



Efficient. Reliable. Sustainable.

Setting a new standard for cargo and passenger transports in the Baltic Sea

he arrival of M/S Finnsirius to the Baltic Sea took place less than two weeks ago when I am writing this editorial. The close to 12,500 nautical miles journey from China to Europe proceeded as planned, despite facing severe weather conditions near Taiwan and some technical challenges. The vessel was turned into a car carrier on her transfer voyage, carrying over 1,000 cars bound for Europe onboard when sailing from China. During her stop in Gioia Tauro, Italy, the cars were discharged and transhipped while Finnsirius loaded again some 800 special vans to Antwerp, Belgium. During her stop in Gioia Tauro, over 30 more crew members and colleagues joined the vessel to familiarise themselves with her and to ensure that the vessel would be ready for the traffic start with less than a week preparation time after arriving to Naantali, Finland.

M/S FINNSIRIUS, the first of Finnlines two new Superstar ro-pax vessels, was delivered on 18 July 2023. Personally, I think that this is a remarkable achievement, considering that the delivery of Finnsirius took place only 2.5 weeks later than originally anticipated in the Shipbuilding contract, signed almost 3.5 years ago!

Whilst our newbuilding department has been in charge of the Superstar ro-pax project for the past four years, managing everything from preliminary studies, sketches and concept design to supervising and testing that everything is built as planned and agreed, the real test for Finnlines Ship Management is just to begin.

All the preparatory work done, including but not limited to new customer service concepts, IT solutions, innovative upgrades in ship-shore interfaces, everything is now put to the real test. While building a ship is a long, time-consuming and extremely challenging project, taking a newbuilding into traffic is quite different, to say the least. The transfer crew had less than a week after delivery to get

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Thomas Doepel Deputy CEO



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ready for loading cars from China to Europe and once Finnsirius arrived in the Baltic Sea, the ordinary crew had again less than a week to prepare her for Naantali– Långnäs–Kapellskär traffic. Within that time frame, the crew must not only get familiarised with the vessel but also ensure that all cabins, cargo decks, public areas, shops, restaurants and other facilities are ready to meet and hopefully even exceed our customers' expectations.

FINNLINES VISION for setting a new standard for cargo and passenger sea transport in the Baltic Sea is very ambitious and no doubt a challenge for us. We are not only launching several new service concepts, such as archipelago cruises and shuttle services for foot passengers, but also implementing new technologies onboard that are becoming more complex than ever to manage for the crew.

With new solutions, such as auto-mooring and shore power connections, the integration between the ship and shore side deepens and involved parties must develop new routines to manage daily operational tasks. Ship Management's role is inevitably changing, often acting as a representative of the charterer (i.e. the Line) and providing advisory services on how to operate in the most environmentally efficient way.

Whilst in the past Ship Management was required to deliver high reliability, low operational costs and highquality crew, expectations have increased. Improved transparency and good communication skills are today self-evident but, driven by big data, Business Intelligence and IoT, we shall also be able to implement The arrival of Finnsirius will not only improve our Finland–Sweden service, but also other ro-pax services in the Baltic.

predictive maintenance and advisory services and drive fleet performance improvement. Hence, best practices from our new Superstar project will be disseminated to gain other parts of our fleet.

THIS AUTUMN WILL BE REVOLUTIONARY for our ro-pax services. The deployment of Finnsirius and Finncanopus will not only improve our Finland–Sweden service but also enable a cascade of improvements elsewhere in our ro-pax services in the Baltic Sea. Our Malmö–Travemünde line will enjoy improved tonnage and capacity and Finnlines importance for the Swedish security of supply will further grow with the intended start of our new Sweden–Poland ro-pax service. These development steps had never been possible without the arrival of our new Superstar ro-pax ships.

THIS EDITION OF FINNLINES NEWS focuses on the arrival of M/S Finnsirius without forgetting the green transition and the core of our business, namely how we can best serve our customers. Enjoy reading the 2nd edition of Finnlines News 2023.



