

## Small ports vs big issues

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# The Port of Opportunities

The Port of HaminaKotka is a versatile Finnish seaport serving trade and industry. The location of HaminaKotka at the logistics hub makes the port truly unique – it opens up connections to all parts of the world.

Welcome to the port of HaminaKotka!

**[haminakotka.com](http://haminakotka.com)**





## red-hot port matters

Photo: Danya Gutan/Pexels

### Smyril Line ro-ro-connects Norway and the Netherlands

The Faroese shipping line has launched a new service that links **C.R.O's Brittaniehaven** in the **Port of Rotterdam** with the Norwegian ports in **Stavanger, Trondheim, Rørvik, and Hitra**. The connection was initially served with the use of *Akranes* (1,511 lane metres of cargo capacity), replaced with *Mykines* (1,474 lm) as of 12 August.

### Isle of Man Steam Packet Company to have a new ferry

The shipping line has signed a contract with the South Korean **Hyundai Mipo Dockyard** for the delivery of the new vessel, works on which are to commence in mid-2021. Once operational in spring 2023, the newbuild will replace *Ben-my-Chree* across the **Douglas-Isle of Man** service. The older ferry will henceforth serve as a backup. "The final specification and build programme are still in development, but it is expected the new vessel will be slightly larger than the [125.2 m-long and 23.4 m-wide] *Ben-my-Chree* in most respects but with considerably more passenger space. It is also intended to be more environmentally efficient and manoeuvrable in poor conditions," **Mark Woodward**, Chief Executive, **Isle of Man Steam Packet Company**, said.

### Davies Turner fine-tunes its Express China service

The UK freight & logistics company has tweaked its combined rail-truck-sea weekly service from **Hefei** to enable direct on-carriage to other destinations than its hub in **Dartford** throughout England. The service has been going by rail from Hefei to **Neuss** in Germany and then by truck under bond to the **Port of Rotterdam** for boarding a ferry heading to **Purfleet** for on-carriage to **Davies Turner's** hub in Dartford. "Since the direct service recommenced in March, we have seen three to four 40ft High Cube containers arriving every week direct into our Dartford freight hub," **Tony Cole**, Head of Supply Chain Services, Davies Turner, said. He further explained, "However, following the review, we have identified many of the shipments are for distribution to other parts of the UK, so we are now working with our partners in China to refine the consolidation process at Hefei, and to ensure that shipments destined for the South West, Midlands or North West are consolidated in the same container." He concluded by saying, "Having reviewed the pattern of shipments we are carrying, we have decided to offer a direct service to our regional freight hubs in Birmingham, Bristol and Manchester, in addition to the existing direct service to Dartford." Upon arrival, the shipments' contents will be discharged, customs cleared and delivered.

### APM-T takes over ALC

As of 1 September 2020, container operations of **Aarhus Logistics Center (ALC)**, including port areas, form part of **APM Terminals'** business in the **Port of Aarhus**. To date, ALC has been handling containers across the berths nos. 404, 406, and 408 (out of 13 in total). "The terminal was established by ALC in the spring of 2017, after which ALC has managed to develop a strong activity level. However, due to limitations regarding area capacity and lack of prospects of further developing the business, ALC consequently decided to divest the terminal to the much larger operation at APM Terminals in Aarhus," APM Terminals wrote in a press release. To this **Dennis Olesen**, Managing Director Nordics, APM Terminals, added, "We are acquiring an interesting business with loyal clients, who will now gain access to a bigger network and with that, new development opportunities for their business. At the same time, we expect to be able to make the clients' workday more efficient as administration decreases with just one operator."

### Russia's first LNG ro-ro

The Turkish **Kuzey Star Shipyard** has floated out *Marshal Rokossovsky*, a dual-fuel ro-ro ship built in cooperation with **Nevsky Shipyard** on behalf of **Rosmorport**. The 11,057 dwt-big Arc4 ice-class vessel, 199.9 m-long and 27.4 m-wide, is scheduled for delivery in spring 2021. Once operational, it'll replace *Ambal* and *Baltiysk* across the **Ust-Luga-Baltiysk** service. *Marshal Rokossovsky* will be able to take up to 170 railcars, 58 trucks, and 40 trailers on-board. Thanks to 30 plugs, it'll also be possible to transport reefers. The ship was designed by **Marine Engineering Bureau** (Project CNF19M). Keel laying for *General Chernyakhovsky*, a sister ship, took place in April 2019.



## DFDS sets to become climate neutral by 2050

The Danish shipping & logistics company has revealed plans to gradually decrease its carbon off- and onshore footprint. **DFDS** expects to achieve a 25-35% emission reduction between 2019 and 2030 (the company emitted around 2.0mt CO<sub>2</sub> last year, out of which 90% came from ferry operations). A 45% reduction is to happen by 2030 (vs 2008 baseline), with full climate neutrality two decades later. Over the course of the next ten years, DFDS will set in motion technical initiatives to axe its ferry greenhouse gas emissions, including bulb and propeller modifications, hull anti-fouling, and decision support systems for fuel performance. Next, the company will replace fossil fuel-based bunker with that sourced in a renewable way, to be used by both newbuildings and older ships after retrofitting. Projects and partnerships are already initiated towards that goal, among them, participating in the construction of a hydrogen factory. Meanwhile, DFDS will also reduce its land emission – own as well as third-party haulier trucks, plus port equipment. The company aims to make greater use of electric trucks and cars and decrease its buildings' energy intensity. "I am very happy that we now have an ambitious and comprehensive climate action plan in place. It clearly states how we can and will take responsibility for the environment. The plan will also help us stay relevant as a provider of ferry and logistics services for both freight customers and passengers in the coming decades," **Torben Carlsen**, CEO, DFDS, commented.

## An additional ro-ro on Stena Line's Belfast routes

The company has chartered **Seatruck Ferry's Panorama** which started operating across the **Belfast-Liverpool** and **Belfast-Heysham** services as of 2 September. The 142 m-long and 23 m-wide vessel offers 1,830 lane metres of cargo capacity. She added ten weekly sailings to **Stena Line's** traffic between Northern Ireland and England (up to 56 crossings to/from Belfast), increasing the trade lane's freight capacity by 28%. "Adding the seventh ship to our Belfast operations will help us increase frequency, capacity and give us greater operational flexibility. This extra ship will be capable of operating to Liverpool and Heysham thus ensuring that we can better match demand and the needs of customers," **Paul Grant**, Stena Line Trade Director (Irish Sea), said. He added, "It has been a very challenging time for the freight industry, but we are confident that having additional capacity available on these important trading routes between England and Northern Ireland will help us provide an enhanced sailing schedule for our customers." The company also underlined in a press release, "During the summer months, Stena Line has seen an increase in freight demand and anticipates that extra capacity is required for the traditionally busy Autumn period as well as the expected increase in pre-Brexit trade activity."

## Hapag-Lloyd tech-partners with Intelligent Cargo Systems

The Hamburg-headquartered shipping line will use the **CargoMate** platform developed by the London-based maritime technology company. Specifically, the solution is to provide real-time port call visibility and automated notifications of important port events, such as estimated time of completion, all in order to dynamically manage coastal schedules. "Hapag-Lloyd will use CargoMate software to enable the crew to monitor operations more efficiently and safely while capturing new data to further improve their route and vessel performance," **Intelligent Cargo Systems** wrote in a press release. To this **Jörn Springer**, Senior Director, Fleet Support Center, **Hapag-Lloyd**, added, "By having a real-time view of every port call on the CargoMate platform, we're able to observe port calls in greater detail without requesting progress updates from the terminal or local agent." He also underlined, "It has uncovered new cost-savings, and will continue our drive to improve performance and visibility for our customers."



Photo: Intelligent Cargo Systems





Photo: rawpixe

## PORTS OF GENOA:

28.90mt handled in H1 2020 (-17% yoy)

Container traffic served by the Port System Authority of Western Ligurian Sea (Genoa, Savona, Prà, and Vado Ligure) also noted a drop over the reported period – down by 10.5% year-on-year to a total of 1,213,189 TEUs.

### The Ports of Genoa's volumes

	H1 2020	Yoy
<b>By cargo group</b>		
Containerized freight	11.83mt	-8.3%
Oil & oil products	8.44mt	-18.2%
Other general cargo	6.00mt	-20.4%
Dry bulk	1.01mt	-47.7%
Steel products	694.5kt	-42.8%
Bunker & supplies	540.6kt	+9.2%
Other liquid bulk	380.1kt	-10.1%
<b>Total</b>	<b>28.90mt</b>	<b>-17.0%</b>
<b>By harbour</b>		
Genoa	15.62mt	-19.8%
Prà	6.68mt	-14.7%
Offshore Vado Ligure	3.08mt	+2.5%
Savona	2.54mt	-22.4%
Vado Ligure	980.5kt	-22.1%
<b>Passenger traffic</b>		
Ferry	238,765	-65.5%
Cruise	167,409	-80.6%
<b>Total</b>	<b>406,174</b>	<b>-73.9%</b>

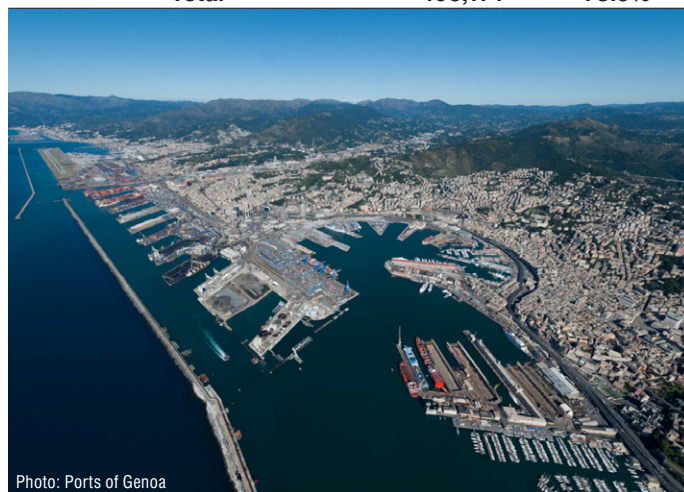


Photo: Ports of Genoa

## THE PORT OF GDAŃSK:

23.16mt handled in H1 2020 (-15.2% yoy)

The turnover of liquid bulk noted the sharpest decline of 33.4% year-on-year to a total of 6.72mt, whereas grains – the biggest increase of 189% yoy to 609.2kt.

### The Port of Gdańsk's volumes

	H1 2020	Yoy
General cargo, out of which	10,988.4kt	-5.2%
Containerized	9,971.1kt	-4.1%
Liquid bulk	6,723.7kt	-33.4%
Coal	2,656.9kt	-23.7%
Other dry bulk	2,184.9kt	+13.0%
Grains	609.2kt	+189%
<b>Total</b>	<b>23,163.2kt</b>	<b>-15.2%</b>
<b>Container traffic</b>		
TEUs	950,413	-6.5%
<b>Passenger traffic</b>		
Ferry	56,057	-27.1%

## SPANISH PORTS:

253.33mt handled in H1 2020 (-11% yoy)

The turnover of dry bulk noted the sharpest decline among the main cargo groups over this year's first half, down by 18.8% year-on-year to a total of 36.92mt.

### Spanish ports' volumes

	H1 2020	Yoy
Containerized	91,251.3kt	-7.9%
Liquid bulk	86,371.8kt	-7.3%
Dry bulk	36,915.9kt	-18.8%
Wheeled (ro-ro)	27,567.5kt	-17.3%
Break-bulk	6,071.1kt	-13.2%
Other (fish, bunker, supplies)	5,156.1kt	-20.8%
<b>Total</b>	<b>253,333.7kt</b>	<b>-11.0%</b>
<b>Unitized freight traffic</b>		
TEUs	7,916,166	-10.0%
Ro-ro cargo units	675,447	-16.0%
<b>Passenger traffic</b>		
Ferry	4,773,704	-54.9%
Cruise	1,295,173	-72.5%
<b>Total</b>	<b>6,068,877</b>	<b>-60.3%</b>

## UK PORTS:

112.94mt handled in Q1 2020 (-5.6%)

The country's Top 10, handling nearly 71% of all freight passing British ports, noted a drop of 4.4% year-on-year to a total of 79.78mt, with London overtaking Grimsby and Immingham at the prime spot.

### UK ports' volumes (million tonnes)

Port	Q1 2020	Yoy
London	12.72	-2.4%
Grimsby and Immingham	11.37	-21.2%
Milford Haven	9.94	+23.6%
Southampton	8.19	+0.5%
Liverpool	8.10	-6.3%
Tees and Hartlepool	7.68	+6.5%
Forth	6.36	-4.6%
Dover	5.45	-17.9%
Felixstowe	5.21	-11.3%
Belfast	4.77	-0.8%
<b>Top 10</b>	<b>79.78</b>	<b>-4.4%</b>
Medway	3.33	-12.7%
Rivers Hull and Humber	2.60	+7.4%
Clyde	2.28	-4.1%
Hull	2.19	-12.4%
Bristol	1.92	-10.3%
Sullom Voe	1.86	-0.1%
Manchester	1.74	-0.4%
Port Talbot	1.45	+13.2%
Holyhead	1.38	+5.6%
Harwich	1.06	-11.2%
Heysham	1.05	-6.3%
Glensanda	1.02	-32.5%
Tyne	0.92	-14.7%
Portsmouth	0.89	-8.6%
Aberdeen	0.88	-9.7%

Port	Q1 2020	Yoy
Warrenpoint	0.74	-15.3%
Larne	0.72	+0.2%
Cairnryan	0.70	+0.1%
Orkney	0.66	-11.3%
Loch Ryan	0.62	+0.7%
Ipswich	0.58	-1.9%
Newport	0.55	-16.6%
Plymouth	0.54	-8.0%
Londonderry	0.48	-3.5%
Shoreham	0.42	-9.9%
Cardiff	0.39	-12.7%
Goole	0.26	-25.7%
Peterhead	0.25	-14.7%
Great Yarmouth	0.23	-20.8%
River Trent	0.21	-25.2%
Boston	0.20	+1.2%
Newhaven	0.18	-22.4%
Sunderland	0.17	-15.7%
Poole	0.16	-17.9%
Kilroot Power Station Jetty	0.13	+/-0.0%
Swansea	0.10	-18.3%
Dundee	0.10	-24.6%
<b>Fishguard</b>	<b>0.10</b>	<b>-30.7%</b>
<b>Fowey</b>	<b>0.07</b>	<b>-42.6%</b>
<b>Cromarty Firth</b>	<b>0.04</b>	<b>-83.6%</b>
<b>Total</b>	<b>112.94</b>	<b>-5.6%</b>

## THE PORT OF AMSTERDAM:

39.8mt handled in H1 2020 (-12% yoy)

Apart from Zaanstad (+15.3% year-on-year to 84kt), other North Sea Canal region ports noted decreases over 2020's first half, IJmuiden by 3.4% yoy to 8.76m and Beverwijk by 44.3% yoy to 194kt. Overall, some 48.7mt were handled across the ports, a 10.7% yoy drop on the volume from H1 2019. Koen Overtoom, CEO, the Port of Amsterdam, commented, "For the first time in years we have seen a reduction in the transshipment in our port, and it is a significant one." He furthered, "However, we are not pessimistic. In the first half of the year, we have shown in difficult conditions how crucial the port is for the region and for the country. As a vital infrastructure, we have continued to manage shipping traffic and to handle cargo flows, without letup. We have thereby contributed to keeping the country and the economy running." Overtoom summed up by saying, "Our distribution clients, in particular, have had a strong six months, with the distribution of foodstuffs and packages. The market for transport fuels (petrol, kerosene, etc.) is now recovering. It is hard to say what the second half of the year will look like. The fuels market is too fickle for that, and the impact of the coronavirus is uncertain. We do anticipate that in the current conditions, the shortfall in volume for the year as a whole will remain limited to the level that we have seen in the first six months."

