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[UN presses Russia and Ukraine for Black Sea fertiliser deal](#)

UN officials continue to press Russia and Ukraine to conclude an agreement on chemical exports through the Black Sea in an attempt to ease global fertiliser prices and strengthen Vladimir Putin's commitment to the current grain shipment deal.

UN diplomats have been in talks with Kiev and Moscow to reopen a pipeline carrying ammonia - a key ingredient in nitrate-based fertiliser production - from Russia to Ukraine's Black Sea coast.

Rebeca Grynsan, the UN official who led the task force, confirmed the talks in a statement to the Financial Times. "Talks are moving in the right direction and all parties are making every effort at every level to ensure a positive outcome," she said, adding that negotiations are continuing "urgently" with the aim of avoiding "a global-scale food crisis" in the coming years.

The proposal is part of a food and fertiliser deal promised to President Putin in return for his support for a grain agreement reached between Moscow and Kiev in July. It would allow Russian ammonia shipments to use the same sea corridor that has carried nearly three million tonnes of wheat, corn and other food products from previously blocked Ukrainian ports. If successful, such a deal would allow two million tonnes of the chemical - worth about \$2.4 billion at current prices - to be shipped out of Russia each year. Negotiators hope it could help ease a global food crisis as well as strengthen the existing grain deal, giving Putin an extra stake in its success.

Talks have intensified in recent weeks. Vladimir Putin harshly criticised the grain deal last week, sparking fears it could collapse. His complaints - he wrongly claimed that most grain shipments were not headed to poor countries - were echoed by Turkish President Recep Tayyip Erdogan, who helped broker the grain deal. The two leaders are meeting this week in Samarkand, Uzbekistan.

It's unclear whether Kiev's recent military setback to Russian forces in northeastern Ukraine will affect the talks.

Ammonia is a key component of fertiliser. Russia supplied 20% of the world's seaborne cargoes with the chemical ingredient before Moscow's invasion of Ukraine, according to research company ICIS. Fertiliser prices have doubled in the past year, according

to the UN, in part because a pipeline linking the Samara region of southwest Russia to the Ukrainian Black Sea port of Pivdennyi was shut down in February. The pipeline transports about 2.3 million tonnes of Russian ammonia a year, according to data provider Argus Media.

The UN is also calling for the release of 20,000 to 40,000 tonnes of ammonia stuck in Pivdennyi, according to two of the people involved in the talks. Kiev would benefit from revenue of tens or even hundreds of millions of dollars in transit and port fees, one of them said.

UN officials also insist that Moscow allow grain shipments from a fourth port, Mykolayiv, which has been under heavy Russian artillery fire and is close to the Ukrainian offensive around Herson in the south.

Source: https://www.defenseromania.ro/onu-face-presiuni-asupra-rusiei-si-ucrainei-pentru-incheierea-unui-acord-privind-transportul-de-ingrasaminte-prin-marea-neagra_618164.html

[Mykolaiv port cannot join the "grain initiative"](#)

The Mykolaiv commercial seaport is currently unable to join the "grain initiative" due to its proximity to the front line. This was announced by Mykolayiv OVA head Vitaly Kim during the briefing. "Unfortunately, the conclusion was that we cannot join the "grain deal" at this time because of its direct proximity to the line of battle. Therefore, it will be possible to talk about it only when the battle line changes significantly in our favor," Kim said. Earlier, Foreign Minister Dmytro Kuleba reported that Ukraine would consider the possibility of Mykolaiv port joining the "grain initiative" if Russia complies with agreements on unblocking Ukrainian ports and guaranteeing security. The Ministry of Infrastructure reported that it is working on the accession of the port of Mykolaiv to the "grain initiative".

Source: <https://www.blackseanews.net/read/194378>

[Israeli Navy accepts Leonardo's main weapon for Saar 6 corvettes - 76 mm Super Rapid gun](#)

Israeli Navy accepts Leonardo's 76/62 Super Rapido Multi-Feeding naval gun for Saar 6 corvettes Leonardo's 76/62 Super Rapido Multi-Feeding naval gun for Sa'ar Oz and Magen Class 6 corvettes.