Finnsirius – huge and innovative

Finnsirius sets off for its maiden voyage from Naantali via Långnäs to Kapellskär on 15 September 2023.

he first Superstar-class vessel in a two-vessel series, Finnsirius, has a length of 235 metres, a beam of 33 metres, a draught of seven metres, and capacity for 1,100 passengers and 5,200 lane metres of freight. The vessel is the largest ro-pax vessel in the Finnlines fleet. Passenger capacity doubles and freight capacity increases by 1,000 lane metres compared to the previous vessels on the route, allowing Finnsirius to carry approximately 200 cars and 300 lorries per voyage. Modern design and technologies together with economies of scale deliver lower emissions per transported unit.

The vessel has the highest ice class 1A Super and it operates under the Finnish flag.

Focus on sustainability

Several state-of-the-art technologies enable Finnsirius to meet high environmental standards. The vessel's route in the sensitive archipelago requires a quite modest speed. This provides a good starting point for environmentally sound traffic and low air emissions. Instead of simply running slowly, Finnsirius has a specifically tailored propulsion system that takes account of low speeds without compromising propulsion efficiency. The route through narrow and shallow archipelago waters sets its own hydrodynamic challenges, and the Finnsirius' hull shape is designed to navigate the fairways with minimum energy consumption and environmental impact in these special conditions.

To improve hydrodynamic performance,

Finnsirius is equipped with an air lubrication system that further reduces resistance and the power required to propel the vessel by creating a rigid carpet of micro-bubbles under the bottom of the vessel.

"We are excited to have these features onboard Finnsirius and have high expectations for fuel economy and reduced air emissions," says **Juha Ahia**, Finnlines' Project Manager for the Superstar newbuilding.

The ship is equipped with a shore power connection, which is an alternative energy source in the port, meaning zero emissions and lower noise level during port calls. Shore-side electricity also facilitates the charging of lithium-ion batteries, enabling the use of clean shore-side electricity at sea. An auto-mooring system ensures faster

Green Investment Programme nearly completed

In 2018, Finnlines launched a Green Investment Programme, which consists of three ro-ro and two ro-pax vessels. Today, four vessels have already entered service and the last, Finncanopus, is scheduled to be delivered at the end of 2023.

Tom Pippingsköld, President and CEO of Finnlines, has been very pleased to welcome the new arrivals. "The Green Investment Programme has been a massive investment of EUR 500 million, but it has and will benefit our freight customers and private passengers. Finnlines can carry more cargo in a more sustainable manner. Smooth and secure marine transportation is crucial for the economies of the Baltic Sea countries and their national security of supply. As an example, around 90 per cent of Finnish and Swedish exports and imports are carried by sea."

mooring, further reducing air emissions.

Other energy-saving technologies onboard Finnsirius include air quality controlled variable speed fans in cargo hold ventilation, waste heat recovery in machinery cooling systems, cold seawater utilisation in air conditioners, air quality controlled air conditioners and lightning control.

To prevent oil pollution, water lubricated stern tubes and environmentally friendly oils are used in bow thrusters, fin stabilisers and cargo access equipment.

Efficient engines with a hybrid concept

Finnsirius has Wärtsilä 46F main engines, thrusters, and a modern hybrid drive system with 5 MWh of energy storage.

The shaft generator system consists of a fully integrated multidrive, which can also use the shaft generators as motors. The package also includes a power management system, an energy management system for performance optimisation and a bow thruster control. The aim is not only to operate the vessel emission-free on shore power while in port, but also to reduce emissions by using clean shore-side electricity at sea.

"We have Wärtsilä solutions in most of our ships, so we are familiar with the efficiency and reliability they offer," says Ahia.

Layout and design

Onboard, passenger and crew cabins are located on two decks, leaving an open area at the stern for the transport of dangerous goods units. Decks 9 and 10 comprise the cabin areas and the aft of both decks has been reserved for drivers. Drivers' sauna and lounge are on deck 10. Both open to an outdoor terrace.

A total of 323 passenger cabins offer new categories and sizes, ranging from the luxurious sea view suite with a bathtub to spacious family cabins and standard cabins.

Finnsirius passenger facilities consist of seven cafes and restaurants, a sauna and spa area, business and lounge areas, a large duty-free shop and many other facilities. A top chef, **Henri Alén**, has been involved in the menu design. The Swedish multi-awarded bartender **Josephine Sondlo** has planned a choice of drinks, which are only available on the new Finnlines vessels.

