group is the leading company for port handling, storage, transport and logistics in the Rostock overseas port. Its 330 employees, high-performance cargo handling technology and modern quay facilities enable the handling of almost all types of goods such as grain, fertilizer, paper and coal, but also wind turbines and much more. The company is part of an internationally operating group with 26 terminals in Europe and Asia. In Rostock the specialization in the handling of different types of goods and other services is carried out by nine subsidiaries. Together they handle, among other things, a handling volume of around 11 million tons per year - and the trend is rising.

And investments are also being made here: Euroports Papier- Lager- und Umschlaggesellschaft mbH (PLU, German for the Paper, Storage and Handling Company), for example, has invested around 4 million euros in a new hall, thus creating a further 6,000 m² of covered storage space for paper and forest products. "We have also spent a seven-figure sum on more than 30 new paper stackers," said Lentz, who also referred to the state-of-the-art Terminal Operating System in use. PLU employees, equipped with the latest scanner, stacker and clamp technology as well as terminal tractors, roll trailers and cassette systems, ensure reliable and fast loading and unloading of paper - in bales, rolls or on pallets - and preparation for further transport.

Echoing Tesch, Lentz underlined the possibilities offered by the KLV in Rostock. Although it handles only 6% of the goods currently transported (compared with 27% in wagons and the rest by road), the potential is there. Lentz: "In discussions with customers, the topic of sustainability plays a role. Its importance will continue to grow and we see ourselves in a good position, especially since the the terminal for combined cargo transport is located right next to the paper warehouse".

Tesch explained: "We are the only port on the southern Baltic Sea coast that still offers rail project traffic with Sweden. All modes of transport are well combined here".

LOOKING TO THE FUTURE

In 2019, approval was given for Rostock to deepen the sea channel to 16.5 metres, which laid the foundations for future traffic flows and handling potential, especially in the bulk cargo sector. At a cost of more than 100 million euros, the Federal Government wants to deepen the approximately 15-km port access in Rostock so that ships with a draught of up to 15 metres can safely call at Rostock. The work is to begin in 2021 and is scheduled to take about two and a half years.

With an area of around 750 hectares, Rostock is already one of the largest German Baltic Sea ports. Reserve areas and port expansion options will allow the company to react flexibly to all requirements of the national and international economy in the future.

Dr. Christian Horn put it this way with regard to the business of handling paper and forest-based products: "We have invested a lot and are now ready for additional volumes!"

Autonomously-driven trucks are one aspect of the far reaching studies

CANADA INVESTS MASSIVELY IN DIGITIZATION OF FORESTRY

By SUSANNE HAASE, Editor

Even an industry that appears rather traditional from the outside, such as forest products, is moving with the times and increasingly relies on digital instruments. The Finns and Swedes, who have an online affinity and are experienced in forestry, discovered the topic for themselves early on, but it is also playing an increasingly important role in Canada.

The *IFPTA Journal* spoke about it with Francis Charette, the scientific director at FPInnovations. The national research and development institute for the Canadian forest products industry, with offices in Montreal, Vancouver and Quebec City, employs around 430 people and aims to support the growth of Canada's forest sector and related industries and improve their international competitiveness. Its members include many companies that are important players in Canada's wood, pulp, paper and bioproducts industry.

The current research agenda also includes a program called "Forestry 4.0". It is designed to enable the use of real-time data from the domestic forestry industry and to automate operations to a large extent. "We have strong support for this from the entire industry, our members, but also from the Canadian government," says Charette. Currently, digital tools are used primarily for forest management planning and log distribution.

FPInnovations' current research agenda includes a program called Forestry 4.0

OPTIMIZED WOOD PROCESSING

With a view to the future, the focus is on three pillars: autonomously driven trucks; an automated felling process; and, secure digital data traffic in the forests. The aim is to reduce the costs of wood and fibre extraction, to cushion the ubiquitous shortage of labor and to improve the safety of the operation, as well as its ecological balance sheet.

Charette explains, "The aim is to reliably bring the right wood or wood fibre to the right factory at the right time. This means an optimized wood processing process that is geared to market demand."

In international comparison, he believes his home country is on the right track: "The forestry sector in Canada has invested significant sums in the digitization of forest management, including inventories and action plans. I count us among the leading nations in terms of digitized forestry."

He admits, however, that the collection of real-time data across the entire value chain poses many challenges. "The fact that we have many different ecosystems, that the types of forest areas vary greatly, that many of them are in very remote areas without internet access and that weather conditions can be extreme, also contributes to the fact that the digital toolbox we want to use in the future will have to cover a high degree of complexity," says Charette.

DIGITAL TOOLBOX

The Forestry 4.0 program was launched two years ago. In the meantime, the Canadian forestry industry has developed its own perspective on the use of digital possibilities - and has recognized what areas have gaps that it cannot fill with life itself, such as robots, intelligent transport systems and telecommunications. Charette adds, "That's why we've been looking for partners who can help us, also with regard to Internet of Things, autonomous systems, cloud computing and artificial intelligence, and have started with smaller projects."

He is currently working with his colleagues to build a network of suppliers who can offer new technologies for the Forestry 4.0 program. The main private sector partners are Rigid Robotics, Ambra Solutions, LlamaZOO, IOTatel, ASI, Lim Geomatics, Forsite and Scaffold AI. Some companies already have market-ready products in their portfolio, others are working with FPInnovations on the development and integration of digital innovations.

PLANNED INVESTMENTS OF MORE THAN EURO 272 MILLION

According to estimates, FPInnovation's investment in the Forestry 4.0 program will amount to 27.5 million euros by 2025. At the same time, almost 105 million euros will flow into the Canadian Digital Technology Supercluster in the province of British Columbia alone, with funding from the Ministry of Innovation, Science and Economic Development. In addition, companies such as Canfor and TimberWest have committed to paying a further 140 million euros. Charette cannot name a total figure that combines all investments in the digitalization of forestry in Canada, but he is certain that "this is only the tip of the iceberg".