On September 13, at the Haifa naval base in Israel, the acceptance ceremony for Leonardo's 76/62 Super Rapido Multi-Feeding naval gun aboard the Israeli Navy's Oz/Magen class Sa'ar 6, which includes four ships in total, took place. The 76/62 SR MF will deploy the corvettes' air, anti-surface and missile defense capabilities. The Israeli Navy is one of the world's first users of the 76/62 Compact gun and six guns are still in operational status and in use since 1973 on board the Nirit Saar 4.5 missile boats. The Israeli Navy has acquired four new guns now installed on board the new Sa'ar 6 corvettes and it is expected that advanced ammunition and more new guns will be acquired in the coming years. The 76/62 Super Rapido naval gun is a technologically advanced system capable of meeting the most stringent modern operational requirements. Already chosen by more than 60 navies worldwide, the system is distinguished by its firing rate of 120 rounds per minute, which allows it to cope with any scenario, from air and anti-surface defence to missile defence, and with its Multi-Feeding loading system. This allows real-time selection with conventional or guided munitions depending on the specific scenario. The naval gun maintains an exclusive capability to integrate ammunition equipped with programmable multi-functional 3AP fuzes and 4AP flares developed and manufactured by Leonardo, guaranteeing maximum

effectiveness, accuracy and high operational flexibility based on mission-specific configuration programming features.

Compared to naval defence systems in its class available today, the 76/62 Super Rapido offers maximum operational flexibility due to its ability to integrate and fire all types of conventional ammunition available on the market. It allows firing with Leonardo's SAPOMER, the only conventional ammunition that achieves a range of 20 km, as well as Vulcano's new Leonardo guided munition, which allows target engagement of up to 35 km with metric accuracy at any range by maintaining long distances. Vulcano ammunition can also be equipped with the latest generation of seekers (IR-Infra Red and SAL-Semi Active Laser), which further increases accuracy by eliminating the margin of error and reducing risk even in the most challenging environments. The 76/62 Super Rapido is the only system capable of firing these two types of ammunition. Leonardo's Strales set offers engagement of the most challenging targets, such as subsonic and supersonic threats. The Strales set includes a special trolley shield and a radio frequency (RF) antenna to guide Leonardo's latest generation of DART (Driven Ammunition Reduced Time of Flight) munitions with its high maneuverability (greater than that of a rocket). It also has a coupling range of 6 - 8 km and a programmable safety capable of activating at a certain distance from the target to maximise effectiveness. The antenna, by emitting RF beams, guides the DART ammunition to the target and guarantees maximum engagement accuracy with 3 or 5 rounds of ammunition. The advanced capabilities that come with the use of the Strales kit, as well as the DART and Vulcan ammunition, can only be achieved through the use of Leonardo's technologies.

Source: <https://www.navalnews.com/naval-news/2022/09/israeli-navy-accepts-leonardo-main-gun-for-saar-6-corvettes/>

[Saab receives orders from Sweden to upgrade submarines](#)

Saab announced on 14 September 2022 that it has received new orders from FMV (Swedish Defence Materiel Administration) for the modernisation of HSwMS Södermanland. Saab has received new orders from FMV for submarine modernisation. The orders include a life extension of HSwMS Södermanland as well as new batteries. The total value of the order is SEK 470 million (~US\$44 million). The life extension means that the HSwMS Södermanland submarine will receive around 50 modifications, extending and improving its operability for another six years. The orders also include a battery exchange for the Swedish Navy's current submarine fleet, as well as a project focused on battery development to ensure both current and long-term capabilities. "We are proud to be a trusted partner of FMV in providing submarine capabilities for the Swedish Navy. These orders give us the opportunity to continuously plan the best way forward together with the customer."

Source: <https://www.navalnews.com/naval-news/2022/09/saab-receives-orders-from-sweden-for-submarine-upgrades/>

[Finnish Navy receives 4th and final Hamina-class FAC](#)

Patria Group announced on September 13, 2022 that it has delivered its fourth and final modernized Hamina-class missile boat to the Finnish Navy at Upinniemi. Patria has delivered the fourth and last modernized Hamina-class missile boat to the Finnish Navy in Upinniemi. In the Mid-Life-Upgrade (MLU) project, Patria acted as prime contractor, designer and main systems integrator. The fourth upgraded Hamina-class missile boat, called Pori, started its sea acceptance tests related to the commissioning of the boat already in spring, which continued during the summer. In total, four missile boats were upgraded between 2018-