## HHLA'S SEA CONTAINER TERMINALS:

3,345k TEUs handled in H1 2020 (-11.3% yoy)

The company's three terminals in the Port of Hamburg took care of a total of 3,058k TEUs (-12% year-on-year) while the remaining 286k TEUs (-2.4% yoy) were added by the facilities in Tallinn and Odessa. At the same time, HHLA's intermodal division transported 718k TEUs, a decrease of 8.2% yoy, out of which 568k TEUs (-6.9% yoy) were carried by rail and 149k TEUs (-13% yoy) by trucks.

## THE PORT OF ZEEBRUGGE:

25.1mt handled in Q1 2020 (+14.5% yoy)

The turnover of liquefied natural gas (LNG) rose the most over the reported period, up by 148% year-on-year to a total of nearly 8mt. Container traffic advanced, too, by 14% yoy to altogether 8.6mt, as well as the handling of dry bulk, by 32% yoy to 814kt. On the other hand, wheeled (ro-ro) cargo trade dropped, by 23% yoy to 6.5mt, along with that of break-bulk, by 31% yoy down to 330kt.





Photo: North Sea Port

## NORTH SEA PORT:

32.4mt handled in seaborne trade in H1 2020 (-11.5% yoy)

With 28mt, inland navigation marked a weaker year-on-year downturn of 5.1% over 2020's first half. The H1 2020 seaborne cargo transshipment was broken down to 16.2mt of dry bulk (-7.2% yoy), 8.6mt of liquid bulk (-17.3% yoy), 4.9mt of break-bulk (-12.5% yoy), 1.26mt of containerized freight (+5.4% yoy), and 1.2mt of wheeled (ro-ro) cargo (-29.4% yoy). North Sea Port brings together the Dutch Zeeland Seaports (Vlissingen and Terneuzen) and the Flemish Port Authority of Ghent.

## THE PORT OF ANTWERP:

5,870,264 TEUs handled in H1 2020 (+0.4% yoy)

Tonnage-wise, the handling of containerized freight decreased by 0.3% year-on-year to a total of 68.95mt. In total, the Port of Antwerp took care of 114.17mt, a yoy drop of 4.9%. Turnover of general cargo amounted to 74.56mt (-0.3% yoy), including, apart from containers, 3.47mt of break-bulk (-29.1% yoy) and 2.13mt of wheeled (ro-ro) cargo (-21.8% yoy). On the bulk front, 33.64mt of liquids were handled (-7.4% yoy), plus 5.97mt of dry bulk goods (-13% yoy). A total of 397,633 vehicles passed through Antwerp's quays, a decrease of 37.3% yoy.

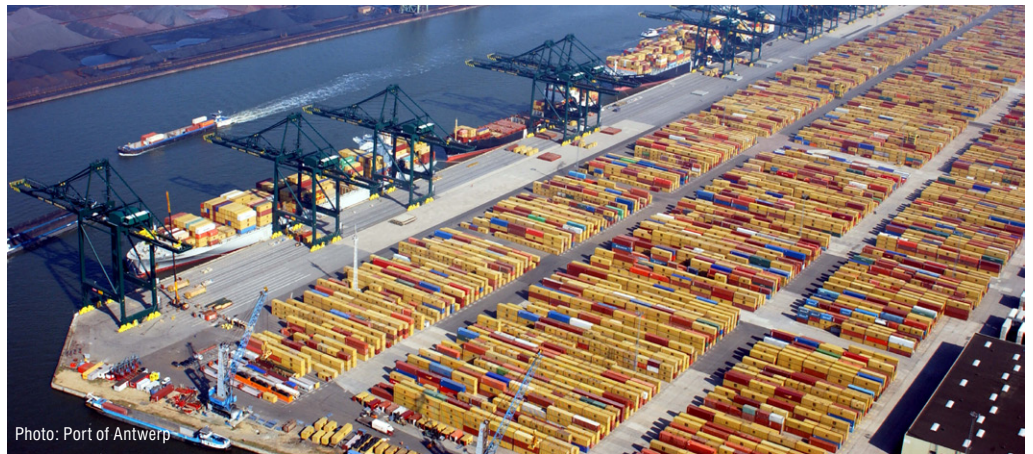


Photo: Port of Antwerp

## FINNISH PORTS:

52.25mt handled in H1 2020 (-3.1% yoy)

International traffic totalled 47.75mt (-4.1% year-on-year), out of which exports totted up to 24.86mt (-6.4% yoy) and imports to 22.88mt (-1.6% yoy), while transit – 4.50mt (+9.8% yoy). The country's ports took care of 757,055 TEUs (-7.4% yoy) – 380,251 TEUs in export (-5.8% yoy) and 376,804 TEUs in import traffic (-8.8% yoy).





## short stories

Photo: Pexels

### Port of Piraeus contracts INFORM to digitalize its vehicle logistics

The German tech-company has been entrusted with implementing an intelligent optimization IT system to enable end-to-end transparency of all processes in the vehicle supply chain. Once online across **Piraeus'** 145k m<sup>2</sup>-big vehicle car terminal, customers, suppliers, third-party logistics, and customs authorities will be able to track via a web portal where and when a vehicle has been delivered. In addition, the system's algorithms will make it possible to optimize the operational processes in the compounds through real-time decisions and advanced planning. "Digital decision making for us means both making automated optimized decisions as well

as helping our customers' management to make operational and tactical decisions more easily by providing reliable real-time data," **Hartmut Haubrich**, Director Vehicle Logistics Systems, **INFORM**, explained. He added, "In the case of PPA [Piraeus Port Authority], for example, we will automatically generate work orders and optimize the work orders in real-time to ensure that operations are smooth and target dates are met efficiently. In this way, we will increase the service capacity of the terminal but also the availability and intelligent allocation of storage spaces." Overall, INFORM's solution will help to increase the car terminal's capacity currently standing at 600k movements/year.

### P&O Ferrymasters becomes LG231's first tenant

The company has taken a five-year-long leased occupation of a 21,460 m<sup>2</sup>-big distribution centre in the LG 231 logistics park erected by **DP World London Gateway** near its sea container terminal. The 12.5 m of internal height, full warehouse management system facility offers 28 dock-levellers and four level access loading doors, racking & bulk, wet bond, and picking from full pallet down to piece picking and cross-dock container unloading. The primary focus of this facility is the food & beverage as well as fast-moving consumer goods industries, but **P&O Ferrymasters** says it's also suitable for any vertical industry. The distribution centre is **BREEAM** Excellent, with an EPC 'A' rating, plus **Planet Mark**-accredited. According to DP World London Gateway, the company can develop buildings on a build-to-suit basis, from around 93k up to 149k m<sup>2</sup>, obtaining planning consent within 28 days under its Local Development Order. "This additional new warehouse capacity at London Gateway marks an important additional step in our plans to enable trade flows across Europe. This new facility will provide the operational flexibility

and capacity our customers need to ensure their supply chains are becoming even more efficient and effective with direct access to a central hub linking rail, road, deep sea and short sea. With both Rotterdam and London Gateway recently operational [the former in 2019], we believe we are well-positioned to provide resilient and agile supply chain solutions which have become more important than ever," **Mark Mulder**, Director Contract Logistics, P&O Ferrymasters, said. **Oliver Treneman**, Park Development Director, DP World London Gateway, added, "We are excited that P&O Ferrymasters has become the first tenant of LG 231. We look forward to working with P&O to deliver innovative and flexible supply chain solutions which add value to our customers' businesses. LG 231 is the ideal location for P&O Ferrymasters to grow over the long term as DP World London Gateway has the capacity, when complete, to be the largest integrated port and logistics park in Europe. Together we can offer unrivalled service for customers and possess the potential to radically impact the whole supply chain and enable the smarter flow of trade."

### Argentina's first LHM 420 – and the first to be assembled remotely

A mobile harbour crane of the LHM 420 type (124t of lifting capacity, 48 m jib length) has been delivered to **Euroamérica** in **Campana** and assembled on the spot using **Liebherr's** Remote Service App. "Due to the current pandemic situation worldwide, the engineer from the head office, Liebherr-MCCtec Rostock GmbH in Germany, was unable to attend in person, so all provisions were made so that he could nevertheless be on hand to provide any support and assistance required. Cameras were installed on-site, daily meetings were held to discuss the

pending tasks, and the new Remote Service tool was ready for its first crane assembly," the crane manufacturer wrote in a press release. "[...] Liebherr has accelerated the market launch of Remote Service in terms of an extended test phase. This means all Liebherr customers with maritime cranes, deep foundation equipment and crawler cranes up to capacities of 300 t now have the opportunity to use the Remote Service App free of charge until the end of 2020. A laptop, tablet or smartphone and an Internet connection are all that is needed," the company added.

## PD Ports' Teesport Bulks Terminal goes online

The £9.2m investment to renovate and refurbish the former **Steel Export Terminal** came to fruition on 12 August. The new 300k ft<sup>2</sup>/27.9k m<sup>2</sup>-big facility comprises seven walled bays, primed to store a range of bulk products such as soya and grain and is directly connected to covered rail. The investment has created 44 new jobs on Teesside. **Simon Clarke** MP, Minister for Regional Growth and Local Government, said, "The opening of the Teesport Bulks Terminal marks an important milestone in the continued revival of the Tees Valley. This new terminal will increase trade, create new jobs for the region and help boost the UK's economic recovery as we emerge from the worst effects of the coronavirus pandemic. Teesside is leading the way in an era of international investment and economic renewal, and as a proud Teessider, I couldn't welcome this more." To this **Frans Calje**, CEO, PD Ports, added, "In 2015, disaster struck the Tees Valley as the steelworks collapsed after more than 150 years of steelmaking. Overnight the River Tees and this region lost one of its main component parts and we, as PD Ports, lost a third of our business." He furthered, "Thanks to an ongoing journey of diversification, we have been able to rise, almost symbolically, from our own ashes into something that is now

far larger in 2020 than it ever was in 2015. We now employ more people than we ever did before in the Tees Valley, and instead of being reliant on what we once were, we are now in charge of our own destiny. With the opening of this facility, we are celebrating the relationship of two like-minded businesses and the realisation that by working together we can be far greater than going it alone."

**James Maw**, UK Managing Director, **Glencore Agriculture UK** (which will utilise three bays at the Teesport Bulks Terminal to store its agribulk products destined for UK distribution), summed up, "Our business was getting tired, and so we had to radically think about how to revitalise Glencore UK. That planning and strategy led us to Teesside and PD Ports in late 2016. PD Ports has proven its adaptability in transitioning from steel products to a wide range of bulk products, and I have to commend the work they have done, alongside key customers, in delivering a remarkable change for PD Ports and the Tees Valley. It is providing a future for the Port and the region as a whole. The **Teesport Bulks Terminal** will provide new opportunities for both import and export as well as providing the efficiency, reliability, flexibility and a level of service that will ensure that our customers remain our customers."

## Paperless container exports at FCT

**Global Ports' First Container Terminal** (FCT), operating in the **Port of St. Petersburg**, has become the country's first to use a fully digital management system for export containers. The technology, embedded in Global Ports' customer portal, makes it possible for freight forwarders to digitally exchange legally binding documents with the customs authorities. This enables FCT to commence container vessel loading without additional approval. Forwarders, customs, the terminal operator, and shipping lines have online access to information on what's happening with a container at all stages of the export process. Global Ports plans

to roll out the system throughout the rest of its terminals in Russia by end-year. The company also wants to include shipping lines' functionalities into the system. "[...] Shipment orders remained the last 'paper' element in export shipments. Due to our efficient interaction with customs, we have now made this document digital as well. Now, an export shipment may be ordered and traced on our customer portal. The technology we use guarantees data protection and integrity of data after it is entered into the electronic document flow system," **Alexey Yermolin**, Director of Information Technology, Global Ports, noted.

## Spain-England-Ireland multimodal net

The short-sea shipping company **Containerships**, part of the **CMA CGM Group**, and **APM Terminals Gijón** have partnered to form an eco-friendly logistic chain connecting major Spanish cities with the British Isles. The solution combines trains (up to 52 TEUs of capacity), gas-run vessels, and trucks

running on biofuel. The network sees train sets arriving at APM Terminals Gijón from **Seville, Murcia, Valencia, Barcelona, Zaragoza, Madrid**, and **Burgos**, after which the shipments leave Spain (on Fridays) on-board ships that then call to the ports of **Liverpool** (Mondays) and **Dublin** (Tuesdays).