In principle, it divides companies into two groups with regard to this topic. "The one, which includes some Canadian companies, is very innovative. These companies have developed a long-term vision and have already identified digital technologies as a solution to current problems." But then there is the other group that exists in every industrial sector: "These are the more conservative companies that prefer to wait until a technology is mature before making changes."

IDENTIFICATION OF EACH INDIVIDUAL TREE

Thanks to the first group, although the Forestry 4.0 project is a long-term project, a number of approaches have already been implemented, including the ITC (Individual Tree Crown) Inventory and TimberOps. The ITC Inventory, developed by Forsite Consultants, allows a new perspective on the forest stand. "It is all about identifying every single tree in the forest and

Autonomous vehicles and platooning systems find their way into the forestry industry

Canada sees big investment in digitalization of forest operations

calculating its individual characteristics. This paves the way for the creation of a digital twin of a forest area and thus a whole new way of planning and monitoring forest operations," explains Charette.

TimperOps is a new product development with LlamaZoo, a company that is not a traditional partner of the forest products industry. The visual tool comes from the mining industry and combines the ability to process large amounts of data with a three-dimensional virtual reality platform. Charette says, "The tool makes it possible to create plans for difficult logging conditions, such as steep slopes or tree felling in coastal regions."

GIANT STEP FORWARD

He firmly believes that thanks to Forestry 4.0 and similar programs in other countries, the forest-based industry will "take a giant step forward" in three to five years. Autonomous vehicles and platooning systems, i.e. digitally accompanied transport convoys, would find their way into the forestry industry. Charette adds, "I also think that the tele-operation of harvesters on dangerous areas will become part of everyday life. Machine operators will have a greater amount of information to work with and some of their tasks will be done automatically. Internet connectivity for forests will become affordable. The number of scientists working on automated machines for forest management will triple, and more companies will work with original equipment manufacturers to support the transition to digital forestry," He also sees a great opportunity for start-up companies that could develop high-tech services for the industry.

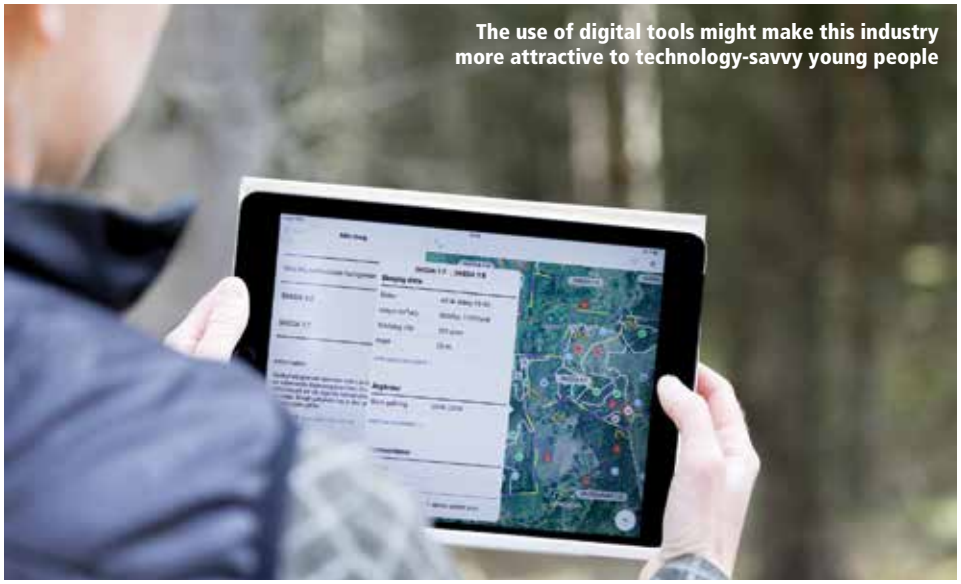
And then there's another aspect that is of no small importance to the future viability of the industry in Canada, but also in other parts of the world. Charette says, "We have almost full employment here at the moment, which has led to a shortage of workers in our sector, especially for some more traditional tasks, such as driving trucks. We know that the younger generation is technology-savvy, and we hope that the use of digital tools will make this industry attractive to young people as well."

Harvesting wood in Canada can be a challenge due to the rough landscape

Picture: Unsplash

Francis Charette, Scientific Director at FPInnovations

Tele-operation of harvesters on dangerous areas will become part of everyday life



The use of digital tools might make this industry more attractive to technology-savvy young people

Pictures: FPInnovations

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"Digitization is the key to securing the sustainability of the forestry sector!"

TIMBETER APP ENABLES PRECISION FORESTRY AND TRADE

By SUSANNE HAASE, Editor

Estonia is rich in forests (they cover 51% of the country's surface) and famous for the inventiveness of its numerous IT specialists: Timbeter combines both aspects that characterize the small Baltic state.

Originally, the technology start-up wanted to contribute to the fight against illegal logging, but thanks to the easy-to-use app, which works with an algorithm based on artificial intelligence, it is also increasingly used to optimize delivery processes for both buyers and sellers of timber. The innovative solution based on mobile devices enables fast, precise and transparent measurement of timber quantities. The process takes only a few minutes per stack. By comparison, manual measurement can take three quarters of an hour.

But the app not only saves time, it also enables more accurate results, which often result in a better price. In addition, all the necessary data (volume, number of logs, diameter, location) are directly and easily available in digital form, which enables users to generate reports and process data quickly and makes the management of the entire supply chain more efficient. The app is also intuitive and well designed: After a short tutorial, most employees can easily work with it on their mobile phone or a tablet.