2022 as part of the MLU project, providing new capabilities to the Finnish Navy. The large-scale overhaul ensures the ability to counter maritime threats, repel attacks at sea, protect sea lines and monitor and ensure territorial integrity. With the new torpedo and surface missile system, as well as upgrades to the surface-to-air missile system, the ships are capable of impacting in the air, on the surface and underwater. The planned life cycle of the Hamina class extends to the 2030s with the life cycle upgrade. "The Hamina Class mid-life upgrade and modernization illustrates well the advanced integration capability of the Patria system. In addition to the mid-life cycle review and extension, one of the main objectives in the Hamina Class modernization was the development of anti-submarine warfare performance. As part of the new capabilities, Patria has provided the Hamina Class ships with the innovative new training target system it has developed, which enables anti-submarine warfare training in a flexible and most cost-effective way." Said Veli-Pekka Heinonen, Patria Finland Division's Director of Marine Business. Patria is an international provider of defence, security and aviation life cycle support services, pilot training and technology solutions. Patria provides its aerospace and military customers with equipment availability, continuous performance development, and selected intelligence, surveillance and management systems products and services. Patria has several locations including Finland, the Netherlands, Sweden, Norway, Belgium, Estonia and Spain. Patria is owned by Finland (50.1%) and Norwegian Kongsberg Defence & Aerospace AS (49.9%). Patria owns 50% of Nammo, and together these three companies form a Nordic defence partnership.

About the Hamina-class FAC modernisation All four Hamina-class ships are being modernised as part of the Mid-Life Modernisation (MLU), providing new capabilities to the Finnish Navy. Local contractor Patria acted as prime contractor, designer and main systems integrator. The aim of the Mid-Life Upgrade project is to ensure the service life of the ships until 2030 and extend the time the ships can operate independently. The project will also add new capabilities to anti-submarine warfare (ASW) and surface defence capabilities. The upgrade work includes: A BAE Systems Bofors 40 Mk4 40 mm main gun (replacing the 57 mm Mk3) IAI Gabriel V Saab Torpedo 47 anti-ship missile Saab Trackfire remote weapon stations Saab 9LV Battle Management System Kongsberg ST2400 variable depth sonar With this MLU, the Hamina class will be compatible with the Finnish Navy's future Pohjanmaa class corvettes.

Source: <https://www.navalnews.com/naval-news/2022/09/finnish-navy-receives-4th-and-final-hamina-class-fac/>

Three additional LNG cruise ships mark key milestones

The cruise industry is preparing for the launch of three large cruise ships before the end of the year, each powered by liquefied natural gas. It's part of the industry's efforts to improve its environmental performance, with cruising among the shipping sectors rapidly adopting LNG. Cruising launched its first fully LNG-capable ships at the end of 2018 and moved on to a total of seven large cruise ships already in service using LNG, with three more scheduled to enter service in November and December this year. Currently, there are a total of 10 LNG-powered cruise ships, including three smaller ships and the seven large cruise ships, plus another 25 either under construction or on order for delivery by 2028. Four additional LNG cruise ships are also optional. Carnival Corporation was the first to introduce LNG-powered cruise ships, working with Germany's Meyer Werft to develop designs for the first large cruise ships. AIDANova was launched in 2018 as the first of its kind, with the design platform also being adopted by Costa, P&O and Carnival Cruise Line. Recently, the next two ships built on the LNG platform have marked key milestones as they prepare for their upcoming maiden voyages. Carnival Cruise Line's second LNG-powered cruise ship, Carnival

Celebration set sail on Monday, September 5, for its first round of sea trials from the Meyer Turku shipyard. The Finnish shipyard has built two LNG cruise ships for Costa and is now completing the second of two cruise ships for Carnival. Carnival had a full contingent of officers, technicians and engineers on board to thoroughly test the ship's technical, mechanical and navigational systems when it first set sail in early September. "During sea trials, Carnival Celebration underwent several tests, which are designed to determine the ship's capability and performance. We did many manoeuvring tests such as endurance tests, steering tests, speed tests and thruster tests. The ship has done wonderfully and in a short time we will take her out and start sailing," reported Captain Vincenzo Alcaras. The Carnival Celebration enters service on 6 November. She will make a special transatlantic sailing from Southampton to Miami before starting 7-day cruises in the Caribbean. She will become the first LNG-powered cruise ship to be based in Miami.