The crew are accommodated in 64 cabins. The crew facilities are completed with a good-sized gym and sauna as well as a separate mess and dayroom.

The interior design draws inspiration from nature and natural materials, with views of the sea and archipelago playing a key role in the design. Large windows, seating areas and a covered outdoor deck connect the interior with the archipelago views experienced along the voyage. The interior was designed by the leading Finnish interior design studio dSign **Vertti Kivi**.

Trade route through the Archipelago

Finnsirius will enter Finnlines' Naantali– Långnäs–Kapellskär line connecting Finland, Åland Islands and Sweden. Operational sailings start in September 2023. The sister vessel Finncanopus will be delivered at the end of 2023 and she will enter service on the same route.



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Behind a great project

Finnlines' Newbuilding team has worked together with Grimaldi Group's experts to create the most environmentally friendly vessel ever operated in the Baltic Sea. Our experienced shipbuilders Juha Ahia, Project Manager for the Superstar newbuilding, **Pasi Väänänen**, Technical Superintendent, and **Kristiina Uppala**, Onboard Concept Development Manager, have ensured that the commonly set targets have been achieved during the design and construction phases.

Juha Ahia shares an insight into the supervision of the project, but he emphasizes that shipbuilding is not a oneman show. Finnlines' in-house knowledge as well as engineering consultants and an interior architect outside the company were involved. On-site supervision has of course played an important and significant role in the implementation of the vessel and in ensuring quality at the shipyard. Finnlines' site team is an international team, with members from Brazil, China, Finland, Italy and Romania.

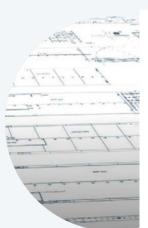
The list of tasks is always long: to check technical details, approve drawings, suggest changes, select equipment suppliers, and secure the contracted quality. "All in all, I have to keep abreast of the latest developments and how the project proceeds."

Shipbuilding is a collaborative project and in addition to the Weihai shipyard it has engaged many equipment and system suppliers. Several European suppliers, and in particular Finnish suppliers, have been involved in the construction of the state-of-the-art vessel. The share of European suppliers is over 40 per cent The main suppliers include Wärtsilä (main engines, bow thrusters, hybrid drive system), Kongsberg (propulsion and steering gears), Hyundai Himsen (auxiliary engines), Saacke (exhaust and oil fired boilers), Langh Tec (hybrid exhaust gas scrubbers), Auramarine (fuel supply units), Alfa Laval (purifiers and ballast water treatment), Silverstream (air lubrication), MacGregor (cargo access equipment), KONE (elevators), Heinen & Hopmann (air conditioning), Sperry (navigation system), Novenco (cargo hold ventilation), Consilium (fire detection), Marioff (fire extinguishing), and R&M (interior TK) and many others.

Construction of Finnsirius From drawing board to home waters

The general idea is to design a vessel which meets the highest technical and environmental standards. As the vessel will operate in the Northern Baltic between Finland and Sweden, ice conditions must be taken into consideration. Turnaround time in ports will be short, and so handling of cargo shall be smooth, fast and efficient and it shall be possible to drive the freight through the vessel on two decks.

On the Naantali–Långnäs–Kapellskär line, private and commercial passengers, i.e. lorry drivers, may have diverse expectations. A sauna bath, a dive into a hot tub, nice dinner with a pint of beer and 7–8 hours of rest in peace and quiet may be preferred by drivers, whereas leisure travellers may be keen to admire the magnificent Archipelago Sea through panoramic windows, and spend time in a spa, gym or lounge. The vessel shall offer multiple facilities and upgraded services compared to the existing vessels on the line.



> 2019

A shipbuilding project starts with design development. The Danish-based ship design consultancy, Knud E. Hansen, drafts the concept design for a ro-pax vessel.

During the autumn of 2019 representatives of the Finnlines Newbuilding department visit shipyards in China and Korea to survey their capacity and facilities to build ro-pax ships.

In December, Finnlines signs a contract for two ropax vessels with China Merchants Jinling Shipyard in Weihai. The concept is further developed into a contract design by the Finnish naval architects and marine engineers Deltamarin. The focus will be on sustainability, passenger comfort and efficient cargo handling. The ships, called "Superstars", will be larger than any of Finnlines' existing ro-pax fleet.