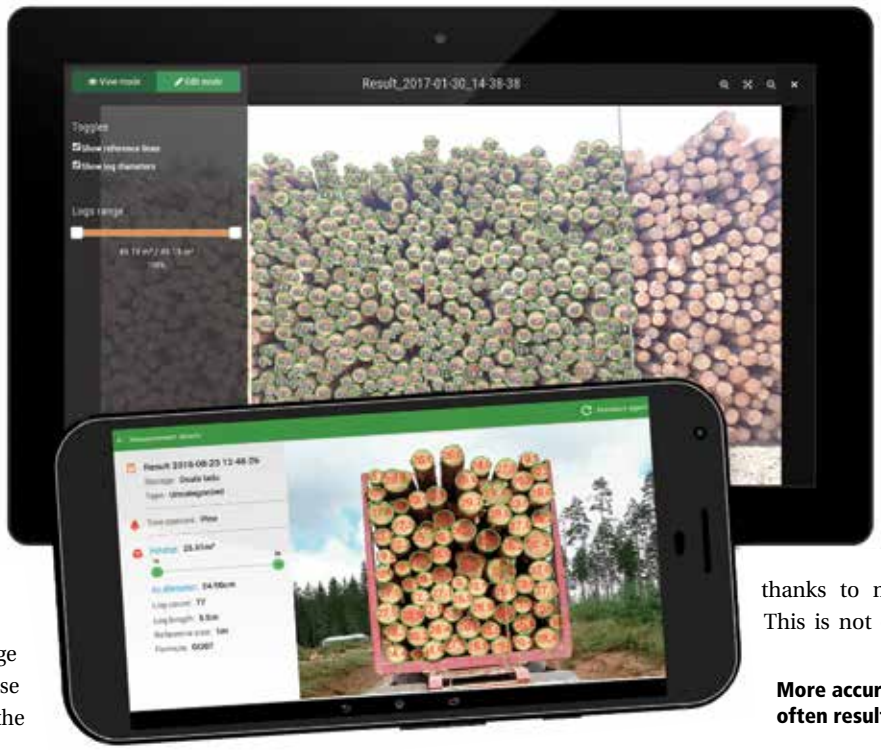
In view of the wide range of possible uses and the ease of use, it is no surprise that the company, which is based in the capital Tallinn, now serves around 300 customers in 61 countries, including giants in the industry such as the Chilean pulp, board and paper manufacturer CMPC, the US company International Paper, the Siam Forestry Group from Thailand, as well as many private owners, sawmills, transport companies, firewood manufacturers and wood processors. The app is available in 11 languages and more than 10,000 users have reportedly registered more than 10 million cubic meters of wood.

INCREASING TRANSPARENCY

"Right from the start, we set ourselves the goal of developing a solution that is affordable and accessible to everyone. The timber trade is usually a diffuse, even shady business. We help to increase transparency and ensure fair trade," explains CEO Anna-Greta Tsahkna.

The story of Timbeter began in 2013, when co-founder Vallo Visnapuu, who runs a sawmill in Estonia, received a call from the organizers of a local technology hackathon - an event where developers meet to jointly write programs dedicated to a specific topic within a given timeframe. Visnapuu was asked to present problems he is facing in his company and to see if they could be solved by using new technologies.

Based on his professional experience, Visnapuu was aware that a precise digital app for measuring wood would be a great relief. His approach: If smartphones can recognize human faces, they would also have to be able to identify and distinguish stacks of wood in a picture. At the event, he met Anna-Greta Tsahkna and Martin Kambla, now the company's technical director, and together they developed a prototype that won the competition.



More accurate results that often result in a better price

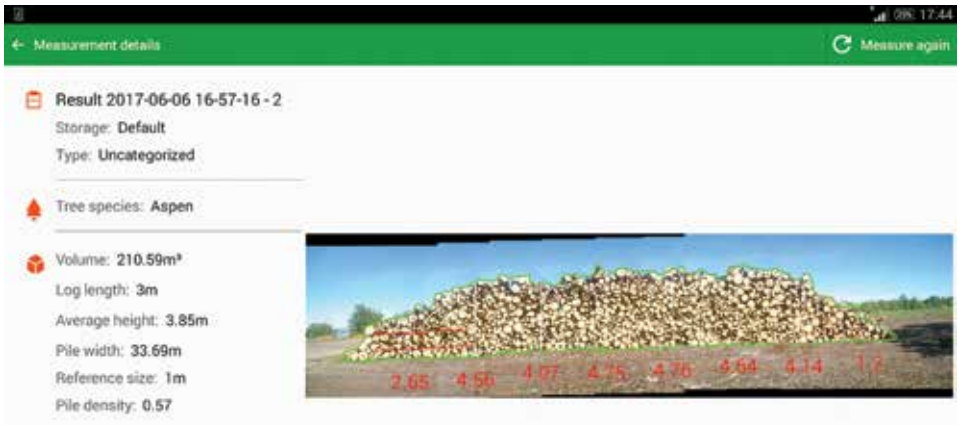
EFFICIENCY AND SAFETY IN FOCUS

The advantages the app offers are obvious. But Tsahkna finds it difficult to answer the question of how improved a margin can be achieved on average thanks to more accurate measurement. This is not due to the app, she explains,

but to the lack of transparency that characterizes the timber trade. "There have been cases in which customers achieved a plus of 200 euros with their first measurement, or had 1.5 cubic meters more wood than before," she says, emphasizing that in addition to an improvement in the economic result, the efficiency of operations and the safety of employees are the main focus. For example, CMPC has reported that in the two years since Timbeter has been in operation, there have been no more fatal accidents during the measuring process because employees can keep a greater distance from the stacked logs.

Also, the amount of paint used for marking, which is often a health and environmental hazard, has been reduced by more than half for many users. Timbeter says that timber exporters have also had positive experiences: "Thanks to the digital availability of the data, authorities in destination countries such as China receive the necessary information in advance, so that approval can be granted without delay."

Prices for using the Timbeter app start at 150 euros per unit and month. This package includes unlimited measurements and the functionality of the cloud storage module, which allows all activities to be tracked and data managed in real time.



All pictures: Timbeter

These two pictures show screenshots of the app

Timbeter CEO Anna-Greta Tsahkna

Accidents are avoided as employees can keep a greater distance from stacked logs

INCLUSION OF INTELLIGENT EQUIPMENT

Tsahkna and her 12 colleagues, whose average age is 28, know that despite the many advantages the app offers, they have a lot of persuading to do. "It's mainly about changing thought patterns; learning how to use the technology is the much smaller part of the adaptation process," she says. It's a sector in which many methods have been used for a hundred years. "Precision forestry is something really new! This sector also loves heavy machinery and paper. In this sense, the inclusion of intelligent equipment in daily processes and procedures is a big change."