## Esbjerg-Honeywell eco-partnership

The Danish seaport has teamed up with the tech company to develop a system for management of carbon emissions, with the aim of becoming a climate-neutral port. Once in use, the system will enable the **Port of Esbjerg** to track and manage all energy consumption remotely and in real-time, possibly even that of infrastructure to be added in the future. The solution will also make it possible for companies operating in the port to track their individual carbon footprints. "This is a large port with many ships calling and a broad range of activities going on, so our carbon emissions are quite substantial, but we intend to do something about that," **Dennis Jul Pedersen**, CEO, the Port of Esbjerg, said. To this **Lana Sukhodolska**, Head of Sales and Business Development, **Honeywell**, added, "The people at Port Esbjerg know what they want, and in many ways, we see Port Esbjerg as a benchmark for other ports, especially in terms of sustainability. However, in order for this project to succeed, we need to establish what the company's current position is. During this initial phase, we will map, monitor and manage current energy consumption and carbon emissions." She furthered, "The solution

we'll be developing together with Port Esbjerg is absolutely unique in terms of its scope. Other ports may have energy efficiency solutions for their buildings, but no one has ever done what we'll be doing at the port of Esbjerg. We'll include everything from vessels, infrastructure and maybe also various companies operating at the port." Gathering of the initial data will have been completed by this autumn. The port will then decide on the next steps to reduce carbon emissions. To reduce emissions, the Port of Esbjerg is exploring the use of renewable energy for both its own and its customers' needs, including investing in electric vehicles, establishing smart lighting and heating, and installing onshore power supply. "For us as a port, the new system will mean that not only can we lower our carbon footprint and we can do it faster, we'll also be able to do it in a way that makes sound business sense. If it meant we'd incur higher costs, it would be to the detriment of our customers at the end of the day, and that wouldn't be fair. This way, we're making the port more attractive by facilitating the green transition while also staying open for business," Jul Pedersen summed up.



## BCT's new STS comes online

The **Baltic Container Terminal** (BCT), operating in the **Port of Riga**, has started using its brand-new SANY ship-to-shore (STS) crane. The gantry, which arrived in May for final on-site assembly, has a maximum lifting capacity of 45t under the spreader and an outreach of 45 m, making it possible to move containers across 15 rows. "The Baltic Container Terminal works relentlessly to remain the client's first choice in the field of container cargo handling not only in the port of Riga and Latvia but also in the entire Baltic region.

Our competitiveness is based on efficiency and productive capacity provided by a continuous process of innovation, investment in new technologies and modern equipment. The new container crane will further increase the efficiency of our terminal by providing faster and safer ship service to meet the growing demands of our clients," **Gerard Sammut**, CEO, BCT, commented. BCT has now in operation four STSes, two 35t and one 30t of lifting capacity apart from the latest addition.

## Gothenburg's Svea Terminal nears completion

A 360 m-long, 60 m-wide, and 15 m-tall storage tent has been erected in what will ultimately be a 45k m<sup>2</sup>-big transshipment facility located in-between the port's container and ro-ro terminals. Once operational this autumn, run by the Gothenburg-based **Mimab**, the new terminal will receive forest products coming by rail from Swedish mills and then transfer them into containers, some 60-100k TEUs/year. A 350 m-long train will be able to find shelter within the facility. "It's not exactly a camping tent, but rather a fully equipped storage facility that meets all our demands and specifications, and at the same

time, offers a cost-effective operating solution," **Arvid Guthed**, Vice President Port Development, **Gothenburg Port Authority** (GPA), said about the latest development in setting up the **Svea Terminal**. **Claes Sundmark**, Vice President, Sales & Marketing, GPA, added "[...] The Terminal will increase rail capacity even further, and we will be able to double forest product volumes arriving at the port by rail. It also means that we can reduce the port's climate footprint and provide further conditions that will allow our customers to make climate-smart choices." At present, around 60% of containers arrive at or leave the port by rail.

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## featured articles

Interview with Villu Vatsfeld, CEO, Saarte Liinid, and Chairman, the Baltic Ports Organization's Comprehensive Ports Working Group

Photos: Saarte Liinid

# A balance between efficiency and sustainability

by Przemysław Myszka

Having attended a few hefty-numbered port industry conferences, a strong feeling has grown within me, namely that their agendas lean heavily towards bigger players whose cargo turnover goes into a few dozen million tonnes and more while their billions of euros development budgets are cramped with grandiose hard- and software projects on which an army of employees from across multiple divisions are working. Far too seldom do we hear from smaller ports – the challenges they are facing as well as the advancements they would be happy to share if only given the floor. That's exactly why we're talking to Villu Vatsfeld, who is running a port company that oversees 18 smaller harbours in Estonia and chairing the Baltic Ports Organization's (BPO) Comprehensive Ports Working Group (CPWG), about the future of small ports in Europe. We also picked his brain on the TEN-T policy, asked about smaller ports' voice in Brussels and national cabinets, and looked into the peculiarities of small port development, including tapping into the digital revolution.



Villu Vatsfeld, CEO, Saarte Liinid, and Chairman, the Baltic Ports Organization's Comprehensive Ports Working Group

- You've recently become the Chair of the BPO's CPWG. What has been the goal of setting up CPWG? What's your take on the TEN-T policy and its split between Core and Comprehensive networks?

The intention behind establishing the CPWG a few years ago was and still is the need to show how smaller ports are addressing the issues which cover the entire port industry, say participating in the larger logistics networks, diminishing carbon footprint and digitalization, but within the specific environment they operate, distinct from larger ports, e.g., those listed in the TEN-T Core Network. When the transport infrastructure policy was revised several years ago, EU policymakers reasoned that it

would be useful to make a distinction between Core and Comprehensive networks, consequently assigning ports to one of the two categories. According to what was initially planned, the former is to be ready by 2030, while the latter – two decades later, in 2050. As such, a clear investment priority was also adopted. The rationale was reasonable enough – limited EU funds won't satisfy the needs of all the bigger and smaller ports within the same timeframe. In addition, there are other transport modes, notably rail and road, that are competing for the same envelope. In other words, economic efficiency was taken as the prime criterion: put money where it'll deliver the most in return. As a result, one could have seen an





overwhelming number of presentations during port conferences that displayed grand EU-backed developments, including brand-new greenfield projects set to double or triple a given port's potential. According to the economic playbook, these hard infrastructure investments should unlock business opportunities on the shipping side, on- and offshore.

At least that was the thinking in the not-so-distant past. Nowadays, however, and maybe also because of the coronavirus pandemic and its reverberations throughout the global supply chains (and who knows, perhaps peoples' mindsets, too), it is demanded by more and more vocal groups from across the EU society that sustainability and environmental considerations have to be taken into account as well. These voices are asking questions some might find uncomfortable, like whether making big ports even larger isn't a sort of, for want of a better word, an 'implosion policy,' namely that concentrating too much traffic into single network nodes, without sufficient backup, will eventually backfire. If I'm not mistaken, a similar thing has already happened in the container shipping business, where the formation of alliances has ultimately deteriorated the flexibility and

efficiency of the whole supply chain. Same goes for cruise business with fresh examples from Venice, Italy and Dubrovnik, Croatia, where business volumes clashed with local needs and sustainability levels. The recent chemical explosion at the Port of Beirut is one extreme example of the dangers of putting all your eggs in one basket. A single grave incident has obliterated the country's key seaport. It doesn't have to be such a drastic incident, but also global warming statistics show that we are poised to experience extreme weather phenomena more often, and already a number of ports in Europe have been forced to make anti-flooding investments.

The TEN-T Comprehensive Ports have, by all means, found themselves at a crossroads; they'll either go with the flow and try to adapt to the Core Network or start exploring alternatives because there's no guarantee that the bigger fish won't swallow the smaller ones, so to speak. The idea, therefore, is to strike a balance between efficiency and sustainability. Unrestricted push for absolute efficiency is inherently doomed to deliver inefficiencies, both internal (congestion caused by channelling container traffic through one port, for instance) and external (for

example, the loss of biodiversity because nature is driven out by steel and concrete, or climate change in general). It's not that we at the CPWG are advocating against the development of the Core Network; we point our finger to a too big and aggressive concentration of the supply chain in single nodes, which in many port cities has taken its toll on the citizens who are now protesting about the nuisances associated with cargo traffic such as traffic congestion or air, light, and noise pollution. This isn't about smaller ports only; we also underline the importance of regional roads and railways, vital for the proper functioning of localities, their inhabitants, companies, industries, etc., that are situated farther away from the Core Network. The threat is that after 2030, there won't be any need for the development of the TEN-T's Comprehensive part, all because according to excel tables, it will be more efficient to stick to investing into the Core Network. Or, even more worryingly, those listed in the Comprehensive Network won't be there anymore.

That's the biggest challenge in my and my colleagues' opinion: to develop both networks hand-in-hand, with efficiency and sustainability in mind. It will be a balancing act to progress in



such a way that the particular components, goals, and attitudes won't overshadow each other. Think of the port industry as a family, some are bigger and stronger; some smaller but more agile, one has a knack for this, others exhibit different talents. We quarrel, that's true, but also need each other if something goes wrong, or can spark ideas that nobody could come across when trying to do it alone.

- **Do you have the feeling that smaller ports are under-represented in the discussion surrounding the port industry in the EU? Or for that matter, ports by and large when it comes to blueprinting national and cross-border transport policies?**

I've been active in the port industry for 16 years now, saw many small- and big-scale events, but one thing continues to amaze me time and time again, i.e., how little attention is actually paid to our sector, both larger and smaller ports, by policymakers when it comes to development in general, and that of the transport business in particular. As if the port industry falls into some category right from the world of nature, like a forest, there from the beginning, set to last indefinitely. This is, unfortunately, mirrored in what little is earmarked

for us within the EU's transport budget – in comparison to the billions that are injected into road and rail development, not to mention other areas such as agriculture. That's all the more puzzling because modern ports, unlike their ancient predecessors, require extensive infrastructure development, alongside maintenance, well into the 21<sup>st</sup> century more often also towards the open sea than in the past.

By way of example, Estonia, my home country, is working on a new transport development strategy to align it with the next EU budget. The draft document is about 60 pages-big, with significant sections devoted to the road, rail, and even the airport sector, half a page left for us. At the same time, we consider ourselves a maritime nation! Which is true, but it won't sustain itself without governmental political and legislative, sometimes also financial backing. I'm not saying that this is the Europe-wide state of play; however, when talking to colleagues in other countries, some of them dotted with seaports, they see the same pattern: a lot of ports, yet no national port policy. That's maybe why big seaports with strong municipal or regional support are doing better, or when some top figure from the government

personally engages in a project, as has been the case with Russia and Vladimir Putin as president and prime minister at Ust-Luga in the Baltic (but we can all agree that this example is rather hard to replicate).

More generally, ports were and are traditionally more closely connected to the local community than to those sitting in the capital, sometimes hundreds of kilometres into the hinterland. As such, ports predominantly played a somewhat dual role, engines of local growth and facilitators of international trade. That's exactly what I would like policymakers to grasp, namely that seaports are links between various countries. It's easy to see roads and railways on the map, but it should be equally unchallenging to view the high seas as what they are to us – motorways of trade and travel. Setting up a road that takes you from Tallinn to Riga gets a green light and taxpayers' money, but putting in place a public ferry service from Saaremaa to Gotland is nothing short of sacrilege, with the private sector to be the one to take the risk of running it commercially.

- **What are the specifics of developing a smaller port?**



Bigger ports, exactly because of their size and market reach, are universal, in the sense that they handle large volumes coming from different clients; nobody would erect a huge container terminal to serve only one shipping line or cargo owner. On the other hand, smaller ports are there for a reason, so to say, often a very specific one. These may also vary greatly. Take Saarte Liinid for example; the core purpose of running our 18 harbours, including two lake ones, is providing the public service of connecting Estonia's islands with the mainland. That said, some of them had also emerged out of economic needs, like when Riga was developing and needed stone for construction works; as it happens, a relatively nearby located island of Saaremaa/Õsel with the quarries of excellent cobblestone could be put to good use, it only needed a port to get the shipment out of what's now Estonia into today's Latvia a couple of hundred years ago. Fast forward to present times and a dolomite quarry propels the growth of Virtsu, one of Saarte Liinid's harbours, busy with sending the material to, e.g., Germany and Poland for the production of fertilizers. A similar thing can be found on the already-mentioned island of Gotland, where the Ports of Gotland authority manages 11 harbours, passenger traffic being their main focus, but there are also industrial ports, Slite Cementa and Storugns, which are there solely because of economic reasons.

In essence, the TEN-T Comprehensive Ports perform the same job that Core ones do, including even taking care of containers sometimes but carry it out on a local scale being tied to the output of neighbouring industries. Sure, that can be a risk but also an advantage if you run the business in an effective way. There are companies that don't want to get tangled in the 'big port system,' preferring to take their cargoes to a somewhat less-fashionable port, but which can meet their requirements in a more tailored way. It boils down to having a choice, something that should be self-evident in logistics. Otherwise, if you're in a shipper's shoes, you can get sucked into a situation where somebody else decides for you what, where, and when happens to your shipment. As such, what smaller ports need, and maybe what they deserve as well at the end of the day, is more visibility, more publicity so they can win over new customers.

Having said that, it's also fair to admit that there are less rosy circumstances standing in the way of development, notably water depth limitations or vessels increasing in size, which may cut off smaller ports from the market. There are also environmental regulations, unquestionably important, but the administration of which can be counterproductive. Small ports understand that, e.g., nesting birds or breeding fish have to be protected, but that limits the time period during which a port can be developed infrastructure-wise, at times to a very narrow window. Formally, there 'are' protected animals within the port's premises during this-and-that month, but in reality, that's hardly the case. It's not that we want to set up new infrastructure at the expense of the natural world, but there should be more trust placed in port authorities that we'll go to extreme lengths to make sure, like you can read in movie credits, no birds or animals were hurt during port development.

Developing a port has always been a tricky business. First, because it's a supply-driven sector, dependent on the ups and downs of the economy as well as profound changes in transportation technology. Second, because investments take years to finish. Combine these two, and you'll never have the guarantee that a new harbour, quay, or warehouse will be utilized to their fullest extent virtually from day one. Truly future-proof port investments are written out for decades, if not more; yet, at the same time, they are very often expected to deliver a return-on-investment within ten or 15 years. Such a rigid logic seems more and more misaligned with the flux, uncertain world we're living in. Some ports have it lucky, organically growing in harmony with trade and shipping trends, or finding a new niche for themselves, like serving the offshore wind farm industry. Others are, in turn, ill-starred, left behind with brand-new deep-sea quays devoid of traffic, as pointed out in a report authored by the European Court of Auditors a few years ago.

■ **How challenging is it to find skilful employees, especially if one's looking for somebody with relatively high IT/modern technology competencies?**

Two tendencies are clashing. On the one hand, there's urbanization and forecasts that an increasing number of

people will live in large metropolitan areas, house to many of the world's biggest seaports. On the other, though, some of us, me included, have made a conscious decision to pursue a career off the beaten track. There's just more to life than big money found in capitals or major industry and commerce centres.