> 2020

January: Covid-19 makes ordinary design development visits to the shipyard impossible, and both technical and interior design issues are discussed in online meetings. In the autumn, construction of both hulls begins by keel laying blocks.



> 2021

February: The names of the two ro-pax ships are revealed. Finncanopus and Finnsirius are named after the brightest stars in the night sky.

June: The construction of Finnsirius gets into the full swing with the steel cutting ceremony. Finnlines' supervision site team starts work.

▶ 2022

April: The start of Finnsirius hull erection in a dry dock is celebrated. A total of 451 steel blocks are to be joined together.

August: Finnsirius is launched.

Instead of doing all the work at the shipyard, cabins are prefabricated by an external subcontractor. Prefabricated elements can be rapidly positioned onboard the ship, which accelerates installation works. Launch of cabins onboard Finnsirius starts. Interior outfitting starts.

September: The hull erection of Finncanopus starts. **October:** Finnsirius' main switchboard is powered. **December:** Finnlines announces open vacancies. As many as 200 seafarers will be recruited to serve freight and passengers on the new ships. A great many well-qualified applicants express their interest. Finncanopus is launched before New Year.



▶ 2023

March: First main engine onboard Finnsirius is started. **April:** While the previous generation of Finnlines ro-pax ships have a traditional buffet restaurant, a bar and some of them a café, Superstars will have a total of seven restaurants. Top chefs are involved in planning the dining concept, which is introduced to media in Helsinki. "Each portion of food must have a story behind it."

Finnsirius is docked for underwater hull cleaning and inspection.

May: Masters and Chief Engineers are appointed for the two ships. All have a proven track record and many have served Finnlines for many years. Other senior officers and crew members are appointed during the summer. The first crew members move to Weihai to take part in sea trials and prepare Finnsirius for her home voyage and commercial traffic.

Sea trials are conducted to verify the performance of the vessel, such as speed, manoeuvrability and comfort, and to test and prove the proper functioning of machinery and equipment in seagoing conditions. Finnsirius measures noise and vibration in various spaces, tests the Williamson turn and course keeping, the unmanned engine room and even the pizza oven in the Yellow Sea over nine days. Around 300 shipyard workers will work on board to ensure the vessel operates as contracted and will be delivered on time. **July:** On 18 July, Finnlines takes delivery of the first Superstar, Finnsirius. Twelve sets of documents must be signed before Finnlines becomes the sole owner. The captain raises the Finnish flag and the crew members can move aboard to take over the control of the ship. On 23 July, accompanied by fireworks, Finnsirius departs from the shipyard.

Interior view – spaces for all ages





Enter any of the restaurants as Fisherman's Bistro, Barrel Bay Bar & Tapas and Micke's Wine & Dine serve new exciting culinary delights, but the traditional buffet also welcomes guests.



The outdoor terrace is a great place to admire the Archipelago.



No reason to skip the leg day!









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MEET OUR CUSTOMERS Finnlines aims to grow with its customers and this series of articles is the first to introduce some of them.

Spotlight: Ahola Group's evolution in logistics

Diving into the dynamic world of logistics, let's meet the remarkable Ahola Group. Established in 1955 as a response to the increasing need for transporting welfare state components, this family business has evolved into a significant player in international logistics.

he Ahola Group consists of Ahola Transport, a specialist in road transportation, Ahola Special operating in heavy and oversized units, and Ahola Digital providing digital logistics solutions. With a robust turnover of EUR 129.5 million in 2022, they boast an impressive fleet of 560 vehicles and a dedicated team of 700 employees.

Åke Nyblom, Managing Director, Ahola Transport Routes and modes:

Ahola Transport utilises Finnlines' routes, such as Naantali–Kapellskär, Hanko– Gdynia, Travemünde–Turku/Uusikaupunki/ Helsinki. Meanwhile, Ahola Special's unique projects demand engagement across various Finnlines' routes.

Ahola Transport mainly operates lorries and trailers but also lorry chassis. Ahola Special's transports consist of various special transports in loose packages, on mafi trailers and special ro-ro transports.