In Tsahkna's view, a much greater problem is illegal logging and the fact that governments do not have effective monitoring and control instruments to combat it: "Our aim is to reduce the administrative burden of reporting and monitoring for both sides: companies and governments. Forest statistics are currently far too vague and this causes problems at all levels."

She also attaches great importance to the mitigation of climate change. The cultivation and use of wood is a factor that could have a positive impact, she says. "The wood industry definitely plays an important role in providing renewable raw materials. However, we must ensure that forests are managed sustainably so that every tree felled reaches its maximum value and maximum use."

Thanks to the great success of the Timbeter app, an expansion of the portfolio is already planned. "The majority of future applications will focus on reporting, logistics and sales, as well as reducing administrative expenses," explains Tsahkna. "Of course, the development of artificial intelligence will also continue, with a focus on more exotic species, automatic error detection, creation of 3D models and similar things. We already have features that detect duplicate measurements or help companies control their subcontractors."

The goals for the future are ambitious: If Tsahkna has her way, in a few years her app will be a global standard that everyone uses and trusts. Because: "Digitization is the key to securing the sustainability of the forestry sector!"

Learning to use the app is easy, its inventors say

The young team already serves more than 300 customers in 61 countries, including giants like CMPC and International Paper

Focus on customers' needs and climate smart solutions

DEVELOPING THE PORTS OF THE FUTURE

An IFPTA Special Report

Kvarken Ports is investing SEK 500 million in a new container port in Umeå, where SCA Logistics will be responsible for all stevedoring. There are also plans to construct a new quay for oil and liquid bulk.

Efficient ports that meet the growing demand for container transportation, sustainable handling of project loads and reliable shipping. That is what Kvarken Ports, which is driving development forward in Umeå, Sweden, and Vaasa, Finland, is aiming for.

In order to meet future transportation requirements, Umeå and Vaasa have joined forces to build up a totally new transport concept. The company was set up in January 2015 and has since then developed entirely as planned.

"The target is quality ports with the focus on the customers' needs and climate-smart solutions," says CEO, Kvarken Ports, Matti Esko."Both our ports are of great importance for the region. Umeå has a strong forest industry and Vaasa has a large energy cluster. Both cities are also continuing to just grow and grow," he goes on.

SECURES IMPORTANT FERRY TRAFFIC

Kvarken Ports, jointly owned by City of Vaasa and Umeå Kommunföretag AB, plays a key role in strengthening both the east-west and the north-south transportation routes that meet in the Kvarken region. Well-functioning ferry traffic between Sweden and Finland has been the most important area of collaboration to begin with.

"Developments in that respect have been absolutely fantastic, which is due to both Wasaline doing a very good job and our having improved the port infrastructure in both Umeå and Vaasa. We have also focused on marketing the route to freight customers so that they know that it exists and is reliable, which is important not least for SCA Logistics," Esko continues.

SCA Logistics is responsible for stevedoring and freight forwarding services at Port of Umeå and is a closely collaborating partner in the development work. The ferry service to Vaasa is used to transport products from the containerboard mills in Obbola and Munksund to the service warehouse in Vaasa. Both SCA Logistics and Kvarken Ports and some ten other parties are also participating in the major EU project Midway Alignment, which will result in a new, innovative, highly environmentally profiled ferry in the foreseeable future. "The new ferry will be totally unique and will mark a historic event for the port," says Esko.

Pictures: SCA Logistics

Kvarken Ports CEO Matti Esko

LIFTING CAPABILITIES INCREASED

Efficient handling of containerised freight and project loads are also prioritised areas for Kvarken Ports. Investment in another mobile crane, a Terex Gottwald GHM 6507, that can lift 125 tonnes has greatly increased SCA Logistics' capabilities in Umeå.

The planning of the port's new container dock has also been completed at the end of last year. The work has been done in collaboration between Kvarken Ports and SCA Logistics and the plan includes relocation of the container port to the inner port, new berths and a larger container yard. Sawn timber handling will be moved from its present location in the inner port to what is today the container quay.

"This is definitely the port's biggest investment, amounting as it does to over 500 million kronor, and will be a win/win solution. We are

increasing our container capacity and making handling more efficient, which will ultimately lead to savings in both time and costs for our customers," says Esko.

POSITIVE FORECASTS FOR THE FUTURE

Container traffic has been increasing for many years and the fact that all forecasts point to this continuing is the basis for the extensive investments.

"In 2018 alone our container volumes have increased by 18 per cent compared to last year. So we really need to expand our capacity and we're ready to start building. The idea was that during the first two years we would analyse investment needs, shape a strategy, and plan. Now we've done so and we're now only waiting for a final decision on the investment to emerge from the decision process," Esko says.

Over the year sawn timber volumes has also increased by 20%. Project traffic has also grown, for example through the shipping of prefabricated building modules. Umeå Municipality's planned investment in an entirely new rail terminal next to the port will also enable more environmentally advantageous solutions for project loads and other freight that have traditionally been transported by special trucks," Matti Esko points out. "The future looks very positive," he says.

CONTINUOUS IMPROVEMENT IN THE SCA COLLABORATION

The company's collaboration with SCA Logistics has also affected Kvarken Ports' positive development in other ways. "SCA focuses very strongly on its safety culture and that has meant that we want to do all we can to continuously improve," says Esko.

The two companies also find areas in which to collaborate with the common purpose of showing the possibilities offered by modern marine transportation. Last year they organised a sawmill day which turned out to be an eye-opener for invited guests from the sawmill sector. The port's present and future offerings were highlighted and the participants had the opportunity to see SCA Logistics' container vessel SCA Munksund being loaded.

"We plan to continue with similar events. We can see that the market is growing in the right direction and container transportation is gaining ground over traditional transportation methods. Competition is most certainly stiff but we believe in our port where collaboration gives us the results we all want to see," says Matti Esko.