That's, in fact, a pretty good segue to our IT development. Some four years ago, when we enrolled our very first IT manager, we realized the enormous waste in the way we handled our data. We couldn't afford to pay him the salary he could find in Tallinn in some multinational corporation or abroad, but, luckily, he puts the possibility to work on something that will give almost instant outcome above scribbling lines of code, alongside dozens if not hundreds of peers, that may become relevant at some point in the company's life – or never at all.

That's how our digitalization adventure has begun. Just as bigger ports, we see a clear benefit in having nearly real-time access to data on what's happening in our harbours: what ships are arriving and when, have they paid the fees, what kind of services they need, etc. We have also deployed a security camera system, linked to the police and border guard, which will be upgraded in the near future to become a smart one, among others, to automatically record predefined parameters or events, such as how many people board or disembark a ship, or is the fender fastened correctly. As the name implies, smaller ports tend to have smaller budgets, which in certain aspects can be a blessing in disguise, when, e.g., you have to invest in a data management system but cannot afford to develop proprietary software or set up your own servers; instead, you go for a cloud service from the very beginning. When it comes to Saarte Liinid, I don't believe our staff will be replaced by technology anytime soon. It's the other way around; technological development has been possible because we invested in people – and to make their work run more smoothly. This also extends to client contacts; technology can make it easier to strike a deal, sure enough, but it's still people deciding on the final cut, not algorithms talking to each other. The human touch is important, and the way I see it, smaller ports won't go down the full automation lane. Which, ultimately, can play to our advantage.





## The future of smaller ports

Photo: Port of Kaskinen

# Go digital, go green!

by **Annaleena Mäkilä**,

*Managing Director, the Finnish Port Association, and Vice-Chair, European Sea Ports Organisation*

The year 2020 will go down in history as one that stress-tested the transport & logistics industry to its very core, with no exception made for ports. In the middle of the pandemic, with EU top figureheads doing what they can to combine future recovery with the bloc's ambitious decarbonization targets, the port sector has found itself stretched across a double-track. First, the pressing matter at hand, ports have had to iron out a code of conduct how to stay functional in a world that quickly became dysfunctional. Second, the more distant yet already tangible issue, they also need to rethink their business model to adapt to whatever the future may hold – or even better, to co-create it. Both call for the greater embracement of sustainability and digitalization, no matter if one's running a large, medium, or small port.

**a**like in other parts of Europe and the world, the Finnish seaports have remained fully operational during the coronavirus pandemic (COVID-19). While the COVID-related economic crisis hasn't resulted in a sharp cargo downturn (more or less -4.0% year-on-year over H1 2020), it has nonetheless decimated ferry and cruise passenger traffic – the former almost non-existent in Q2, while the latter gone in its entirety, with anybody's guess when the two will rebound.

Despite the gravity of the situation and fundamental fear of getting infected, port authorities and terminal operators have nonetheless set in motion their inner and mutual continuity schemes. The resilience test has been passed with flying colours, as only one or two persons have contracted the virus amongst the entire Finnish port cargo handling personnel. Despite going through tough times and the overall heightened uncertainty, Finland is putting up a

good fight, its forest, bio, metal, and steel production industries fuelling the economy, including imports & exports going through the country's ports. That said, the coming months are expected to be difficult for all ports – smaller and bigger, inland and sea.

### Size doesn't matter

As such, one question takes centre stage: what can ports do to advance even as the clouds become more and more stormy on the horizon? If not now, then when it'll be the right time for the industry to digitalize itself? Small and medium ports have to seize the opportunity not only to secure their position but to strengthen it.

We didn't have to wait for COVID-19 to see it coming. Do consumers really care if the online shop they're buying from is huge or small? The quality of the service, price, track & trace, and delivery time is what truly matters. The same should pertain to our sector. Infrastructure? Check. Hinterland





**A**nnaleena Mäkilä, Master of Laws (LL.M.) (Trained on the Bench) from the University of Lapland's International Law and Legal Studies, has been managing the Finnish Port Association since 2012, plus vice-chairing the European Sea Ports Organisation for the past six years. Earlier, she worked for the Confederation of Finnish Industries, first as Chief Adviser and then as Deputy Director. Mäkilä was also a Political Adviser to the Finnish Prime Minister's Office in 1997-2000. For more information on the Finnish Port Association, please visit [www.finnishports.fi/eng](http://www.finnishports.fi/eng)



**Suomen Satamaliitto**  
Finnish Port Association

connectivity? Check. Reliable service providers? Check. Is there a reason why customers should value the size of a port over these qualities?

Transitioning towards e-logistics chain won't happen overnight. Here the journey itself may be as enlightening as the end result. That will, however, require some serious commitment, including breaking the power of entrenched habits, not to mention a master plan (but also the flexibility to alter it as things unfold or new insights are acquired) and tight cooperation with partners and customers. For starters, it's highly advised to on-board a true millennial, someone who has 'digital' as their middle name. Yet, not only to solve IT issues but, first and foremost, contribute to upgrading business processes. Trust will be of the essence; new operating models will be data-driven, hence depend on sometimes sharing more than sensitive information. Whoever will be in charge of managing the data sets must make it 200% clear that everything will be done to avoid system breaches and that data will be used to generate value for the entire community. As such, cyber security and hygiene need to become as important as investing in infra- and superstructure.

Ports differ. What unites them, however, is that irrespective of their size each of them can go down the digital lane as the third decade of the 21<sup>st</sup> century unrolls. Ports need to 'soundproof' themselves from the buzz that this-and-that technology will catapult them beyond their competitors' reach. Instead, a careful step-by-step due diligence is required to match their goals with the right solutions.

### **Sustainability enabled by technology**

Sustainability, enforced by regulations or pursued voluntarily, is one such goal. There is a number of fields across which ports are trying to make their operations less burdening to the environment. For instance, many ports are located in or nearby cities and towns, therefore, port- and shipping-related pollution can be a bone of content between citizens and the port community. Installing emission-reduction machinery, monitoring its impact, and communicating the results to the general public is one way ports can put technology to good environmental use. Another example is when ports target their own eco-performance, investing in solutions that decrease their carbon footprint, plus cut their costs for good measure (as when installing solar panels). Thirdly, tech-enabled sustainability also stands for streamlining cargo and passenger flows by diverse means, e.g., automating truck and car traffic to and from ferry terminals. Technology can also make ports more predictive – traffic management systems can

aid stevedores in planning their shifts while having a digital twin enhances infrastructure maintenance.

There's a catch, however. The environmental part of the maritime business is expected to be covered by even more regulation. More often than not, new rules add administrative burden organizations have to shoulder. This, in turn, can make it exceptionally hard for smaller ones to keep running a tight ship, as their resources become spread too thin. Maybe it would be better to put more faith in the industry, smaller ports in particular, that it wants to be part of the green transition even if there's no regulation stick swaying ominously above their heads.

### **Insurmountable?**

More broadly, smaller ports should be included in the decision-making process on the national and international level. Enter the EU TEN-T policy. The TEN-T is about creating a transport network, all modes included, that facilitates smooth, border-less transport across the entire bloc. The fine print is, however, where the devil conceals the details. The European Commission has divided the TEN-T into corridors, prioritized Core Corridors to be precise. The feeling among those included in the Comprehensive Network has been that living up to their expectations will have to wait. Decades to be precise again.

Yet, it seems that something has recently changed. On the one hand, there's the EU Green Deal, promising to give more power to green projects elbow. On the other hand, the next long-term EU budget (2021-2027), though negotiations are still ongoing in the European Parliament, can take a fresh look at developing the Comprehensive Network, especially in conjunction with the EU Green Deal and a greater push for digitalization. This may as well move short-sea shipping closer to the centre of attention, earmarking more funding for such programmes like Motorways of the Sea.

What about ports that aren't included in the TEN-T? The way forward for them would be to partner with other ports, academia, service providers, and other relevant actors, pooling resources towards a shared target. By way of example, the University of Oulu and four Bothnian ports – Kalajoki, Raahe, Oulu, and Tornio (the first and last sitting outside the TEN-T) – are working on a self-assessment energy-saving tool kit.

Becoming green and digital will require ports to abandon old ways of thinking. It'll be a time of gathering data, making sense of it, sharing it with others, and turning it into action – to make future transport & logistics sustainable. There's nothing standing in the way of bringing smaller ports onto the next level – if they don't withhold themselves from doing it that is. ■



Photo: Connect2SmallPorts

# At the (digital) edge

by **Christopher Meyer, Krzysztof Koźyczkowski, Laima Gerlitz, Emil Arolski, and Robert Philipp**, *the Connect2SmallPorts project*

**The Connect2SmallPorts project, part-financed by the INTERREG South Baltic Programme 2014-2020, aims at fostering the digital transformation of small- and medium-sized ports located in the south of the Baltic Sea region, hence strengthen their competitiveness.**



CONNECT2SMALLPORTS

The EU-backed Connect2SmallPorts project brings together partners from the port industry, the tech-world, and academia to assess the current state of digitalisation of small- and medium-sized ports in the South Baltic Sea Region and develop solutions that will increase their digital footprint in order to better their competitive position. The project is lead by Hochschule Wismar, University of Applied Sciences: Technology, Business and Design in Germany. For more info, including resources as well as events organised by the consortium, please head to [www.connect2smallports.eu](http://www.connect2smallports.eu)

A lot of political and economic attention concentrates on the bigger ports belonging to the Trans-European Transport Network (TEN-T) of the European Union (EU). At the same time, smaller ports often suffer from low freight volumes and volatile trade patterns, missing smart specialisation, outdated infrastructure, lower investment levels, and altogether fewer blue and green growth business opportunities, even though a lot of them are listed as TEN-T Comprehensive Ports. Nearly two-thirds of all ports in the Baltic fall into either the small or medium category, with an annual total cargo turnover of about two million tonnes. Just as their counterparts from other regions worldwide, they serve as gateway hubs for regional economies. In order to continue doing so, however, they'll have to embrace modern technological solutions to get an edge on what's currently holding them back as well as on future challenges.

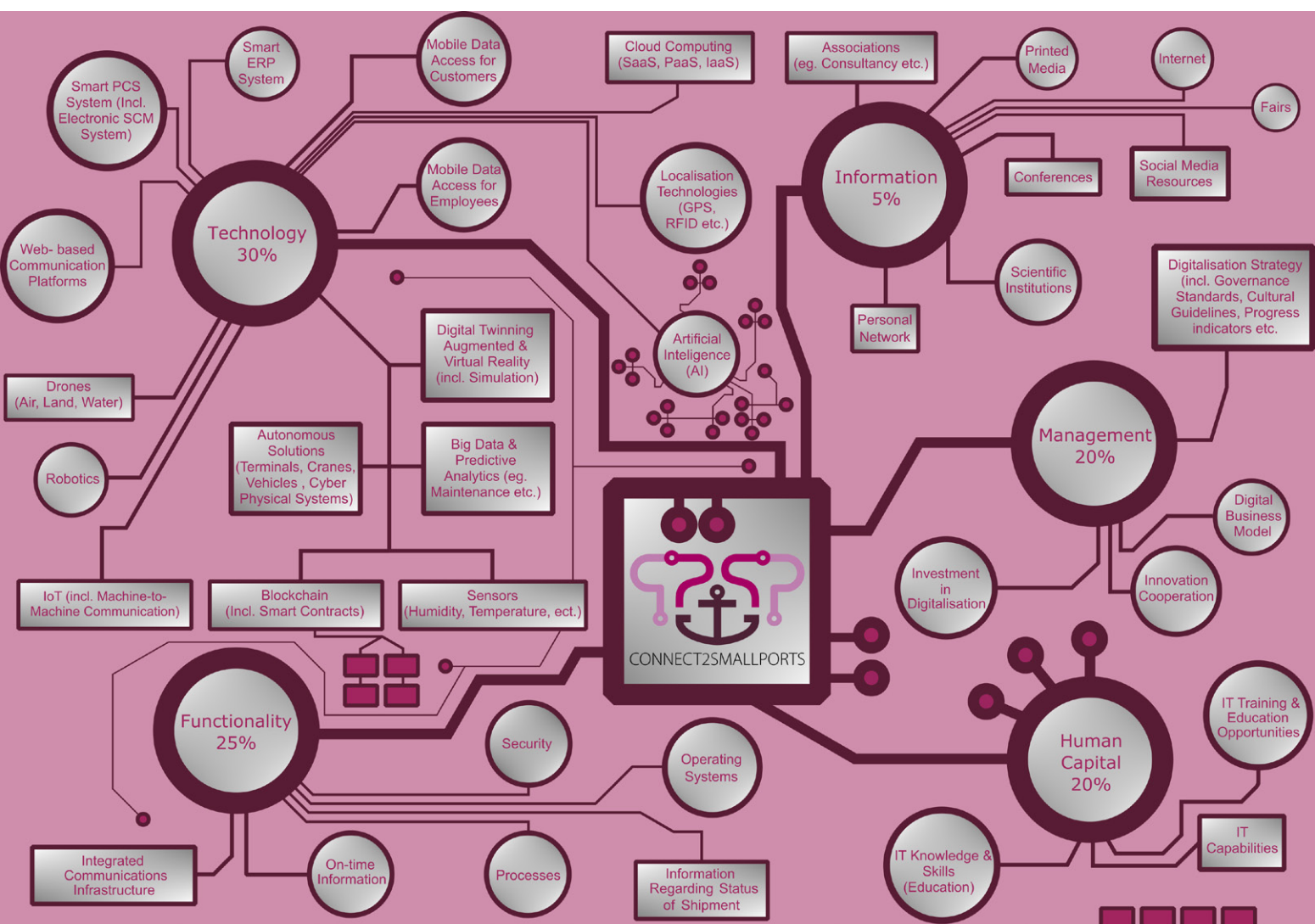
### Five steps to increasing ports' digital footprint

The Connect2SmallPorts partnership gathers institutions from Lithuania, Poland and Sweden, among them three

seaports as direct partners: Karlskrona, Klaipėda and Wismar. In addition, several ports contribute as associated partners, and the project is also supported by the Baltic Ports Organization. To increase the Baltic ports' digital footprint, the Connect2SmallPorts consortium has identified five key areas of action.