Another cruise ship built on the same platform, P&O Cruises' Arvia, being built at Meyer Werft in Germany, also marked a milestone on 27 August. The 1,130-foot-long cruise ship was operated from the Meyer Building's covered dock II. Floating began early in the morning, with the ship positioned near the fitting-out dock, where the funnel and mast will be lifted onto the ship with a crane. The ship's lifeboats have also arrived in the yard and will be placed in groups while she is at the fitting-out dock. It is expected that the Arvia will make its transport on the Ems to the North Sea in early October. She will then undergo sea trials and final fitting out before her handover. Her maiden voyage is scheduled for 9 December, with a return sailing from Southampton to the Canary Islands. After Arvia left the building hall, the floating engine room module for Carnival's third LNG-powered cruise ship, Carnival Jubilee was moved to the dock to be joined with other blocks that had already been assembled in the hall. The Carnival Jubilee is scheduled to be delivered in late 2023. Based on the same platform, all three ships are approximately 180,000 gross tons and accommodate more than 5,200 passengers. They share common design elements such as a three-storey atrium and unique elements for each cruise line. P&O expands the dining and entertainment options, while Carnival Celebration has an area to highlight Miami and special elements, including accessories and furnishings from the company's previous cruise ships, to mark Carnival's 50th anniversary. MSC is also preparing to launch its first LNG cruise ship, MSC World Europe marking a key milestone on September 10. The ship has completed its first LNG bunkering in the French port of La Rochelle. At 215,863 gross tonnes, she becomes one of the largest cruise ships in the world. Her naming ceremony is scheduled for 13 November in Doha, the capital of Qatar, as the ship serves as a hotel during World Cup matches. She will sail from Qatar until March 2023 before repositioning in the Mediterranean. Disney Cruise Lines also announced details of its second LNG-powered cruise ship, which will be named Disney Treasure when it enters service in 2024. Royal Caribbean International is preparing for the launch of its first LNG-powered cruise ship, Icon of the Seas, in late 2023, as well as a smaller, luxury cruise ship, Silver Nova, under construction for its Silversea Cruises brand. The 54,500 gross ton cruise ship is scheduled to enter service in summer 2023. Fincantieri begins construction of first LNG-powered cruise ships Work began in July on the first LNG-powered cruise ship for Germany's TUI Cruises. Fincantieri is also building a new class of LNG cruise ship for Princess Cruises.

Source: <https://www.maritime-executive.com/article/three-additional-lng-cruise-ships-mark-key-milestones>

[Greek-run Vrachier shipped coal from Russia after EU sanctions](#)

A ship run by a Greece-based company shipped coal from a port in Russia late last month after European Union sanctions on the commodity took effect, according to maritime