Cranes at Kvarken Ports Umea

Kvarken Ports Umeå – strategically situated with year-round traffic.

Port of Umeå is one of the largest ports in Scandinavia with an annual freight volume of 2.3 million tonnes. Half of the freight is forestry products like kraftliner and timber products. Other freight consists of oil, animal fodder and project loads, for example wind power pylon components. The port's container volumes are steadily increasing and at present approximately 30,000 TEU are handled annually. The port is strategically situated on the naturally shortest route across the northern Baltic and is an all-year port with good prerequisites for coping with the winter period.

The use of high-capacity carriers has helped reduce energy use and improve safety

SMART CHOICES ENSURE SAFE WOOD TRANSPORT

An IPFTA Journal Special Report

UPM Forest achieves two goals in one with its logistical choices: lower emissions and improved transport efficiency are two sides of the same coin.

Logistics plays a significant role in the forest industry's production chain. First the wood raw material is transported from the forest to the mill. Then, after processing, it is shipped to the customer as pulp, paper, plywood, or sawn timber.

UPM Forest reduces its carbon footprint and emissions by choosing the most appropriate vehicles, routes and warehouses for its transport needs. As a further positive offshoot, this also improves transport efficiency.

"The logistical choices we make in transporting raw materials and products are important not only for commercial reasons but also in terms of environmental responsibility. Transport must always be safe, environmentally sound and profitable," says Esa Korhonen, senior manager, Logistics Services at UPM Forest.

Harvesting, storage and transport to the mills are carried out using a flexible combination of railways, vehicles and water transport. UPM's mills use more than 20 million m^3, which amounts to more than 1,000 daily truckloads of pulpwood and logs used as raw material. Two thirds of the pulpwood and log wood is transported by road vehicles, a quarter by train, and approximately 5% by water.

Special vehicles allow for emission benefits even on shorter distances

Picture: UPM Forest

HCT TRUCKS HELP CUT COSTS AND EMISSIONS

In recent years, UPM Forest has actively piloted High Capacity Transport (HCT) as part of a large project involving various research institutes and transport entrepreneurs. Since 2013, giant trucks longer than 25.25 metres and carrying over 76 tonnes have been tested as part of a new project headed by Traficom (Finnish Transport and Communications Agency).

UMP Forest uses a 100-tonne HCT combination vehicle to transport wood and four slightly lighter combination vehicles to transport chips between Finnish mills. The results of the trial have been promising.

"HCT combination vehicles allow us to reduce fuel consumption per load and improve safety by reducing the number of trucks on the road. Thanks to the location of the mills, our unique transport system and great planning, we have been able to increase the proportion of giant trucks that carry a full load," says Korhonen with a smile.

According to Metsäteho Oy, R&D specialists also involved in the project, the benefits of giant trucks are especially clear in chip transports between terminals. Depending on the size of the combination vehicle, the costs are reduced by 5 to 15% compared with regular trucks. An 84-tonne vehicle can retrieve the load directly from the forest, leading to a cost saving of almost 10% compared with regular combinations. The benefits of HCT include lower emissions and up to 20% lower fuel consumption.

"Emission benefits are gained even on trips shorter than 100 kilometres. With a heavier total weight, the portion of payload increases and fuel consumption per transported cubic metre is reduced. The benefits are increased if the HCT combination vehicles carry a full load both there and back," says Pirjo Venäläinen, senior research scientist at Metsäteho.

LOG FLOATING NEVER DIED

UPM Forest is the only company in Finland that uses floating as a method of transportation alongside railway and vehicle transports. Water routes are efficient, as they are ready for use without requiring additional investment.

"We stand out in a good way. Floating is not only a transport method, but it also doubles as a storage method. Free storage makes it environmentally sound and commercially profitable," Korhonen says.

He calculates that floating uses only a third of the energy used in vehicle transports and half of that used in railway and ship transports. One floating raft is so big that transporting a corresponding amount of wood by road would take hundreds of truckloads.

Even though UPM Forest uses the floating method less often than other wood transport options, its active use promotes the company's competitiveness in logistics. Different transport methods do not compete but offer options for finding the safest, most profitable and least environmentally harmful solution for varying transport needs.

"Little streams make big rivers. Responsible management and rules are necessary, but the right attitude is the most important thing. With the right mindset, we can only succeed," Korhonen believes.

HAVE YOU VISITED IFPTA'S WEBSITE LATELY?

IFPTA is bolstering its efforts to keep members up to date with the latest news and events in virtually every segment of the forest products transportation supply chain. The website is being updated on a daily basis with news about ports and shipping, rail carriers, trucking, breaking technology and regulatory announcements, and other information important to our members. So please take a moment to visit www.ifpta.org and let us know what you think.

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GET INVOLVED

We encourage our members to work with us in building all aspects of the Association as we move forward. If you have news about your company, would like to post a topic of discussion on our LinkedIn page, or have IFPTA follow your company on Twitter, please let us know.

CONTACT

To submit online news or for questions about IFPTA and our online outlets, please contact John O'Brien at: jobrien@ifpta.org.

UPCOMING INDUSTRY EVENTS

Breakbulk Europe
September 29-October 1, 2020
Bremen, Germany

Breakbulk Americas
November 3-5, 2020
Houston, Texas

DREWRY TO TRACK WEEKLY CONTAINERSHIP CANCELLED SAILINGS AND WAITING TIMES

Responding to unprecedented market volatility following the Coronavirus (Covid-19) outbreak, Drewry Supply Chain Advisors, the logistics consultancy arm of Drewry Shipping Consultants, announced the launch of two new container shipping tracking services reporting cancelled sailings and ship waiting times every week.

By combining Automated Identification System (AIS) data, monitoring containership movements several times a day at some 50 major ports, with Drewry's own insights into carrier schedules and shipping capacity, both services deliver a high level of actionable, dynamic and detailed intelligence on what is happening in the current week and what will happen this month in the container market - by major trade route, region or major port.