First, mobilise & integrate supply and demand sides – connect small ports' operators, authorities, transport infrastructure stakeholders, and information and communications technology (ICT) planners and managers to develop a joint cluster strategy. Second, learn & exchange – integrate all actors to exchange, do peer learning, learn from others (incl. the Core Ports), get trained as well as apply best practices; a minimum of 30 small ports will be involved in the new capacity building network. Third, design & confirm – select 15 ports and design infrastructure pilots; these refer to improvement solutions targeting technical and ITC interoperability, improved co-modality and hinterland accessibility as well as port management systems. Fourth, test & future transfer – implement designed ten infrastructure and five investment pilots; ports will





be selected based on their competitive edge in digitalisation from a minimum of 30 integrated ports in the entire network. Lastly, sustain & internationalise – organise a series of road-shows, share the vision and best practices from the implemented five pilots in the region; this includes the development of potential transfer plans and internationalisation actions.

#### DRIP score and digital auditing results

In line with the development of digital auditing, the Connect2SmallPorts consortium has come up with a novel index for the measurement of digital port performance, the so-called Digital Readiness Index for Ports – DRIP. The DRIP embraces five dimensions and includes 38 related indicators that are also included in Port Performance Indicators (PPIs).

The five dimensions cover performance areas: management, human capital, functionality, technology, and information. Respectively, these areas are integrated into the tool, since digital transformation processes of ports are not governed by only using novel technologies. By contrast, it is more the interplay of management measures and employees' knowledge, skills, institutional capacity and capabilities in functional and tailored IT system processes that build up digital technologies and solutions. As a result, all dimensions must intertwine in order to facilitate a sustainable digital transition towards a smart port. Furthermore, it is important that comprehensive and sustainable information sourcing is envisaged in order to be well informed about the current digitalisation trends.

Sufficient and state-of-the-art information access facilitates the right identification of appropriate digital measures and investments, i.e., decision-making. The DRIP also indicates the importance



Access to the DRIP online survey is granted for interested port representatives via the QR code



of each dimension, as different weighting scores were ascribed to each of them as a result of expert interviews and thematic meetings with ports, academics, port business intermediaries, as well as support and steering institutions, including authorities.

The very first review of the results from over 30 implemented audits in European ports has already been carried out. A detailed benchmarking report can be used as a solid source for ports aiming at improving their digitalisation. In synopsis with the report, the following first observations can be highlighted. First, digitalisation of small port activities and management is very important, because small- and medium-sized ports' digitalisation is today at a far lower level in comparison with large ports. Second, the developed methodology for benchmarking digitalisation in ports can be used for any small, middle and large port evaluation worldwide, and support existing performance. Third, digitalisation trends of the analysed ports have shown that ports which have less cargo turnover also have fewer possibilities to digitalise port operations and other activities. Fourth, the digitalisation level in small- and medium-sized ports is about 30% lower in comparison with large/Core ports. Fifth, low increases in digitalisation level of small- and medium-sized ports could have an accelerator effect in stimulating port activities and facilitate their service portfolio.

#### **Corona-induced digitalisation – and more to come**

Similar to all other institutions, Connect2SmallPorts project suffered from COVID-19 lockdown, but the partnership has been able to shift towards digital cooperation tools, in a way

showcasing that digitalisation offers an added value and strengthens resilience and adaptive capacity of ports to changing conditions. Likewise, small ports can significantly increase their capabilities when introducing technological innovations and facing global challenges. Ignoring digitalisation altogether, in the long run, could potentially lead to a digital exclusion of smaller ports, causing a disruption in the maritime sector, and in the final outcome, negatively affect regional development.

To address this future potential and provide solutions, the Connect2SmallPorts Channel has been added to the project platform. The Channel contains an On-line Training Course for port personnel in the Internet of Things (IoT) technologies. In addition, several on-demand on-line sessions are available, too, with more content being uploaded regularly.

Moreover, the project consortium has started to develop detailed schedules and actions to implement five pilots in small- and medium-sized ports, having already four confirmed participating south Baltic ports. The results of the pilots will also be available on the project platform in due course. Meanwhile, top-notch knowledge of digitalisation can be gathered by exploring the project's research database, accessible through the project's website.

The non-profit Connect2SmallPorts consortium is looking out for future cooperation and joint activities in the field of blockchain, IoT, digital transformation, and similar technologies with focus on maritime development, especially small- and medium-sized ports. The project can offer expertise and experiences in the mentioned fields to provide added value and innovative insights to anybody working on port development plans. ■





Photo: Port of Sète

## Secondary ports in France

# Taking matters into their own hands

by **Paul Turret**, *Director, Higher Institute of Maritime Economics (ISEMAR)*

**France makes a distinction between ports under the national government and local authorities' control. The latter are responsible for running the country's secondary ports, meaning that they develop differently, even though cross-tier collaboration is often sought after.**



The Higher Institute of Maritime Economics (ISEMAR) was founded in 1997 by the local communities, the Chamber of Commerce and Industry, and the port community in Nantes Saint-Nazaire. Its goal is to cater the maritime transport, ports, and naval industries with economic expertise. Among many things, ISEMAR publishes its monthly Summary Reports addressing economic challenges in maritime transport. These cover a variety of areas related to maritime and port economics, including monitoring developments in regulations governing offshore human activities. Please visit [www.isemar.fr/en](http://www.isemar.fr/en) for more info.

All countries have a hierarchical classification of ports according to their economic significance. This grouping is based on the volume of each type of activity (transshipment, transit, storage, industries) in or near a port as well as farther into the hinterland. As such, all European countries have the main national and secondary regional ports. That said, how these are governed and developed can vary greatly Europe-wide.

### Decentralisation

In France, this hierarchical distinction between larger and smaller ports has also been reflected in their governance structures since the 1960s. For comparison, Spain and Italy, each having around 20 ports, have kept the same public governance structure for all of them irrespective of their size. All ports in Belgium, the Netherlands, and Germany, large or small, are generally under public authority control, too. Although ports in the UK fall into three different categories – municipal, trust (public), and private – unlike other European economies, the last category dominates the industry.

In 1965, the French government decided to establish a limited group of six so-called 'autonomous ports,' i.e., larger ports with new industrial areas and terminals able to cope with the emerging containerisation trend (a 2008 government reform renamed these ports as "Grand Port Maritime," "Major Sea Port" in English). National ports underwent a reform in 2004. This 'decentralisation' transferred control of these ports from the national government to local authorities, i.e., French regions, departments, and agglomerations. The French model distinguished ports based on their volume of activity and economic significance. For instance, Sète, the largest secondary port with 4.5mt/year, focuses its business on a chosen number of key activities: providing ferry services as well as handling oil products, agricultural goods (grain, animal feed, fertilisers), and forest products. The port serves local industries, including a cement clinker and bio-fuel plants in Sète, a fertiliser production in St-Malo, and a small-scale steelworks in Bayonne.



**Tab. 1. Main secondary French ports' cargo traffic in 2019 (thousand tonnes)**

Area	Port	2019
English Channel	Caen	3,128
	Dieppe	1,727
	Cherbourg	1,690
	St-Malo	1,265
Atlantic	Lorient	2,660
	Brest	2,600
	Bayonne	2,282
Mediterranean	Sète	4,304
	Toulon	3,100
	Port La Nouvelle	1,607
Corsica	Bastia	1,843
	Ajaccio	1,235

A specific feature of the French system is that such supervisory authorities are free to make their own organisational and managerial decisions. Ports can therefore be run either by a port authority under the control of the region or granted as a concession (to a Chamber of Commerce and Industry or a privately-owned company). In some cases, French regions must manage smaller ports and take part in the governance of ports under national government control.

Faced with competition from European neighbours, France is keen to promote collaboration among its ports, sea and inland. In the north of France, for instance, this stipulated the establishment of a partnership between Dunkirk, Boulogne, Calais and smaller inland ports; in Normandy, between smaller ports and the Seine Axis (Le Havre, Rouen, Paris); and in the south, between ports on the Mediterranean shores and those along the Rhône and Saône rivers.

#### **Local & specialized: no containers but plenty of ferries**

At least since the 19<sup>th</sup> century, France has focused on upgrading its larger ports, right up to the era of container terminals and heavy-duty quay-side plants (refineries, steelmaking, aluminium smelting). That said, secondary ports haven't been overlooked, at least to a certain degree. Fuel is distributed through all ports, and many secondary ports also handle this type of traffic. The same goes for serving the agricultural and livestock businesses – exporting wheat and corn and importing fertilizers and animal feed. The remainder is made up of a handful of product categories for each port. Notably, unlike in many other secondary ports in Europe, there is no container traffic, the only exception being the peripheral harbour of Brest at the tip of Brittany (meat exports).

On the other hand, secondary ports across Europe all have one thing in common: their ferry links. While it's true that in the north of France the Port of Calais accounts for the most of the traffic with Britain, five small ports on the Channel – Dieppe, Caen, Cherbourg, Saint-Malo, and Roscoff – together handle 2.5m passengers and 170k trucks a year travelling to and from the UK. Alike others Europe-wide, these passenger ports haven't been hit hard by the coronavirus pandemic, with whatever shape EU-UK trade takes post-Brexit hovering above them as yet another threat to their bottom line (in the Mediterranean area, the pandemic has negatively impacted the number of tourists, too, as well as influenced the

level of immigration from North Africa). The ports of Toulon and Nice have links with Corsica and Sardinia, and Sète has connections with Morocco. In the past, ro-ro traffic with Turkey had been split between Sète and Toulon, but since the Danish DFDS has taken over the Turkish U.N. Ro-Ro wheeled cargo traffic has been gravitating towards the former port, with vehicle logistics also going through Sète.

#### **New development energy**

Overall, no significant investments were made in French secondary ports, except for modernizing their ferry facilities. The case of Sète is enlightening: its upgrade to accommodate containers was initially pointless but ended up providing new capabilities. Until the advent of Marine Renewable Energy (MRE), a policy initiative projected to gain ground in France over the next few years, no new development work could be justified. The wind turbine industry, either floating or on foundations, is now generating many projects for ports (estimations speak of 4.7-5.2 GW of new on- and off-shore capacity to be installed by 2028).

The aim is to welcome new production and assembly plants and to provide extended logistics areas for very large wind turbine parts. While on the lookout for new business opportunities, the Port of Cherbourg has established a heavy lift quay (costing €60m) as well as a site for a wind turbine blade production plant. In the already-mentioned Brest and in Port-La Nouvelle (in the Mediterranean), regional authorities have launched gigantic MRE projects worth nearly 200m each. Despite the debatable desirability of such investments, the regions are very keen to develop their ports using greater financial resources than what otherwise would be available. In both cases, there is a political will obviously motivated by targets that go beyond simple port economy matters, at least in the short term.

At a European level, French secondary ports seem to be somewhat lagging with their limited traffic. This results from two things. First, there's geography, i.e., the weak economies of some French regions (in terms of population and industries). The second is political, i.e., top port development decision-making is still very much centralised. French authorities, particularly the regions, must now take port matters into their own hands. It'll be an act of careful balancing as developing a port will have to compete for financing with other priorities of (strictly) local importance such as energy, agriculture, and road investments. ■

Photo: Rawpixel

# When push comes to shove

by **Victor Shieh**, *Communications Partner,*  
*the International Association of Ports and Harbors' World Port Sustainability Program*

**The International Association of Ports and Harbors (IAPH) has been fully engaged with its COVID-19 Task Force in tracking port performance, and how their members have reacted to the coronavirus pandemic in order to share best short- and long-term practices.**



Founded in 1955 in Los Angeles and headquartered in Tokyo, the International Association of Ports and Harbors (IAPH) has steadily developed into a global alliance of ports, representing today some 180 ports and some 140 port-related businesses in 90 countries. The member ports together handle well over 60% of the world's seaborne trade and nearly 80% of the world container traffic. The IAPH is granted Consultative Status as a non-governmental organization from five United Nations specialized agencies and one intergovernmental body: IMO, UNCTAD, ILO, UNEP, WCO, and ECOSOC. Click [www.iaphworldports.org](http://www.iaphworldports.org) to find out more.

**W**ith the COVID-19 crisis already impacting ports in the Far East in April 2020, and pandemic declarations taking hold elsewhere, the IAPH decided to call upon top experts from member ports around the world to establish a dedicated working group. The COVID-19 Task Force has provided the port community with the status of ports worldwide by means of a regular survey, assistance to ship owners on regulations, operational guidance for ports, and the support ports needed from governments to keep supply chains functional. The Task Force also looked at the economic impact of the pandemic, and now collects thoughts towards building up guidance on the long-term resilience of the ports in all aspects of their businesses.

## **Now: instantaneous response**

Despite the initial severe downturns in vessel calls, hinterland connectivity problems, overcapacity at berths and warehouses, and staff shortages, the vast majority of ports weathered the storm and maintained cargo operations over the period. The ports surveyed by the IAPH were predominantly small- to medium-size, mainly from Europe and both Americas,

with between 58 and 120 ports answering the same questions, first on a weekly basis and then every fortnight.

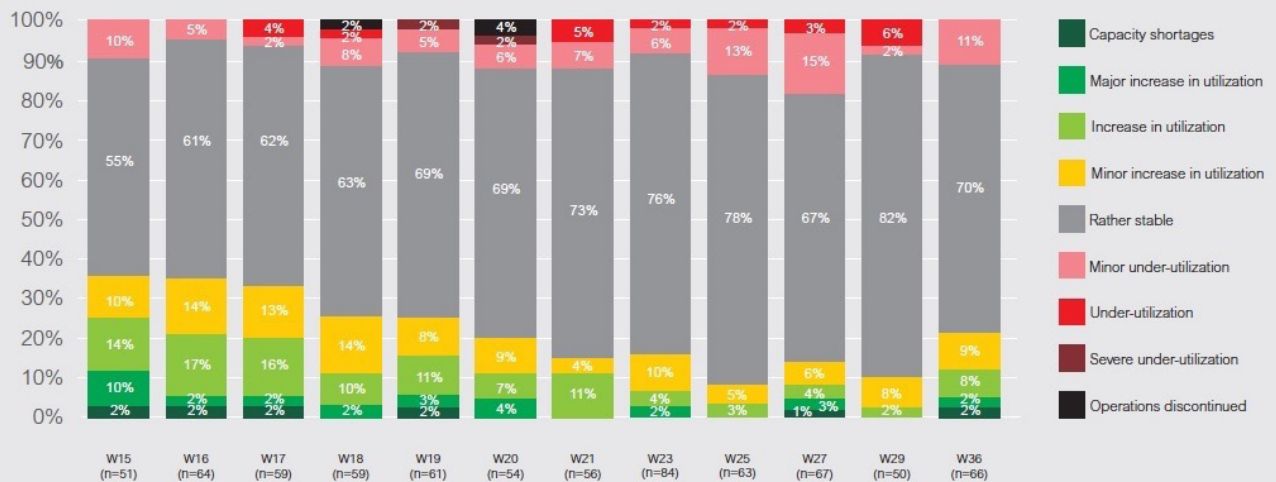
First and foremost, the surveys reveal that the biggest challenges ports faced were to reorganize their gangs, operators, and office staff in a safe manner to service the severely reduced number of vessels calling at their ports. Remote work became almost universal except for essential office staff, with gangs and operators being carefully organized in permanent groups and shifts with staggered changeovers.