data analyzed by Bloomberg. The ship, the Stavros, completed loading 53,000 tons of coal at Russia's Taman bulk cargo terminal on Aug. 29, according to data from analyst firms Kpler and Logistic OS. It arrived at a port near Iskenderun in Turkey on Sept. 5, Bloomberg ship-tracking data show. Stavros is managed by Athens-based Eastern Mediterranean Shipping. A spokesman for the company declined to comment on the ship's cargo, but said there could not be a sanctions violation if the destination wasn't in the EU. The European Commission has previously said the sanctions apply to any coal shipments originating in Russia, regardless of destination. The ban on coal covers both the "purchase" and "transfer" of these goods, regardless of the final destination, the EU executive said. The sanctions also extend to financing and insurance by EU companies, regardless of the origin of the company taking over the cargo. It is unclear whether the coal originated in Russia or who ultimately owns the ship, while the final destination and use of the shipment is unknown. Since Russia's invasion of Ukraine in February, the EU has introduced a series of sanctions in an effort to increase pressure on President Vladimir Putin's war machine. But the restrictions have also imposed massive costs on European economies, with rising energy prices triggering inflation and higher interest rates, especially since the Kremlin shut off a key gas pipeline to Germany this month. The ban on coal imports from Russia began on 10 August after a four-month slowdown. The commission issued a clarification last month to stress that the sanctions prohibit EU companies from providing services, such as financing or insurance, to any coal shipments originating in Russia. A circular sent last month by members of the International Group of P&I Clubs, which covers 90% of the world's ocean tonnage for risks such as spills, suggested that companies were surprised by the EU's explanation and assumed the ban on transfers and services would not apply to export destinations outside the EU. Most insurers are subject to EU jurisdiction, according to the circular, because even those based outside the bloc rely on European reinsurers to diversify their risks. The Stavros departed from berth 2B at the Taman bulk terminal and left Russian waters bound for Turkey, according to shipping data. That berth is used for loading coal, according to shipping agency EISA. After its stop in Turkey, the ship stayed higher in the water than when it arrived, according to Bloomberg ship-tracking data, indicating it unloaded a substantial amount of cargo. A spokesman for the commission declined to comment, saying the application of sanctions was a matter for national authorities. A Greek government spokesman said he could not comment. Stavros has protection and indemnity insurance with Standard Club, according to its website. The entry says the ship's cover is entered in Standard Club's European division. UK companies are also barred from offering insurance for Russian coal shipments, according to a government official familiar with the British regime. The ban applies regardless of the destination of the coal, said the official, who spoke on condition of anonymity. A Standard Club official said it has policies in place that a sanctioned shipment will not be insured, but would not go into details of individual shipments. The coal ban was approved by the EU in April as part of the fifth package of sanctions against Russia. The EU said at the time that it would affect a quarter of all Russian coal exports, representing annual revenues of about €8bn (\$8bn). Restrictions on Russian oil seaborne shipments will also come in later this year. These will similarly include a ban on related services, including insurance, which are used to transport oil around the world.

Source: <https://gcaptain.com/greek-managed-bulk-carrier-shipped-coal-from-russia-after-eu-sanctions/>

Privatisation of Daewoo Shipbuilding a priority for Korea

Speaking to reporters today, the new president of the Korea Development Bank said efforts to sell Daewoo Shipbuilding and Marine Engineering (DSME) to private investors is one of the bank's top priorities. The state-owned financial institution has been the largest

investor in the financially troubled shipyard for more than 20 years. Chairman and CEO Kang Seog-hoon spoke at a press conference with reporters marking his first 100 days as leader of the government institution that used to invest in Korean industry to both support development and promote business. KDB also invests in financially troubled companies during their reorganizations to support the companies' return to stability and financial health. Kang outlined his priorities and the challenges he sees for Korean business. DSME is KDB's latest investment in the shipbuilding sector after the financial institution completed the sale of several smaller shipyards to private investment groups. In early September, it was reported that they had completed the sale of Daehan Shipbuilding. Last year, several other medium-sized shipyards were also sold, including the remaining interest in the former STX. KDB first became involved with DSME in the late 1990s during a shipyard reorganization. In 2000, they became the largest shareholder with a position representing 49 percent of the shipbuilder's equity. Seventeen years later, in 2017, DSME entered into a debt swap arrangement with KDB that increased the bank's position to 79 percent (if all options are exercised) as part of a \$2.8 billion recapitalization of the shipyard. However, DSME's corporate value has reportedly fallen from \$4.8 billion when the bank first suggested its privatization in 2008 to a valuation of about \$1.2 billion as of 2019. Korea JonhAng Daily reports that Kang said the shipyard "needs a lot of R&D and new investment," with that investment best coming from private investors. He also told reporters that finding new investors for DSME could help increase management efficiency for the shipyard as a way to "save DSME," which remains one of Korea's big three in the shipbuilding sector. KDB has been studying various possible exit routes for its investment in DSME over the past few years. They supported the proposed merger that would have made the shipyard part of Hyundai Heavy Industries. After the EU effectively blocked the merger, KDB sought a new private investor, and the situation was accelerated by new financial challenges at the shipyard, which worsened during a 51-day subcontractor strike this summer. The Korea Times reports that Kang is striving for the successful sale of DSME "as soon as possible". Discussing options, the KDB chief said, however, that it would not be possible to split the shipyard into its commercial and government business and sell the two sections separately. Speculation has recently focused on the possibility of breaking up DSME to facilitate its sale. Speaking about his long-term strategy, Kang said he is moving forward with a plan to move KDB's headquarters from Seoul to Busan to place it closer to the largest port and key industries, including shipbuilders. The government and the bank have announced plans to invest in Korean industry, including major efforts to support shipbuilders' transition to new technologies and support their leadership in green technology and automation. Kang said the bank will also invest more than \$20 billion in the semiconductor industry over the next five years.