According to Åke Nyblom, Managing Director of Ahola Transport, the Group works hard on sustainability issues and staff well-being.

Ahola Group is actively transitioning to electric and gas-powered lorries.

Sea vs. land/rail:

While Ahola Transport's core lies in land transportation, we integrate sea-legs into our cross-border operations seamlessly. Although rail transport isn't a regular choice, it becomes relevant for projectbased endeavours. In particular, sea transportation is extremely important for Finland's exports due to its strategic geographical location.

Swedish market and challenges:

The Swedish crown's depreciation by 20 per cent during the past 18 months theoretically favours export-oriented economies like Sweden. However, the situation is nuanced due to the drop in the Swedish Purchasing Manager Index (PMI) and the struggles faced by numerous Swedish companies grappling with dwindling orders.

Green transition and sustainability:

Sustainability isn't just a buzzword for Ahola Group; it's an integral aspect of our strategy. Aligned with the UN Sustainable Development Goals, we work to cut emissions diligently through various strategies. Leveraging digitalisation, we enhance our efficiency while curbing the carbon footprint. Notably, we are actively transitioning to electric and gas-powered lorries, signalling our commitment to a greener future.

Recent investments and future plans:

Ahola Group's investments span diverse areas. We're prioritising driver well-being by establishing a Trucker's Spa in Naantali, complete with modern facilities and even an outdoor gym. Additionally, our fleet is evolving with electric and gas lorries, while the wind power transport niche leads to increased adapter wagon investments. Cutting-edge technologies like laser scanning and 3D modelling are embraced. Infrastructure upgrades, solar electricity systems, and new facilities further highlight our commitment.

Industry evolution and future prospects:

The Green Transition is reshaping logistics, demanding adaptation to EU emission targets and global crises.

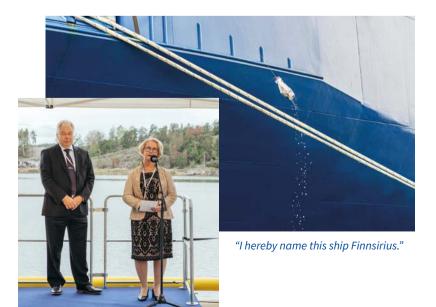
The responsibility work will gain in importance in the next few years, and we have to work hard together to respond to the various aspects of this huge challenge.



Getting Sirius Stylish, spectacular, stunning – a Superstar debuts

n 13 September Finnlines could finally welcome media, customers and other stakeholders onboard M/S Finnsirius. Celebrations started with a naming ceremony, which was followed by an evening reception. Nearly 700 guests attended the event and all seemed to be impressed by the thoughtfully designed spaces and high-quality services. The vessel itself was quite a majestic sight in the port of Naantali.

Tiina Ahola, representing the Ahola Group, had been invited to act as the Godmother of M/S Finnsirius. Ahola is an international logistics company, which has a long-standing relationship with Finnlines, both being major carriers of Finnish exports and imports. Following the tradition at maritime namings, Tiina Ahola broke a bottle of champagne against the bow, wishing the ship, its crew and passengers good fortune and fair winds. >





Captain Timo Dahlberg was proud to introduce the new ship to the quests.



"Finnlines is the market leader on this route, but Finnsirius sets new standards for transportation of freight and passengers," said **Antonio Raimo**, Line Manager, Finnlines.

Finnlines is mainly known as a freight carrier, but the company has also served professional drivers and private passengers over the years. Nostress voyages have been appreciated but today Finnlines has more to offer. "We intend to offer the most convenient and easiest way to travel by sea between Finland and Sweden. Cruises have made a welcome comeback in Naantali now that foot passengers can also board the ship," said **Marco Palmu**, Head of Finnlines Passenger Services.



Finnsirius' Godmother Tiina Ahola surrounded by representatives of Finnlines and Port of Naantali after the ceremony.

Guests had an opportunity to tour the ship and taste culinary delights in ship's bars and restaurants. Many stopped to listen to star-themed live music.





Automatic trailer trestles – a Finnlines invention

In the wake of 'trailerisation' of the transport chain, an automatic trailer trestle system was developed and patented by Finnlines in the early 2000's. The system made securing of trailer cargo safer, easier, faster, and more costefficient.