Updated weekly, the Drewry Cancelled Sailings Tracker provides a 'snap-shop' of cancelled sailings on a particular day. The data is obtained from carriers and is highly dynamic, particularly in the current, unstable Covid-19-impacted market. By monitoring closely and acting on the weekly Cancelled Sailings Tracker metrics, shippers and forwarders will be able to anticipate delays and longer lead times or rollovers on specific major trade routes and for specific weeks, and select sailings based on the latest data on the incidence of cancellations by alliance and by week. Ports and carriers will be able to forecast or plan for expected changes in overall carrier activity and number of sailings.

Also updated weekly, the Drewry Containership Waiting Time Tracker calculates average waiting times that ships wait outside a port before berthing, at 44 major ports, for the previous two weeks. By monitoring the end-of-week Ship Waiting Time Tracker for the just-ended week, shippers, forwarders, carriers and other stakeholders will be able to anticipate potential delays at the port of arrival and to monitor the trend away from or back to normal levels and compared with the previous weeks.

KUEHNE + NAGEL LAUNCHES ENHANCED VERSION OF SEAEXPLORER

Kuehne + Nagel has launched an enhanced version of its SeaExplorer online platform. Especially in the current volatile market environment, transparency is crucial for companies requiring sea freight services. Industry sources predict a high rate of cancelled sailings in various trades in the coming weeks. Schedule reliability is currently at 65%, the lowest level in the past 10 years.

The new SeaExplorer features come just in time to mitigate these disruptions. Accoding to Kuehne + Nagel, in one single digital platform, it is now possible to find the best option for container shipping needs, including transparency on alternative routings and sailings. SeaExplorer customers can improve their shipment planning and inventory management with the help of artificial intelligence and the access to big data.

As a new key feature, the platform also provides detailed visibility of CO_2 emissions per service loop and port to port routing – a core element of the company's Net Zero Carbon programme. "This feature allows our customers to choose the most sustainable transport option", says Otto Schacht, member of the Management Board of Kuehne + Nagel International AG, responsible for sea freight.

QINGDAO ADDED TO THE TRANS-SIBERIAN LANDBRIDGE

FESCO and RZD Logistics, a subsidiary of Russian Railways, have sea-linked the Chinese port with the Russian one in Vladivostok from which containers head to Europe by rail.

The first train set - carrying containers from Qingdao and Busan, including dangerous goods (acids) - left Vladivostok on February 28 and arrived in Brest on the Belarusian-Polish border crossing on March 10. From there FESCO's and RZD Logistics' partner, PCC Intermodal, took over the shipment for splitting it and delivering to customers in Poland, Germany, and Belgium.

"We see great interest on the part of customers in our Trans-Siberian LandBridge service, so we decided to expand the range of goods by adding the very demanded transportation of dangerous goods. Taking into account our competencies, accumulated experience and the availability of our own assets throughout the entire intermodal chain, we can guarantee our customers compliance with delivery deadlines and, most importantly, the safety of transportation to anywhere in Europe," Maxim Sakharov, CEO, FESCO Group, highlighted.

The multi-modal Trans-Siberian LandBridge was initially trialled in May 2019 when containers were shipped from the Japanese port of Yokohama to Wrocław in southwest Poland via Vladivostok. Later on, the South Korean port of Busan was added to the network. The service became regular as of September 2019.

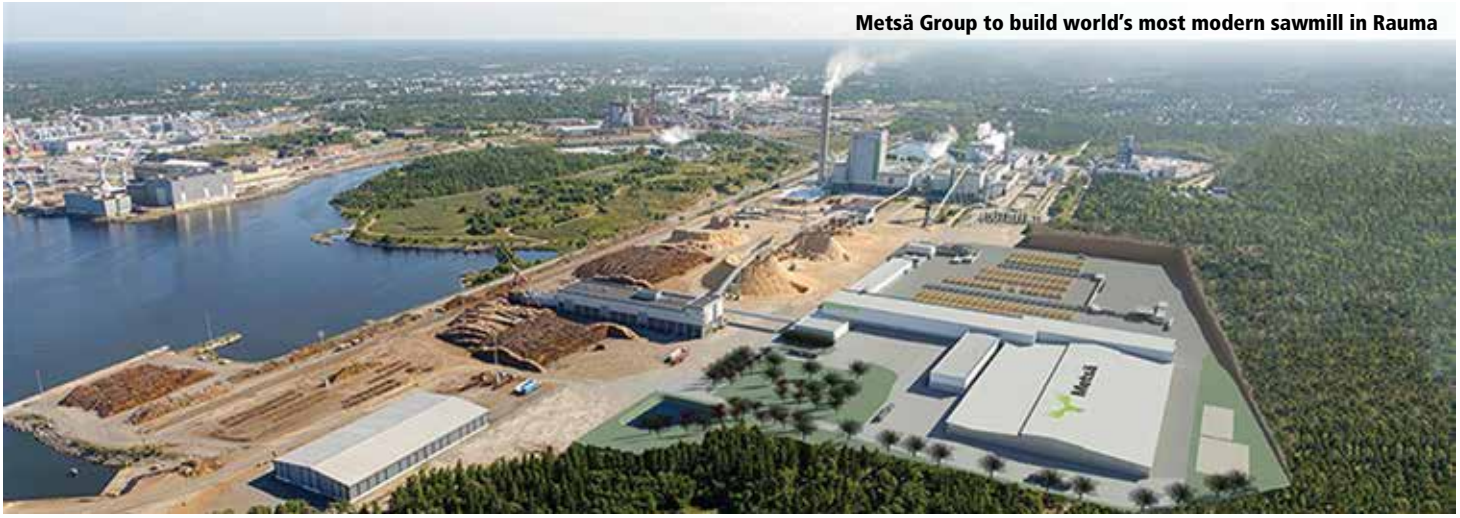
WORLD'S MOST MODERN SAWMILL TO BE BUILT IN RAUMA, FINLAND

Metsä Fibre, part of Metsä Group, has made the decision to build the world's most modern sawmill in Rauma.