Source : <https://www.maritime-executive.com/article/privatization-of-daewoo-shipbuilding-is-priority-for-korea>

CEO in focus: Allard Castelein, Port of Rotterdam

The Port of Rotterdam has blazed a trail for ports globally in terms of automation, digitisation and decarbonisation. As he enters the final year of his tenure, Allard Castelein, CEO, Port of Rotterdam, says there is still much work to be done. While many global organisations are experts in 'talking the talk', the Port of Rotterdam stands out as 'walking the walk' in terms of real investment and innovation in robotics, digitisation and infrastructure improvements to facilitate the efficient and effective transfer of ship cargo for global distribution. At the helm to ensure a smooth flow of trade is CEO Allard Castelein, who has held the top spot at Europe's largest port since 2014. Today, Castelein, entering the final year of his tenure, and his team face a number of unique challenges, including the Russian war in

Ukraine and the resulting sanctions that have halted the flow of Russian trade westward and thrown all of Europe into an era of uncertainty over energy and economic security. Port of Rotterdam: by the numbers "The Port of Rotterdam is by far the largest port in Europe and one of the most important ports in the world," Castelein said, moving some 470 million tonnes a year [468.7 million tonnes in 2021], creating some 565,000 jobs by associated businesses. to the port, plus "8.2% of the €63 billion gross national product through the trade volumes we generate and facilitate." Despite the port's historical reliance on cargo - particularly energy - shipments to and from Russia, in mid-July the port reported that total cargo shipments in the first half of 2022 of 233.5 million tonnes were slightly higher (0.8%) than in the first half of 2021, with strong increases in LNG and coal cargoes to mitigate the impact of Russia's reduction in gas supplies to Europe via pipelines. In addition, crude oil production increased as oil products declined. Iron ore, agricultural bulk and container throughput was lower than the same period last year. "Europe relies heavily on Russian energy, and the current geopolitical situation makes Europe very vulnerable," Castelein said in announcing the first-half results for 2022. "A positive development is that in recent months concrete steps have been taken to make our energy supply more sustainable and to increase our energy independence, in particular through investment decisions to build a large biorefinery and the largest green hydrogen plant in Europe. The business community has made a commitment over the last half year to invest €3 billion in the energy transition." The Port Authority had a good first half of the year financially, with revenues up 6.3% (€24.6 million) to €412.2 million and operating expenses down 2.4% (€3.1 million), mainly due to lower sand extraction expenditure. Gross investments in the first half of 2022 amounted to €117.1m, including equity capital injections (vs. first half of 2021: €100.5m). While the war in Ukraine and the resulting energy insecurity is the headline story, other challenges remain for Castelein and his team - and indeed for port facilities globally - including rampant inflation and the threat of recession. "Since the outbreak, we've seen a shift in various volumes, but if you add up all the pluses and subtract all the minuses, the half-year results were about the same as last year," Castelein said. But the rising level of sanctions makes the second half of 2022 and beyond a little less clear. "Coal, oil, petroleum products, possibly gas, LNG... each of them had a significant size in Russia; about 20 to 30% of energy volumes originated in Russia. Now this stops completely over time, except for LNG. And some of the volumes will be replaced from other sources. But in total, it is 62 million tonnes of trade volume with Russia (lost). There is no more trade volume with Russia, and that represents about 8% of our total container volumes at a Russian destination or origin."

One port's threat is another port's opportunity

The world was a significantly different place when Castelein took the helm at the Port of Rotterdam in 2014 as markets, economies and technologies evolved simultaneously, but at its core it is much the same. "If you look out the window, it's still a port," Castelein said. "We still have ships coming in. We still have the industries that have a presence and the activities in the terminal facilities that provide services to northwest Europe." That's the outside, and Castelein says the Port of Rotterdam's investment in traditional equipment, hardware, dredging, security and physical infrastructure is ongoing and significant. But "what's under the hood" of the port looks significantly different. Eight years ago, when he started in his post, Castelein said two major disruptions "based on digitization and energy transition" were coming fast and "[we decided] that we would accept those disruptions as opportunities and not as threats." The manifestation of these "opportunities" has essentially transformed the organization at its core. "As a company, we've changed dramatically from our previous position as a custodian of facilities, headquarters and ports," Castelein said, "We've become a very active and proactive business developer, entrepreneur, investor and co-op. creator of various solutions in the energy transition [and] digital realm." With the destination clear, the