Automatic trailer trestles were first adopted in the Helsinki–Travemünde



traffic, but the equipment has gradually been taken into use in several other ports.

The aim was also to improve stevedores' safety at work and to reduce the ro-pax vessels' stopover hours in port on the Helsinki–Travemünde route.

Aarhus took the challenge

Monday, 5 June 2023, was Denmark's Constitution Day, but it was also the day when Finnlines started using Auto trestles in full scale in Aarhus.

The ro-ro vessel Finnbreeze arrived early on Monday morning at 7, and the first discharging took place in beautiful sunshine. The stevedores were well prepared, and so the operation went smoothly although there was some driving back and forth in the beginning. After all, many workers had to adopt new working habits and routines. The vessel crew, Finnlines office staff, the stevedores' foreman, but especially the stevedore drivers and lashing staff, faced a major change.

According to **Rune Nielsen**, the Managing Director at Finnlines Denmark A/S, introduction of the new equipment was "a good experience and very promising for the future operations despite some expected challenges."



Official Sleepy Head of 2023

Every year, at dawn on 27 July a crowd of people walk to the Naantali guest marina. Many are dressed in pyjamas, nightgowns and bathrobes. Some carry soft toys. All are curious to see who the Sleeper of the year is as the identity is kept secret until he or she is thrown into the sea and revealed. The National Sleepy Head Day (in "I was bowled over by the nomination. At the same time it was a great honour to become part of this fine tradition," said Tom Pippingsköld.

Finnish Unikeonpäivä; in Swedish Sjusovardagen) has been celebrated since the 19th century in Naantali. Although the event dates back to the times when the belief was that people sleeping late were lazy, the official Sleepy Heads have been distinguished composers, painters, actors, entrepreneurs, and politicians, all with some connection to Naantali.

It was not a coincidence that **Tom Pippingsköld**, Finnlines' President and CEO, got drenched this year. Naantali and the entire Western Finland area benefit from Finnlines' investments in new large ecological vessels, scheduled services and increased capacity for freight and passengers between Finland and Sweden. The new ships also provide a high-quality cruising experience in the Archipelago.



Baltops 23 – Ensuring safe merchant shipping in the Baltic Sea

As many as 19 NATO Allies and 1 partner nation, 50 ships, more than 45 aircraft, and some 6,000 people participated in the annual Baltops exercise in June. The exercise gave a unique training opportunity to strengthen the combined response capability critical to preserve the freedom of navigation and security in the Baltic Sea region.

Finnlines' vessels were tracked and some also escorted outside Gotland and Öland. Finnlady had visitors from a

German naval vessel whose crew was interested in learning about operations on a freight-passenger vessel while the joint drill replaced a mandatory ISPS security drill for the Finnlady crew. "It was a very useful drill for us," said Captain Pekka Stenvik.

The NATO Shipping Centre in Britain thanked the ships and their crew for active involvement and dedication to cooperate during the exercise.

Finnlines nominated as the Logistics Company of 2023

The Turku Chamber of Commerce and the Southwest Finland district of Finnish Association of Purchasing and Logistics, LOGY, award every other year the logistics company of the year. In 2023 Finnlines, a Grimaldi Group company, was elected as winner.

Janne Aho, Chairman of the Transport and Logistics Committee of the Turku Chamber of Commerce and CEO of Skanlog Oy, explained the grounds for the election. "Finnlines' investment in the Naantali–Långnäs– Kapellskär route is very important for the region."

He also praised Finnlines for having invested in new, environmentally friendly freight-passenger ships.

The prize was collected by **Staffan Herlin**, Commercial Director at Finnlines, who assured that Finnlines is delighted by the recognition and proud of its role in supporting imports and exports between the two countries and ensuring the security of supply.



GREEN NEWS

> Sustainability is a core element of our business. We have done a lot to ensure sustainability and worked hard to reduce our environmental effects. In the future, maritime decarbonisation will bring big changes into our operations and fleet. At the same time, we think small actions can make a big difference on climate change.

Target: Carbon neutral future New environmental regulations challenge shipping to decarbonize

In July 2023 the International Maritime Organisation (IMO) raised the ambition level to reduce both annual greenhouse gas emissions and carbon intensity of international shipping during the following decades.