Secondly, as borders closed their doors to traffic, and truckers were kept away from terminals, ports had to seek intermodal (rail and barge) alternatives to clear cargo and to create priority lanes for urgent shipments.

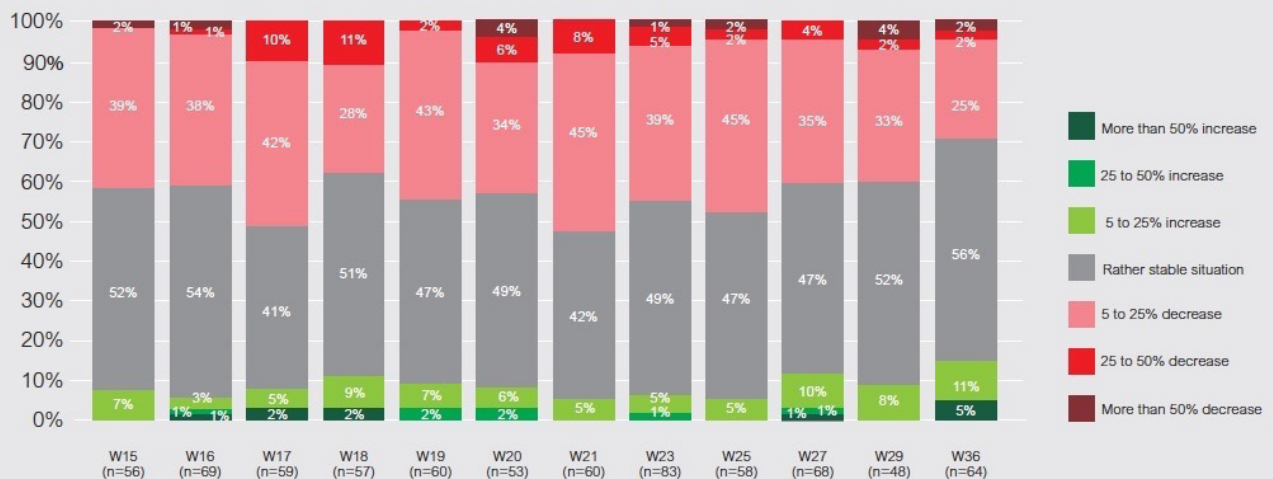
Thirdly, quays, liquid bulk storage, and warehousing capacity were placed under increasing strain as goods importers held back cargo pick-ups due to their own full warehouses, traders withheld hydrocarbon liquid bulk from plummeting markets, while other key sectors, such as automotive, were left holding massive inventories. Ports had to work with their partners to create floating storage zones at anchor, find additional unused port space, and set up



## What is this week's situation in terms of capacity utilization, including warehousing and distribution activities in your port? Foodstuffs and essential medical supplies



## How would you describe the number of vessel calls in your port in the past week, compared to activity during normal conditions? Container vessels



priority fast lanes for urgent medicines and medical hardware, including personal protective equipment.

Fourthly, ports faced the challenge of adhering to local and international regulations introduced to limit the pandemic outbreak, particularly at the ship-shore interface. With infections either on-board or concerns about landside personnel

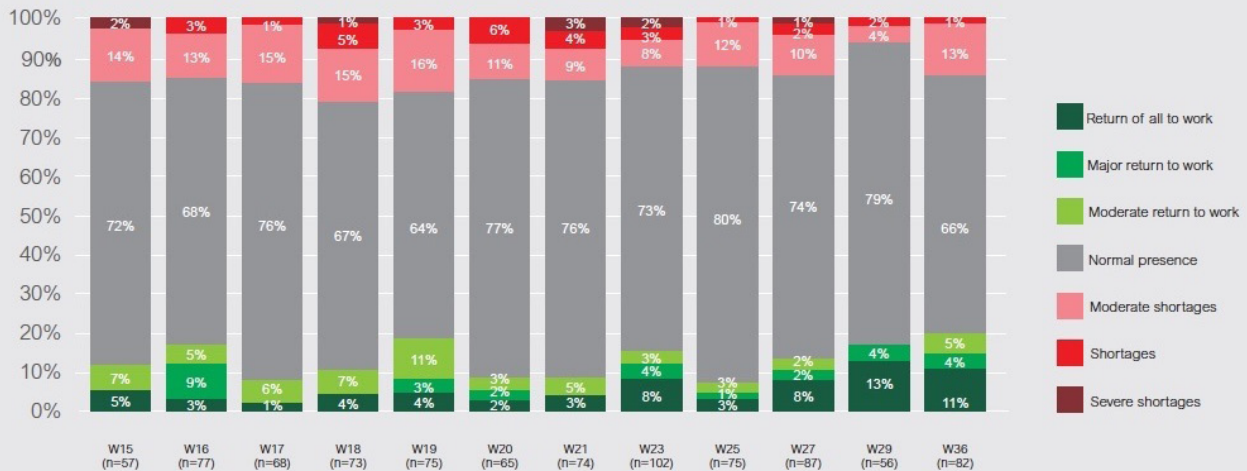
entering a corona-free vessel, and with enormous constraints placed by the emergency health ministry and central governmental legislation, ports had to quickly establish protocols and routines to keep vessels moving in and out of their berths. Ports endeavoured to digitalize as many processes as possible to limit human-to-human intervention.

### Future: new port business model, decarbonization, digitalization

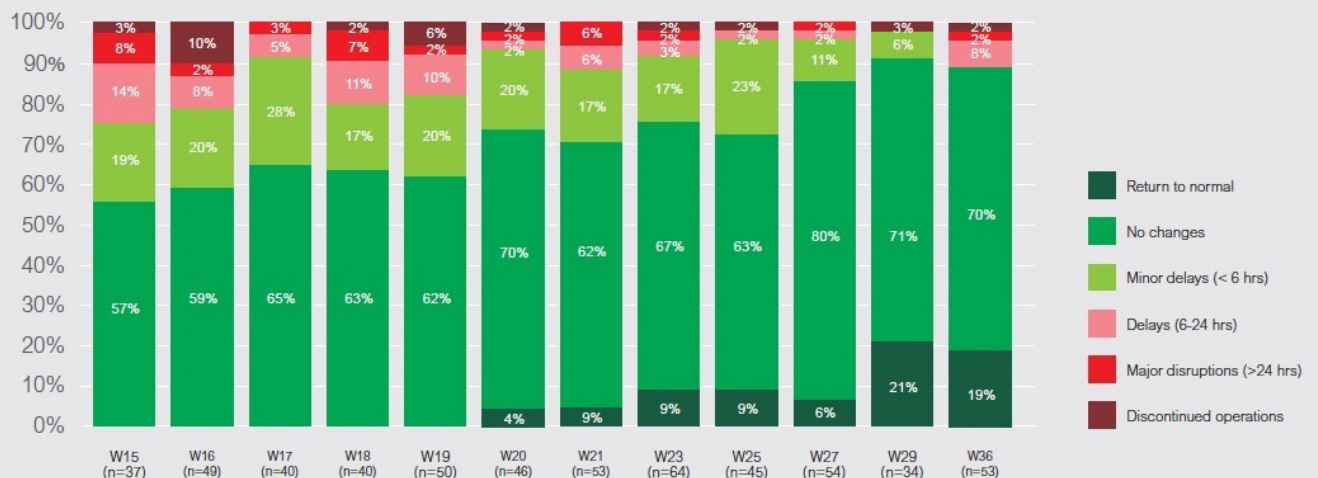
Perhaps the most prevalent challenge facing ports is the continuity of their business models. One of our member focus areas following our immediate response to COVID-19 looking ahead will be on port risk and resilience.

The pandemic has opened the eyes of

## What was the availability of port workers last week? Dock workers



## How has hinterland transport been affected by the COVID-19 situation compared to normal activity during the past week? Trucks (cross-border)



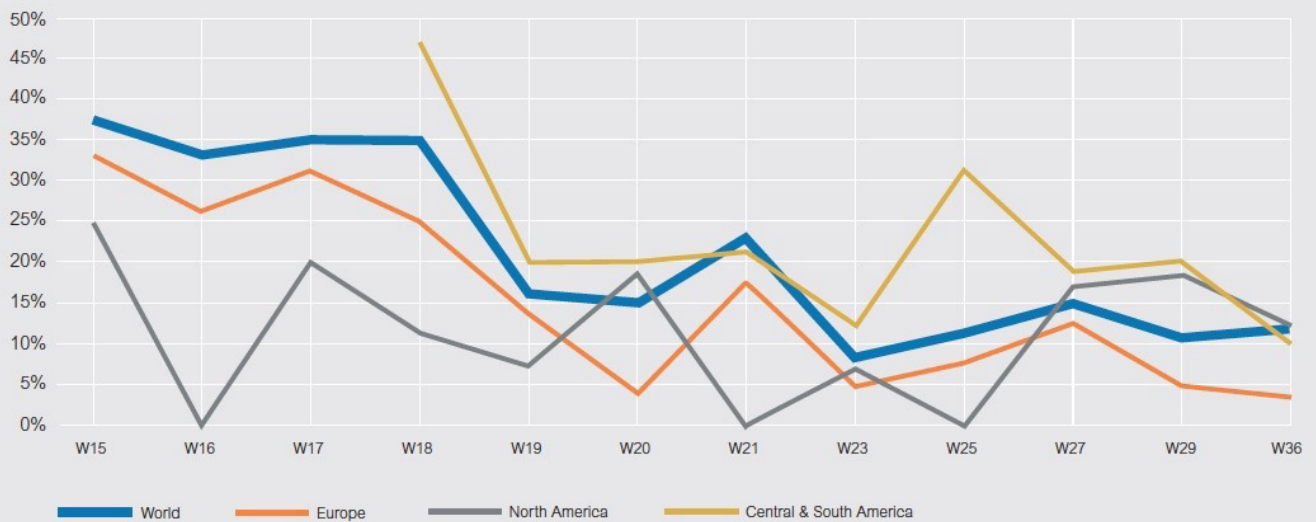
a lot of ports to the fact that their business models are vulnerable if they are purely dependent on port use or land lease income from cargo and/or passenger volumes. This is the third major upheaval in the 21<sup>st</sup> century after 9/11 and the financial crisis, so ports are now looking beyond their traditional role in order to become financially more sustainable. They are looking at other areas where they can provide services such as energy provision, cyber-secure port community systems, and generating reuse through circular economy initiatives between port tenants.

Secondly, the COVID-19 crisis has not stopped the increasing pressure from stakeholders for ports to accelerate decarbonization. Here we have also seen a greater willingness between ports and ship owners to look together at alternative fuel bunkering infrastructure, emission reduction incentive schemes, building infrastructure to combat climate change and a more joined-up approach towards onshore power provision. We see this reflected by joint decarbonization initiatives at the International Maritime Organization (IMO) and innovation-seeking cooperation such

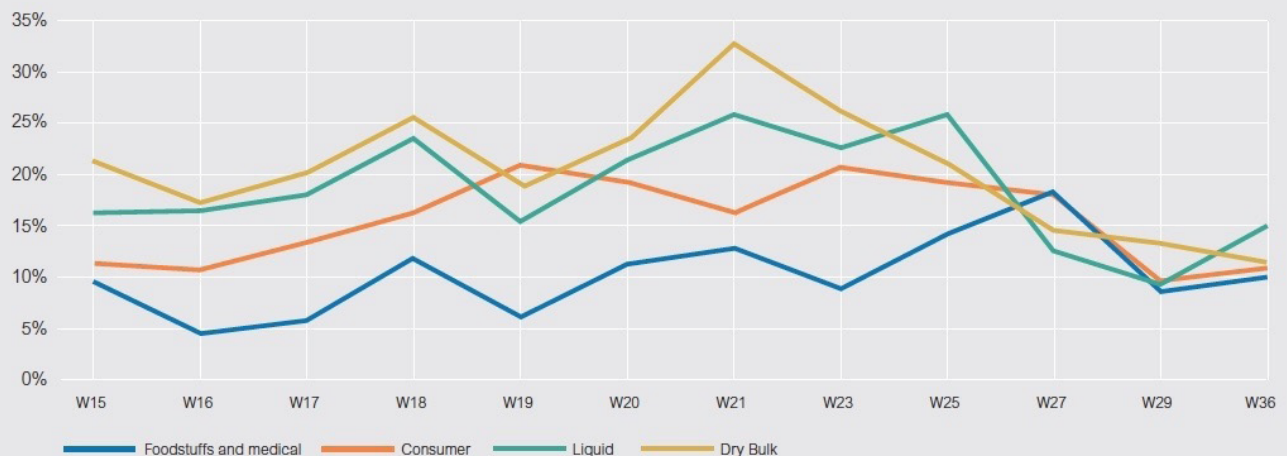
as the Getting to Zero Coalition. Here I believe we can see larger ports in developed countries take the lead in areas such as hydrogen fuel provision and electrification of materials handling equipment (the IAPH's role will be to ensure that technologies and know-how are shared with small to medium ports). There's also the push towards port call optimization to reduce emissions and improve efficiency and safety. The latter is a fine example of an integrated, sustainable approach through better planning and synchronizing processes and standardized data sharing between all parties involved.