port has embraced and embarked on several paths and initiatives "to digitize the logistics value chain and create a digital twin of this port; to truly become the smartest port in existence, with an IoT premise and foundation and a continuous push towards optimization and waste elimination." And in terms of 'waste', Castelein is referring not only to reducing waste in time, money and energy, but also to reducing waste from an emissions profile perspective. "We've invested well over €300 million in the last two years in robotics, optimization and digitization" in various port areas, Castelein said, including investment in Routescanner [note: the Port of Rotterdam Authority is Routescanner's parent company] , which allows shippers to plan their journeys to and from point A to B anywhere on this planet. "We invest in hardware; we invest in the smart app, but we also invest in optimizing the whole port call," Castelein said. This investment aims to have a tangible benefit and he said that by creating an open access platform for all service providers to interact, port call time can be reduced by 20 to 25%, effectively helping companies across the chain reduce costs. and emissions. "Now, that's not efficiency. That will save time, save money, save emissions," Castelein said. "But the same applies if we connect to other ports and have more AIS-enabled information on a longer part of the value chain." To this end, the Port of Rotterdam Authority and the Maritime and Port Authority of Singapore (MPA) recently signed a memorandum of understanding to establish "the world's longest green and digital corridor" to enable low and zero carbon shipping, bringing together different stakeholders from around the world. chain with the aim of achieving the first sustainable ships sailing the route by 2027. Essential to the partnership is the fact that Singapore and Rotterdam are among the world's largest bunkering ports, key cogs in the sector's emerging alternative fuels market. . Beyond alternative fuels, the MoU also aims to optimise maritime efficiency, safety and seamless cargo flow by creating a digital trade lane where relevant data, electronic documentation and standards are shared.

Investing to achieve tough decarbonisation targets

As the world collectively struggles with the means to effectively reduce its emissions, the Port of Rotterdam has adopted a four-pillar plan based on efficiency, new energy systems, new materials and fuel/circulation systems and decarbonisation modalities and has set hard targets to drive its plan: 55% carbon reduction by 2030; carbon neutral by 2050. "Efficiency reduces, for example, waste heat from process industries to power residential areas or plants and factories away from the port," Castelein said, but also includes building a carbon capture facility that "can collect carbon." , deliver it to the fence and take it across the harbor to a depleted gas field offshore, where it's stored for eternity." The second pillar is about the energy system, mainly focused on electrification and hydrogen. A few months ago, the port announced that Shell will build the world's largest (200 MW) electrolyser, with the expectation of having 1.2 gigawatts of electrolysed capacity installed by 2030. The plan for this extends far beyond the port walls, expanding hydrogen infrastructure in the southern parts of the Netherlands and into Germany to supply German industrial groups with green hydrogen, with CO₂ taken instead to be stored in the same depleted field. The circularity pillar has several facets, including a waste-to-chemicals facility, a recycling facility for lithium-ion batteries, and the construction of a sustainable aviation fuel facility. As for talk of the fourth pillar - decarbonising the modalities - Castelein says simply "we either invest, facilitate, allocate land, build quay walls, or collaborate in these processes. In the case of modalities, "we are co-investor in a facility that provides green energy battery packs to inland vessels, where they can take on board a fully charged battery, sail point-to-point in a corridor, discharge the discharged batteries , take a fully charged battery and continue the journey." In total, Castelein estimates that the port is involved in "well over 50 projects in which we operate, run, collaborate and co-invest". "If you sail through the port, you see the drops from the ground, you see the buildings going up; it's real, it's live, it's coming together," said

Castelein, who laments that one of the drawbacks of his job is the enormous amount of time it can take to evolve from a good idea to a built solution. But with Castelein at the helm, all roads lead to a 55% reduction in emissions by 2030 and carbon neutral by 2050. "For the scale of this industrial port facility, this is unprecedented."

Source: <https://www.marinelink.com/news/ceo-focus-allard-castelein-port-rotterdam-499446>