The value of the investment is approximately EUR 200 million. Construction will begin in the spring of 2020. Production at the sawmill is set to begin during the third quarter of 2022. The coronavirus outbreak may have an impact on the schedules.

The new unit will produce around 750,000 m^3 of pine sawn timber a year. The new sawmill will be a worldwide forerunner in technology and efficiency. For example, using machine vision and artificial intelligence in different stages of the sawing process is a significant new development. Similar technology is not yet in use anywhere in the sawmill industry.

The new sawmill will employ around 100 people directly and around 500 people across its direct value chain in Finland. The saw-



Metsä Group to build world's most modern sawmill in Rauma

Picture: Metsä Group

mill's employment impact during the construction phase is estimated to be roughly 1,500 person-years. The annual use of logs sourced in Finland is estimated to be around 1.5 million m^3. Sawn timber produced by the Rauma sawmill will be sold mainly to Europe and Asia.

The location of the new sawmill is logistically excellent as it enables efficient integration into the pulp mill and smooth sawn timber logistics for customers through the Port of Rauma. The synergies between the integrated mill and the pulp mill will be used in power generation, side-stream utilization, logistics and services. The environmental impact of the sawmill will be minimized, and noise management, for example, has been taken into consideration starting from the design phase, both in construction and in the selection of equipment and machinery.

DECISION ON THE KEMI BIOPRODUCT MILL EXPECTED IN AUTUMN 2020

Metsä Group started the pre-engineering of investments totalling approximately EUR 2 billion in the spring of 2019.

With the planned investments, Metsä Group would meet the needs of forest owners and its customers even better than before across the entire forest industry value chain. As planned, the Rauma sawmill investment (see previous story) was the first of the program's projects to reach the decision-making stage.

Ilkka Hämälä, president and CEO of Metsä Group says: "The pre-engineering of Kemi bioproduct mill has progressed well and we expect to reach the decision-making stage in the autumn of 2020, as the environmental permit process is finalised. In this challenging situation faced by the society, what Finland needs now is investments and faith in the future."

The Kemi bioproduct mill would produce some 1.5 million tonnes/yr of softwood and hardwood pulp as well as numerous other bioproducts. It would employ around 250 people directly in Finland and a total of approximately 2,500 people across its direct value chain. The mill's annual use of pulpwood, purchased mainly from Finland, would amount to roughly 7.6 million m^3.

During the construction phase, the Kemi bioproduct mill's employment impact is estimated to be nearly 10,000 person-years, of which more than half would be carried out in Kemi. In the construction phase, the amount of employees is estimated to be a total of around 15,000.The starting point for the planning of the new bioproduct mill has been a high level of environmental, energy and materials efficiency. The mill would not use any fossil fuels at all, and its electricity self-sufficiency rate would be 250%. This would strengthen the already significant position of Metsä Group as an electricity producer based on Finnish renewable fuels.

SAPPI TO TEMPORARILY IDLE LANAKEN PM 7

Sappi will temporarily halt one of the two paper machines at its graphic paper mill in Lanaken, Belgium. The move is ascribed to weakening demand.

"Sappi will temporarily stop production on PM 7 in reaction to the current lower demand for graphic papers caused by the effects of Covid-19," a spokesperson for the group told Fastmarkets RISI. She added that Sappi will assess the production on an ongoing basis in relation to demand fluctuations and that the temporary stop of PM 7 has not yet started. "Currently our 10 production facilities remain open and operational during this turbulent time, which Sappi is extremely proud of. Our core attention has been given to the health and safety of our people and communities around our sites," the spokesperson added.

According to Fastmarkets RISI's Asset Database, the Lanaken PM 7 can produce some 220,000 tonnes/yr of coated woodfree paper.

AN ANALYSIS OF RECENT MARKET MOVES: BY THE RISI ECONOMISTS

COVID-19

The COVID-19 pandemic is driving the global economy toward a significant slowdown as nations throughout the world fight the outbreak. The impact will be particularly significant in Europe and the US, where consumer demand has been the key driver for economic growth in recent years. With consumption down and business interactions significantly limited due to restrictions, curtailments and quarantine, major economic growth contributors are missing. The service sector is likely to be one of the most vulnerable, and its potential problems could cause the rebound in growth to be somewhat slower than expected.

The direct impact on the forest products industry has been relatively muted so far, but the tide is turning rapidly. In this article, the economic analysis teams at Fastmarkets RISI share their latest thoughts on how the global pandemic is impacting some of the major segments in the forest products industry and what this could mean for the future.

PULP

The pulp market could be weaker for longer as a result of the pandemic. The pulp industry has been dealing with supply chain disruptions beginning with inbound logistics in China that have reverberated outward, creating bottlenecks throughout the supply chain and limiting the availability of containers for ocean freight and driving up shipping costs. After a year of weak demand emanating from the acceleration of the decline in graphic papers in Europe and the US and bloated producer inventory levels, substantial supply-side curtailments and consumer restocking had enabled producers to work excess inventories back to balanced levels and tightened the market considerably by early 2020. Supply disruptions were piling up in early 2020 and were on pace to equal nearly 2 million tonnes for the year. However, the astonishingly rapid spread of COVID-19 and subsequent policy responses could more than offset these supply-side disruptions and consumer restocking in late 2019/early 2020 could allow buyers to delay orders further. The increase in reported producer inventories in January could be just the beginning of an extended move upward, and inventories at the ports in China have already jumped higher and are approaching the record levels reached last year.

Lackluster demand in China, which accounted for 36% or 24 million tonnes of global market pulp demand in 2018, as the economy deals with the aftermath of the virus outbreak, supply chain bottlenecks slowing the delivery of both final products to consumers and pulp from the ports, and the ominous economic conditions in the US and Europe that could result in a rapid decline in demand in those regions could keep markets weaker for longer and delay any meaningful recovery in the pulp market until the second half of the year. While prices have already fallen below the high-end of the industry cost curve, slack demand and supply chain bottlenecks coupled with limited market-related downtime could push prices even lower.