## Ports facing delays in trucking in/out port (compared to normal conditions, %)



## Ports reporting capacity underutilization compared to normal activity (%)



## Decarbonization: Port of Marseille – Jupiter 1000

Power-to-gas (P2G) stands for the transformation of surplus electrical current into gas that would otherwise go wasted through electrolysis. Such a process can enable the storage of excess renewable energy – whether it is solar, wind, or wave generated – by means of the hydrogen that is produced, injecting this into the gas network. In parallel, using an innovative methanation technology, the hydrogen generated can react with CO<sub>2</sub> captured from a nearby industrial site to produce methane. The methane is then injected to the gas network, closing a circular economy loop as what was polluting CO<sub>2</sub> can now be used to produce energy. The Jupiter












1000 project is the first industrial demonstrator of P2G of its kind with a power rating of 1.0 MWe for electrolysis and a methanation process with carbon capture. An industrial plot at the Port of Marseille Fos has been selected as the pilot site. Two electrolyzers will produce green hydrogen involving different technologies, from 100% renewable energy. The produced hydrogen will then feed the gas network. There is a high international interest in Jupiter 1000 with more than 1,000 visitors and 20 delegations from all over the world having visited the site to date. Go to [www.jupiter1000.eu/english](http://www.jupiter1000.eu/english) to learn more.





A third area across which we see both small and large ports making efforts to respond to what the COVID-19 crisis will hit the industry with is to accelerate digitalization through improved data collaboration. More and more ports are realizing that paper-based systems are no longer tenable, especially at the ship-shore interface. That being said, only 49 of the 174 IMO member states actually have port community systems in place, which means a lot of work is still to be done to standardize data sets and get willing parties around the table to transparently share data on nautical and supply chain levels. “Digitalization is an example of one area where perceptions are that multi-million-dollar investments are required, which exclude smaller ports or emerging regions. This is simply not the case as a lot of work has been done in this field as with risk and resilience and decarbonization. As with so many of the projects accepted onto the World Ports Sustainability Program, the message is don’t try to reinvent the wheel – borrow insights, experiences, and ideas and apply them where relevant. We are here to help in that process,” Patrick Verhoeven, Managing Director, IAPH, underlined in this regard.



		Week 15 April 06	Week 16 April 13	Week 17 April 20	Week 18 April 27	Week 19 May 05	Week 20 May 12	Week 21 May 19	Week 23 June 02	Week 25 June 16	Week 27 July 01	Week 29 July 15	Week 36 Sept 02
	Ports with decline in vessel calls (last week compared to normal conditions, %)												
	Container vessels	41%	41%	53%	39%	45%	43%	53%	45%	48%	40%	40%	28%
	Other cargo vessels	41%	39%	47%	44%	42%	46%	51%	42%	33%	33%	37%	41%
	Ports facing hinterland transport delays (last week compared to normal conditions, %)												
	Trucks (cross-border)	43%	41%	35%	37%	38%	26%	28%	23%	28%	15%	9%	13%
	Trucks (in/out port)	37%	33%	35%	35%	16%	15%	23%	8%	11%	15%	11%	12%
	Ports facing high capacity utilization of warehousing and storage facilities (last week, %)												
	Rail services	28%	21%	32%	13%	22%	17%	19%	14%	13%	8%	9%	14%
	Inland barge services	41%	23%	40%	21%	19%	21%	20%	20%	18%	3%	9%	13%
	Ports facing shortages in port-related workers (last week, %)												
	Foodstuff & medical supplies	35%	34%	33%	25%	25%	20%	14%	16%	8%	15%	10%	20%
	Consumer products	27%	28%	25%	18%	19%	9%	12%	13%	10%	12%	10%	17%
	Ports facing shortages in port-related workers (last week, %)												
	Liquid bulk	21%	22%	20%	15%	20%	17%	13%	17%	16%	16%	16%	18%
	Dry bulk	16%	17%	13%	12%	17%	13%	10%	9%	18%	15%	10%	19%
	Ports with extra restrictions on vessels (last week, %)												
	Dock workers	16%	16%	16%	22%	19%	17%	16%	12%	12%	14%	5%	15%
	Technical-nautical services	7%	9%	4%	12%	11%	6%	8%	7%	7%	7%	4%	12%
	Port call delays due to extra procedures (last week, %)												
	Harbor master services	4%	8%	7%	10%	4%	8%	10%	5%	4%	6%	2%	9%
	Port authority	28%	22%	22%	26%	16%	22%	12%	12%	21%	8%	7%	15%
	Truck drivers	no data	no data	21%	16%	12%	9%	11%	10%	3%	7%	5%	12%
	Container vessels	49%	22%	33%	20%	19%	10%	7%					
	Other cargo vessels	47%	23%	34%	25%	20%	6%	12%					
	Ports with extra restrictions on vessels (last week, %)												
	Passenger vessels	51%	38%	31%	26%	25%	17%	16%					
	Container vessels	42%	35%	33%	27%	27%	18%	17%					
	Port call delays due to extra procedures (last week, %)												
	Other cargo vessels	35%	28%	32%	30%	25%	20%	19%					
	Passenger vessels	53%	40%	49%	44%	34%	30%	32%					
	Ports with extra restrictions on vessels (last week, %)												
	Inland barges	27%	21%	19%	21%	16%	8%	19%					

The coronavirus pandemic has taken the world by surprise. By and large the transport & logistics sector, ports included, has risen to the challenge. It has also,

nonetheless, exposed certain vulnerabilities. That said, by doing so, the crisis nudged the industry to innovate and rethink its operating model, not least draw attention

to its liabilities, possibly at a faster pace than it was previously planned. Although grave and serious, maybe there'll be a silver lining to corona after all?

## Data collaboration, risk, and resilience

A recent collaboration saw leading ports in this field combine efforts with cyber security experts in- and outside the industry with the IAPH and its partners, ICHCA International and TT Club, to produce an easy-to-understand cyber security white paper for ports looking to take a structured approach towards external cyber threats. The publication aims to ensure ports

accurately understand and correctly define cyber security, conduct a gap analysis, and take a measured, step-by-step approach towards cyber resilience and by so doing eliminate barriers to entry for secure data collaboration between port community members. Visit [www.sustainableworldports.org](http://www.sustainableworldports.org) to get your own copy of the Port Community Cyber Security white paper.



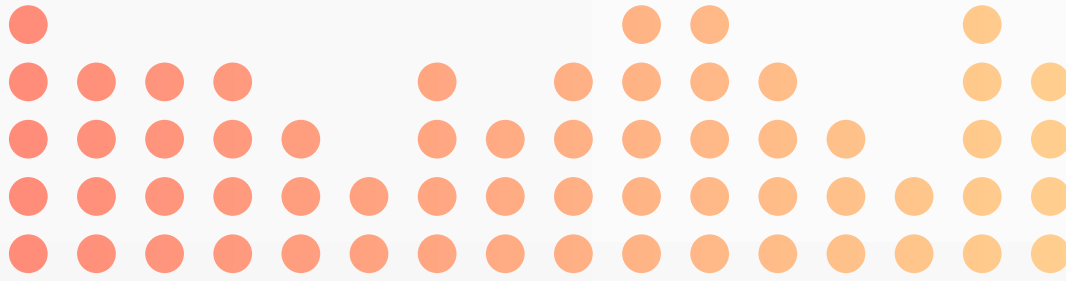


Photo: Rawpixel

# Time and again

by **Ralf Fiedler**,

*Group Manager Ports and Transport Markets, Fraunhofer Center for Maritime Logistics and Services*

**According to a 2016 study by the European Sea Ports Organisation, most ports in Europe are publicly owned (some 87% by a municipality or city). Public ports – even if they operate as ‘private’ under commercial law such as GmbH, Ltd, or AB – compete with a number of other obligations that public authorities have to meet in terms of the necessary expenditure from their budgets. Additionally, further funding constraints due to the recent economic downturn will certainly play a role, too.**



The Fraunhofer Center for Maritime Logistics and Services (CML) develops and optimizes processes and systems along the maritime supply chain. Within practically oriented research projects, CML supports public and private sector clients who are involved in port operations, logistics, and shipping. Visit [www.cml.fraunhofer.de/en.html](http://www.cml.fraunhofer.de/en.html) for more details.

As such, arguments are repeatedly put forward that ports allegedly do not make up for their costs and that steep budgetary resources cannot be made available to cover all the maintenance and investment costs. “Port pays port” is one of these policy principles, which, however, often fails to recognise the true economic importance of ports. Time and again, ports must prove that their worth stretches beyond their gates and quays.

## The long arm of the port

It, therefore, remains vitally important to showcase, in a scientific manner, the employment effects and value-added generated by the port industry, all in order to leverage that knowledge once it comes to cutting the budgetary cake anew. Interestingly enough, the positive economic effects of ports do not usually fall into the same cost or benefit categories, so that’s maybe why they might be omitted in the first place.

To make this effect visible, and to develop a uniform and applicable method, the

Institute for Shipping and Logistics (ISL), the Economic Trends Research (ETR), Holocher and Partners, and our own Center for Maritime Logistics and Services have jointly developed a method to measure the employment impact and value-added generated by ports in a study for the German Federal Ministry of Transport.

The developed solution, which can be applied at different locations, is based on two pillars. First, a survey of the actors with regard to their direct employment and turnover as well as their investments. Second, an analysis of the economic input-output tables in order to capture the interaction between different economic sectors.

From a macroeconomic perspective, we’re talking about a series of effects – from initial and first-round (often referred to as the so-called direct effects), via value-added, to induced. The first trigger macroeconomic effects in other sectors of the economy via the value chain. The expansion of employment at all stages of the value chain increases incomes and purchasing power, which has a positive impact on consumer demand because of



**Tab. 1. Wider economic impact of German ports**

Effect stage	Turnover (billion euros)	Added value (billion euros)	Employment
Initial	27.8	10.2	183,338
First-round	13.0	5.8	128,041
Value-added chain	10.3	4.8	101,165
<b>Total</b>	<b>52.0</b>	<b>20.8</b>	<b>412,544</b>
Induced	10.0	4.8	108,763
<b>GRAND TOTAL</b>	<b>62.0</b>	<b>25.6</b>	<b>521,307</b>

the additionally generated income. This again unlocks a further chain of effects described as the induced effect. The increases in production caused by consumption are estimated in the input-output analysis.

The total regional economic effects in port regions are often smaller than the overall economic impact of ports. A case study for the ports in Lower Saxony in the above-mentioned study concludes that, depending on the extent of the employment effects considered, only between a third and a quarter of the indirect and induced employment effects are in the same federal state. It's very likely that the situation outside Germany will be more or less the same should port-related industrial jobs be located other than directly in port regions.

Direct port-dependent employment is thus concentrated only to a small extent on the coast and along inland waterways; it is rather spread over the whole country (e.g., when heavy-duty industrial components

for the offshore industry are manufactured in southern Germany but destined for shipping through North or Baltic seaports). Consequently, a properly functioning port-hinterland transport infrastructure system is of high importance to the port employment effect, hence the sector's overall economic significance.

#### A clear cut

The proposed method captures the economic 'web-like' impact of ports, particularly along the port-dependent transport & industry chain, including employment and value-added. This, in turn, clarifies the cost-benefit investment ratio, even if the municipality or city owning the port is not the direct beneficiary; the country is, in any case, and that again withholds the question who actually should be in charge of investing in port maintenance and infrastructure. The importance of ports clear-cuts regional, national, and European boundaries. ■

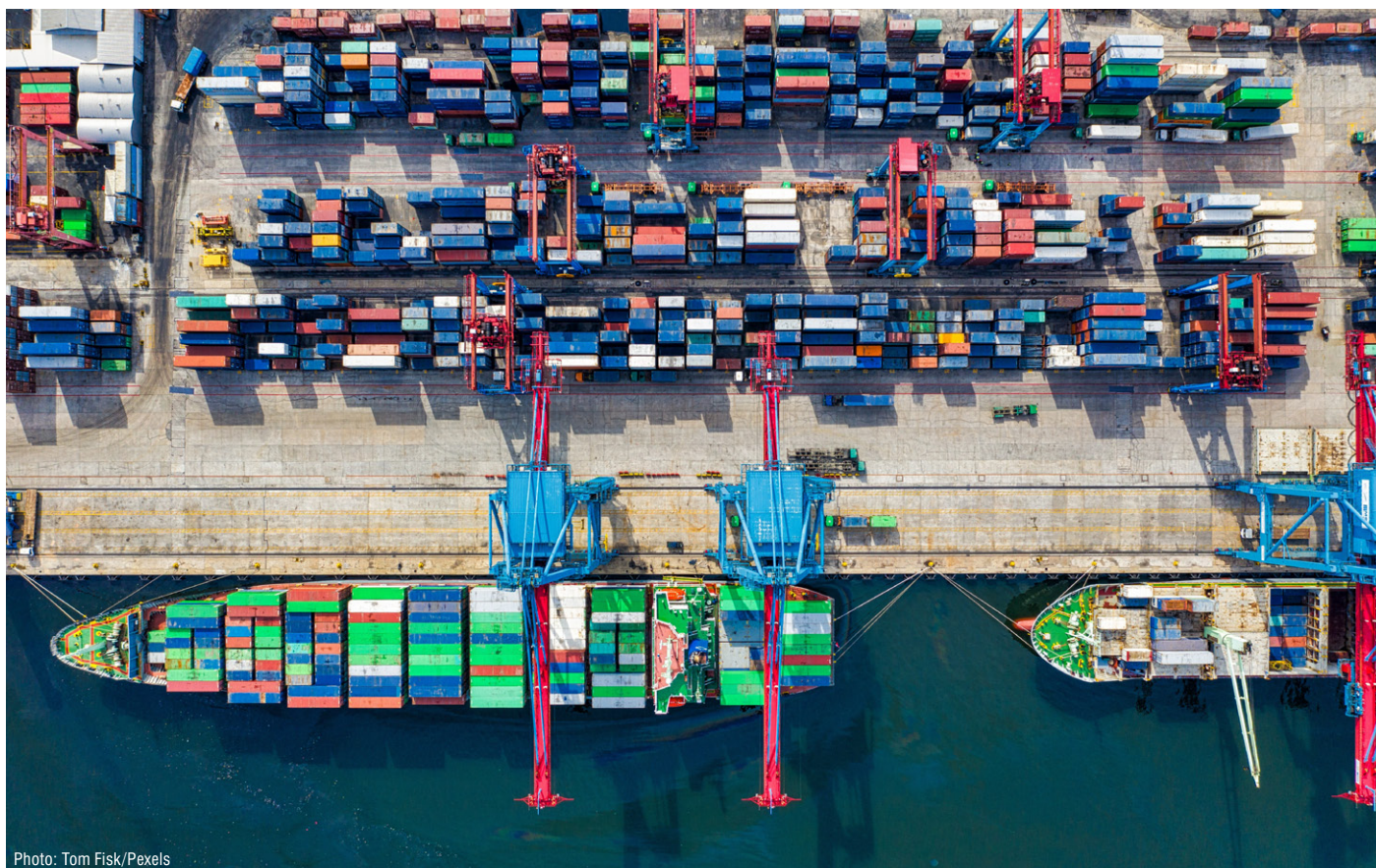


Photo: Tom Fisk/Pexels



**The importance  
of smaller ports  
– for shipping,  
heavy-duty industries  
wind energy,  
and the future  
of the EU TEN-T**

Photo: Mukran Port



# Better than anyone

by **Ewelina Synak**, *Project Assistant, Actia Forum*

**The Trans-European Transport Network (TEN-T) policy had been launched to provide a single market with a modern, integrated transport infrastructure. From 2013 onwards, it's split between the Core and Comprehensive Networks, the former scheduled for completion in 2030, while the latter two decades later. This 'timeline' division, along which EU funds heavily gravitate towards the Core part, raises concerns whether the Comprehensive Network gets all the attention it deserves. The Baltic Sea region (BSR) can serve as a case study of the importance of 'smaller' ports to local and regional economies and as hard evidence that leaving them out can backfire on the very intention underlying the TEN-T.**

**T**he implementation of the TEN-T aims at bringing about sustainable economic growth, including greater cohesion within the bloc, plus streamlining trade by eliminating bottlenecks and congestion as well as sporting innovative solutions, also on the digital front. To that end, TEN-T projects are co-backed by the EU through the Connecting Europe Facility (CEF), with €26.25b available in the 2014-2020 and €30.6b across the 2021-2027 budgeting periods. TEN-T investments are also made through other EU support programmes from the Cohesion Fund and the European Regional Development Fund, along with various other financial instruments that the European Investment Bank provides. That said, the Core Network risks missing the 2030 deadline; a recent report authored by the European Court of Auditors signals that six out of eight mega TEN-T projects have already run into delays (interestingly, and tellingly, there doesn't seem to be a similar overview of the progress of the Comprehensive Network development).