To ensure the compliance of ships and shipping companies, the IMO has already adopted short-term greenhouse gas reduction measures, which came into force at the beginning of 2023. Mid-term and long-term measures are still under development.

Short-term measures to cut carbon intensity

The short-term measures oblige all ships to meet certain energy efficiency criteria, both structurally and operationally. The Energy Efficiency

Existing Ship Index (EEXI) is a one-time measure to assess existing ships' structural energy efficiency by comparing the standard emissions from the installed engines with the capacity and reference speed of the ship. Non-compliant ships have to be modified to meet the requirement. All Finnlines' vessels have been verified to meet the EEXI requirements without alterations.

Another short-term measure, Carbon Intensity Indicator (CII), is an annual measure, which requires ships to reach a certain minimum carbon intensity in operation. Carbon intensity is measured by actual CO₂ emissions per travelled distance and capacity of a ship. The required level of carbon intensity decreases by 2 per cent every year, which means that continuous improvement in energy efficiency will be required. In the upcoming years, the regulation will start to affect more and more the way that the vessels can be operated.

Alternative fuels needed to meet future requirements

Shipping industry is one of the most challenging sectors to decarbonize as new technologies and alternative fuels, which are currently not widely available, must be adopted. It is evident that the carbon neutral future cannot be achieved with fossil fuels. Liquefied natural gas, LNG, has been a viable alternative for some ships. Hydrogen, ammonia and methanol have been identified as promising fuels in the long run. However, transition means that all players in the maritime sector, such as engine manufacturers, fuel suppliers and policymakers, face

> challenges. A shipowner needs to be confident that the chosen fuel type is available and bunkering infrastructure exists. Safety

Fleet energy efficiency reduction, carbon intensity

15.5 g CO₂/GT*nm in 2022

16.9 g CO₂/GT*nm in 2021

unkering infrastructure exists. Safety and fuel storage systems on vessels are also a concern in case of some fuels. Finally, a robust regulatory framework must be in place.

Finnlines moves ahead step-by-step

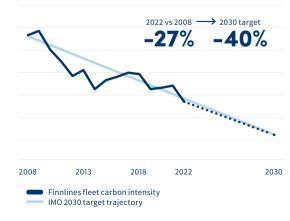
As over the past years, Finnlines continues to improve its fleet's energy efficiency systematically. The performance of the older vessels can be

improved with operational planning and technical solutions. Yet bigger leaps forward are taken when new vessels with the latest innovations are introduced into the fleet. Finneco I, II and III, which entered traffic in 2022, have proven to be much more energy efficient in relation to their capacity than the older ro-ro vessels. The new Superstar ro-pax vessels are expected to outperform ro-pax vessels of the previous generation.

Decarbonization is an enormous challenge, but Finnlines is confident that the company can manage it.

CARBON INTENSITY Finnlines fleet vs. IMO target

(based on g CO₂/GT*nm figures)







More than 170 weekly freight departures and 80 passenger departures.