RECOVERED PAPER

The supply side of global recovered paper markets has been and will continue to be impacted significantly by the COVID-19 pandemic. Chinese domestic RCP collection was interrupted substantially in February as most regions in China were locked down to stop the spread of COVID-19. Chinese government ended the dramatic lockdowns region by region as the epidemic slowed down in March, and Chinese domestic supply has recovered gradually since then.

However, as the virus spread wider from Asia to Europe and North America, the collection disruption was reportedly observed in the areas hit hard by the outbreak, such as Japan, South Korea and Italy. Depending on how long the pandemic will last, RCP collection is expected to be disrupted somewhat in most regions over the next couple of weeks or months.

Recovered paper demand held relatively steady in early 2020 together with the paper packaging segment. The strengthening US domestic demand and the uptick in Chinese imports caused mainly by the shortfall in Chinese domestic supply had combined to push prices up significantly in North America and Asia, while prices in Europe appeared relatively stable. However, a demand slowdown would be inevitable and the recent price rebound posted in Asia and North America would end if global economy heads into a recession.

Global RCP markets had been struggling with sharp declines in Chinese imports, increasing restrictions on imports from other Asian countries and weak domestic demand in Europe and North America in the past two years, and RCP prices had stayed at very low prices in most of 2019. The outbreak of COVID-19 will add more uncertainties to RCP market and make a fundamental recovery in global market more challenging.

ASIAN PAPER AND PAPERBOARD

The view is far from rosy in Asia. While COVID-19 seems to be coming under control in China with the number of new cases declining each day—and reaching the important milestone of no new internal cases on March 19—the advance of the outbreak across the rest of the world is putting pause to any optimism. Generally, reports suggest China is getting back to work across much of the coun-

try, with logistics and operations moving toward normal, but the industrial segment has a big hole to climb out. The pace of the recovery at this point is unclear, with variable reporting and new shocks daily, but the industrial segment seems likely to remain underutilized in the near term. Consumer confidence has no doubt been damaged, and spending expectations have been hit by concerns over jobs and salaries. The Chinese government is implementing measures to support the economy, but its efforts will now need to address the evolving impact on export industries in addition to bolstering domestic demand.

Under these circumstances, market conditions in Chinese paper and board markets have been very fluid, changing weekly. On the packaging side, containerboard markets are likely to remain dampened—tailwinds from rising e-commerce deliveries notwithstanding—due to weak consumer sentiment and headwinds in markets for merchandise exports. Fiber availability adds uncertainty to the supply side of the equation. Weak consumer sentiment will also hurt boxboard demand due to its strong dependence on packaging of consumer goods. This gloomy outlook for China extends to graphic paper and packaging in other Asian markets.

PAPER PACKAGING

The two forest product segments where the initial impact from the COVID-19 pandemic is somewhat more nuanced and runs counter to the negative demand themes elsewhere are packaging paper and board and tissue. Both markets are dealing with the differences in demand from at-home and away-from-home (AfH) consumption. The immediate impact of the US response to the COVID pandemic has been a shock to the supply chain. Panic buying led to a run on items sitting in many retail stores, and images abound of store shelves empty of merchandise.

Many state and local governments have begun to implement bans on large scale gatherings to restrain the growth of the virus to something that will not overwhelm the health system. Closures of sit-down restaurants are expected to have the most significant impact on packaging demand, since a considerable amount of packaging is used in the transport of goods to away-from-home food establishments. However, people still need to eat, and any losses in the away-from-home segment will be offset by increased spending on food consumed at home.

We anticipate that overall consumer spending on foods, and consequently industrial production of processed foods, will contract modestly during the middle of the year. One reason is that meals at sit-down restaurants tend to be higher value than foods consumed at home. Another is that the sharp reductions that are occurring throughout the service sector of the economy are going to lead to reductions in personal income, which traditionally lead to reductions in spending.

One last item to watch on the packaging front will be whether the empty store shelves and potential for long periods of work-at-home lead to an acceleration of the penetration of e-commerce into traditional retail outlets. Food in particular has substantial room for growth, and companies that are ready to ship out more restaurant-quality foods to households could see a boom as people seek some alternative to the food they normally splurge on at restaurants.

TISSUE

When the virus started to spread so did the panic buying and hoarding of tissue. Retailers in North America and Europe found it necessary to limit the amount of tissue purchased per customer to keep the shelves in their tissue aisles stocked. In Germany, three trucks that belong to a famous tissue supplier with one of the country's oldest brands were hijacked by people desperate for toilet paper. This was not bad news for tissue producers, who suddenly needed to utilize all their reserve capacity to respond to the burst in demand. Consumer tissue mills in North American and Europe have been running at their capacity limits for the past couple of weeks.

Consequences for the tissue industry differ by segment. The tissue market may have recorded one or two record sales months, but will the trend continue? This is shaping up to be a banner year for consumer tissue producers, but most likely home storage levels will be reduced again. In contrast, the AfH tissue business will suffer drastically this year. Very little travelling, vacant hotels, restrictions on dining out, closed schools and people working from home instead of offices are all factors that will depress demand in the AfH tissue segment in 2020, especially during the first half of the year. The only potential bright stop for the AfH segment is increased consumption by the medical care industry, but this is a rather small AfH application. In summary, we expect disparate trends for consumer and AfH tissue. Consumer tissue is likely to experience a slower second half, offsetting the peak demand during the first half, while the AfH business could see a rebound in the last half of the year.

A FINAL THOUGHT

We are not and do not pretend to be epidemiologists and have tried to momentarily put aside the very real and serious health risks the pandemic presents to focus on our area of expertise, the economics of the forest products industry. The situation is extraordinarily fluid, with major news breaking daily. We recognize that planning in this type of environment is challenging to say the least, as is forecasting. The goal posts continue to move, and the economic impact of the global pandemic becomes more dire daily. The economic disruptions emanating from the social upheaval the pandemic has placed on the world will be severe and will ripple through all industries. However, the ultimate impact on each individual forest products segment is not uniformly negative, with tissue and packaging markets receiving a tailwind, at least for the time being, from increased tissue usage and expanding demand for home delivery services.

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