## Enough certainty

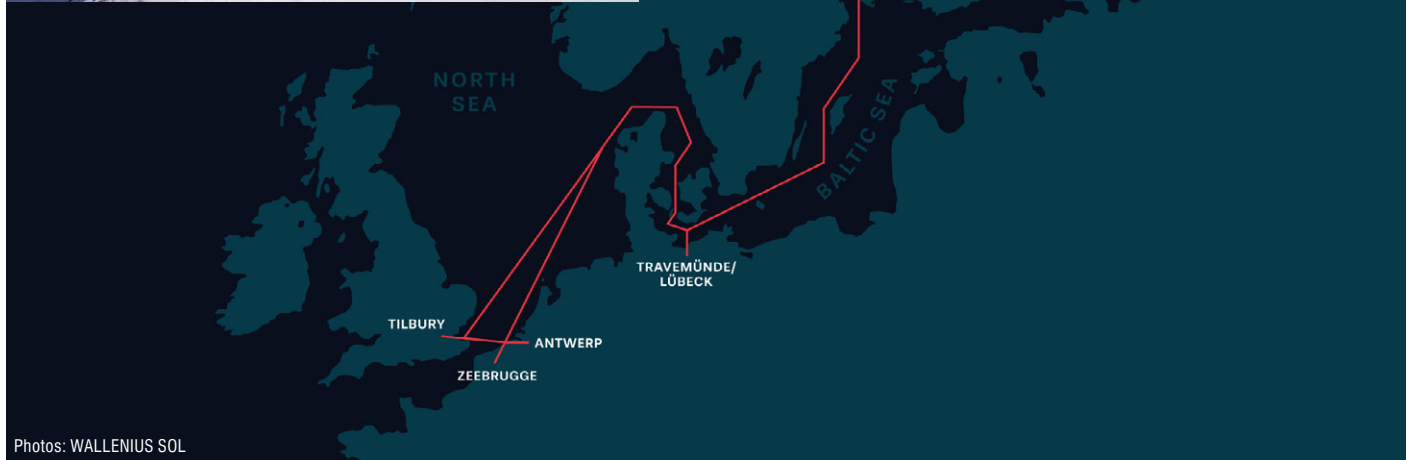
The TEN-T applies to 336 seaports Europe-wide (105 Core and 231 Comprehensive, respectively). In the Baltic, from a total of over 200 ports, 21 are listed as Core and 66 as Comprehensive. The regional seaports of the latter network took care of 246mt last year, some 26% of the region's 947.6mt total.

Though EU funds are mainly directed towards the Core Network, ca. 80% of CEF envelope in 2018, a few projects have been initiated to advance the Comprehensive one. For instance, the Nordic Maritime Hub was focused on the development of the Motorways of the Sea (MoS), the sea shipping arm of the TEN-T, between the ports of Frederikshavn and Gothenburg, including the provision of alternative fuels and onshore power supply. Successful initiatives like this have encouraged others from across the Baltic to follow suit; the 2019 round of projects, financed in 20-25% by the EU, include: dredging of the Paldiski South Harbour Fairway; MultiPort – improving port infrastructure for cargo handling in the Port of Rauma; Northern

Gateway – improving intermodal connections in the Port of Oulu; Panamax Bulk – removing a bottleneck in the Deep Port of Kokkola; Blue Port Kiel – realisation of efficiency, quality and sustainability upgrades in the seaport of Kiel; Gävle Port – electrified railway connection; YES – Ystad upgrading efficiency and safety of port logistic; and preparing the Port of Karlshamn for the next generation of large ro-pax vessels and provision of onshore power supply.

Among many, the MoS concept has been intended to connect Core Ports with more remote regions of the EU. The Baltic champions what's probably the world's most extensive ro-ro & ferry network, with Comprehensive Ports, as well as those entirely outside the TEN-T, playing a big role in connecting regional economies, both in cross-border and cabotage traffic. This is not only vitally important for the Swedish and Finnish heavy-duty industries from the Gulf of Bothnia to get their goods onto the European and world markets, but it is equally essential for Danish or Estonian citizens who are commuting between their





Photos: WALLENIUS SOL

islands and the mainland, personal mobility being a public service local ports are tasked with providing.

This wouldn't be possible without the region's Comprehensive Ports. Their proper functioning and development, alongside their neighbouring industries, provides, in turn, shipping lines with enough certainty to undergo capital-intensive fleet renewal. By way of illustration, the JV between Wallenius and Swedish Orient Line, WALLENIUS SOL, has invested in modern 1A Super ice class gas-run ro-ros (5,800 lane metres of cargo capacity) to ensure year-round service between a number of Bothnia seaports and Germany, Benelux and the UK, paper products being their main southbound shipment.

### Specialized

In contrast to their bigger counterparts that serve multiple liquid and dry bulk as well as general cargo streams, many smaller seaports are bonded with either in-port or local industries (mostly oil & petrochemical, metallurgical, electrotechnical, chemical, and wood and paper) for which sea shipping is often the only viable way of taking in/sending out their goods.

Though a Comprehensive Port, Neste's Sköldvik is by no means small. With 24.69mt handled in 2019, it's Finland's biggest in terms of cargo turnover and Baltic's third largest when it comes to liquid bulk throughput (in fact TEN-T's biggest in the region, as the first two spots are occupied

by Baltic Russian ports). The port serves its owner's refinery and a nearby power plant (where Neste keeps 40% of stock).

The metallurgical industry is represented by the port in the Swedish Oxelösund, the ownership of which is split between SSAB and the local municipality. SSAB's plants in Borlänge and Oxelösund stream their supply chains through the port, which, however, takes care of other customers' logistics needs as well, i.e., the paper industry (SCA Logistics' service that links the Swedish east coast, including another Comprehensive Port, Sundsvall, with Rotterdam).

Other ports are tapping into emerging industries from the so-called blue economy, such as Rønne's involvement in offshore wind energy. Back in mid-2018, it was announced that it would serve as the port of departure for wind turbines for the Danish largest (600 MW) wind farm Kriegers Flak, triggering the expansion of the harbour. Next, in January 2020, the port was selected for pre-assembly and shipment of MHI Vestas' offshore wind turbine components. The same story has happened to the German Port of Mukran (Sassnitz) which has been successful in diversifying its portfolio to aid its bottom-line suffering from diminishing ferry traffic. The Offshore Terminal South has already proved more than useful during the construction of the Baltic 2 (288 MW), Wikinger (350 MW), and Arkona (385 MW) offshore wind farms. Over the coming six years, three more wind

farms will be built near Mukran's home island of Rügen, including Baltic Eagle (476 MW), Iberdrola's second Baltic project. In addition to its function as an installation port, Mukran also serves as a service and maintenance base for wind parks.

### Written in stone

It is perhaps smaller ports, in- and outside the TEN-T, that recognize better than anyone else that the breakdown of their operations and what makes for their bottom line, not least the very certainty of their existence, isn't written in stone. Throughout the European port industry, one can more and more often hear that the 'traditional' port business model, resting on cargo turnover and terminal concessions, is increasingly out of date. The trade-disrupting, freight traffic-halting coronavirus pandemic has just made it more vivid. If anything, other all-embracing trends, 3D printing or circular economy for starters, can only throw a wrench in the works of today's supply chain.

Naturally, it's the port's duty to seek its fortune. But that takes place in a certain environment, policymakers having a big say in shaping what's doable and what's off-limits. As such, the TEN-T policy's focus on the Core Network shouldn't overshadow the development of the Comprehensive part. The much-debated green re-start of the EU economy should be inclusive – there's much to do on the more local level as well as to learn from the ups & downs of 'less fashioned' ports. ■



How are European inland ports becoming fit-for-future

Photo: Port of Linz

# Enablers of green logistics

by **Turi Fiorito**, *Director, European Federation of Inland Ports*

**The European logistics sector is currently experiencing a protracted period of transition. Under the European Green Deal, the EU has set ambitious transport, environment, and climate goals for 2030 and 2050. These, however, won't be easy to realise and require a sustained and integrated approach. For too long have we looked at transport as being divided by its components. This silo entrenchment has led to both inefficiencies and the absence of a real modal shift. At the same time, the coronavirus pandemic has shown that the only crisis-resilient logistics system is a multimodal one, in which transport streams adapt as barriers and blockades arise.**



The European Federation of Inland Ports (EFIP) acts as the unique voice of inland ports in Europe, highlighting and promoting their role as nodal points for intermodal transport. EFIP actively follows all developments in the field of EU transport and environmental policy of importance to inland ports and their environment and represents them to the European institutions as well as to other national and international organisations (the Economic Commission of the United Nations for Europe, the Central Commission for the Navigation on the Rhine, and the Danube Commission). Please visit [www.inlandports.eu](http://www.inlandports.eu) for more details.

Inland ports find themselves at the heart of this transition. They are located within or close to urban areas, serving as multimodal hubs that bring together inland waterway transport (IWT), rail, road – and, in certain cases, maritime and aviation, too. At the same time, inland ports form part of the urban area and are therefore front and centre when it comes to the issues of air quality and CO<sub>2</sub> reduction, as well as the oftentimes troubled relation between the transport & logistics industry and city dwellers.

## **Inland ports: moving forward**

Unlocking the potential of a truly multimodal system should be the first priority in this transition. As logistics demand increases, shortages in capacity will become an ever-increasing problem. With rail reaching its capacity ceiling and road transport skirting its own limits ever more frequently, IWT provides an opportunity for growth. A full multimodal approach is required to maximise Europe's transport capacity, with inland ports as central hubs.

In order to optimise their position, European inland ports are further investing in their digital systems and supporting innovation to promote multimodal transport. A good example of this is the Rheinports Information System that makes it possible for shippers to pre-book arrival berths, which in turn allows companies to streamline their activities. The system will be expanded in the future by adding cross-modal functionality for rail while adapting to autonomous vessels, trains, and lorries entering the logistics sector and inland ports.

European inland ports recognise that they are unable to tackle greenhouse gas emissions alone. But this does not condemn them to inaction. Instead, inland ports are enabling their users, clients, and other stakeholders to meet their sustainability challenges. This includes, but is not limited to, shore-side charging facilities or supply and storage of sustainable energy carriers (hydrogen, batteries). The latter will allow inland ports to provide IWT vessels, trains, and trucks with renewable energy, increasing their commercial





Photo: Port of Lyon



Photo: Vänernhamn



Photo: Port of Paris

activities, while at the same time as tackling wider climate goals.

The question of sustainability is not only one of cost but also of opportunity. As multi-modal and industrial hubs, European inland ports are supporting their local economies in adapting to a more sustainable way of carrying out their businesses. Companies investing in the circular economy favour locations close to urban and industrial hubs; a role ideal for inland ports. One example is the River'tri project at the Port of Lyon, where locals are invited to take all their waste products – from carpets to batteries, mattresses to cardboard – to a quay at the centre of the city, to be sent directly on barges to industrial sites at the Port of Lyon. The project can take care of up to 3,000 tonnes of waste per year, eliminating a huge amount of CO<sub>2</sub> emissions, congestion and noise pollution, as well as simplifying the recycling process for the Lyonnais. The circular economy model is thus an exciting prospect for inland ports, allowing them to diversify their client portfolios, while simultaneously guaranteeing continued logistical and local importance.

Urbanisation in Europe is a continuous process and city congestion will only add pressure for cities and metropolitan areas to seek out new solutions, including greater use of IWT. Diverse goods, from consumer to industrial, can be floated along inland waterways directly into urban areas for onward delivery. For instance, the Port of Paris and its partners are using floating warehouses to ship parcels deep into the city, to be then delivered by clean cargo bikes and vans. All of this aims to reduce lorry traffic in the inner city, hence reduce congestion, increase road safety, and improve air quality. Such arrangements will continue to penetrate the transportation landscape of river cities and may even fulfil the public transport service in the future.





Photo: Bayernhafen/Ziegler



Photo: Port of Brussels

### Enablers of green logistics through innovation

Inland ports are consolidating their position as sustainable hubs of clean and innovative logistics solution as Europe pushes for a post-corona green transition. They are becoming the hubs for new forms of sustainable industry, urban logistics and clean forms of transport. However, in order to realise the full potential of this sector, a collaborative approach is central. We at the

European Federation of Inland Ports are looking for new ways of bringing together stakeholders to foster this much sought-after change; this year, for example, we are gathering together innovative companies and inland ports for the inaugural Open Innovation Challenge to facilitate the exchange of ideas and knowledge. In this and other ways, our organisation is dedicated to realising the full potential of inland ports as enablers of green logistics. ■



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