BalticEuroMed Service



INDICATIVE EUROMED SERVICE QUARTERLY SCHEDULE																	
	GRA																
2023	ELLA	SCA	BRE	EUR	MED	ELLA	SCA	BRE	EUR	MED	ELLA	SCA	BRE	EUR	MED	ELLA	SCA
	09/23	09/23	08/23	08/23	08/23	10/23	10/23	09/23	09/23	09/23	01/24	01/24	01/24	01/24	01/24	02/24	02/54
YENIKOI	23.9	30.9	7.10	14.10	21.10	28.10	4.11	11.11	18.11	25.11	2.12	9.12	16.12	23.12	30.12	6.1	13.1
SALERNO nb	26.9	3.10	10.10	17.10	24.10	31.10	7.11	14.11	21.11	28.11	5.12	12.12	19.12	26.12	2.1	9.1	16.1
VALENCIA nb	29.9	6.10	13.10	20.10	27.10	3.11	10.11	17.11	24.11	1.12	8.12	15.12	22.12	29.12	5.1	12.1	19.1
SOUTHAMPTON nb	4.10	11.10	18.10	25.10	1.11	8.11	15.11	22.11	29.11	6.12	13.12	20.12	27.12	3.1	10.1	17.1	24.1
ESBJERG	6.10	13.10	20.10	27.10	3.11	10.11	17.11	24.11	1.12	8.12	15.12	22.12	29.12	5.1	12.1	19.1	26.1
WALLHAMN	8.10	15.10	22.10	29.10	5.11	12.11	19.11	26.11	3.12	10.12	17.12	24.12	31.12	7.1	14.1	21.1	28.1
ANTWERP	11.10	18.10	25.10	1.11	8.11	15.11	22.11	29.11	6.12	13.12	20.12	27.12	3.1	10.1	17.1	24.1	31.1
VALENCIA sb	16.10	23.10	30.10	6.11	13.11	20.11	27.11	4.12	11.12	18.12	25.12	1.1	8.1	15.1	22.1	29.1	5.2
SALERNO sb	18.10	25.10	1.11	8.11	15.11	22.11	29.11	6.12	13.12	20.12	27.12	3.1	10.1	17.1	24.1	31.1	7.2
PIREO	20.10	27.10	3.11	10.11	17.11	24.11	1.12	8.12	15.12	22.12	29.12	5.1	12.1	19.1	26.1	2.2	9.2
IZMIR	21.10	28.10	4.11	11.11	18.11	25.11	2.12	9.12	16.12	23.12	30.12	6.1	13.1	20.1	27.1	3.2	10.2
ASHDOD	23.10	30.10	6.11	13.11	20.11	27.11	4.12	11.12	18.12	25.12	1.1	8.1	15.1	22.1	29.1	5.2	12.2
ALEXANDRIA	24.10	31.10	7.11	14.11	21.11	28.11	5.12	12.12	19.12	26.12	2.1	9.1	16.1	23.1	30.1	6.2	13.2

More than 170 weekly freight departures and 80 passenger departures.



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FINLAND > GERMANY							
· ·	ARTURE lsinki		RIVAL münde				
Mon	15:00	Tue	21:00				
Tue	15:00	Wed	21:00				
Wed	15:00	Thu	21:00				
Thu	15:00	Fri	21:00				
Fri	15:00	Sat	21:00				
Sat	15:00	Sun	21:00				
Sun	15:00	Mon	21:00				

GERMANY > FINLAND							
	DEPAR	RTURE	ARF	RIVAL			
	Traver	nünde	Hels	sinki			
	Mon	02:00	Tue	10:00			
	Tue	02:00	Wed	10:00			
	Wed	02:00	Thu	10:00			
	Thu	02:00	Fri	10:00			
	Fri	02:00	Sat	10:00			
	Sat	02:30	Sun	10:00			
	Sun	02:00	Mon	10:00			

FINLAND > ÅLAND > SWEDEN								
02170	RTURE ntali	ARRIVAL Långnäs	departure Långnäs	,	lVAL Ilskär			
Mon	11:45	16:35	16:45	18:45				
	22:45	03:45	03:55	06:15	Tue			
Tue	11:45	16:35	16:45	18:45				
	22:45	03:45	03:55	06:15	Wed			
Wed	11:45	16:35	16:45	19:00				
	22:45	03:45	03:55	06:15	Thu			
Thu	10:30	15:00	15:15	17:45				
	23:00	03:45	03:55	06:15	Fri			
Fri	10:30	15:00	15:15	17:45				
	23:00	03:45	03:55	06:15	Sat			
Sat	10:30	15:00	15:15	17:45				
	23:00	03:45	03:55	06:15	Sun			
Sun	10:30	15:00	15:15	17:45				
	23:00	03:45	03:55	06:15	Mon			
	10:30 23:00 10:30	15:00 03:45 15:00	15:15 03:55 15:15	06:15 17:45	o un			

SWEDEN > ÅLAND > FINLAND								
	RTURE ellskär	ARRIVAL Långnäs	departure Långnäs		IVAL ntali			
Mon	10:15	14:40	14:50	19:40				
	21:45	02:10	02:25	07:15	Tue			
Tue	10:15	14:40	14:50	19:40				
	21:45	02:10	02:25	07:15	Wed			
Wed	10:15	14:40	14:50	19:40				
	21:45	02:10	02:25	07:15	Thu			
Thu	10:45	15:30	15:45	20:10				
	21:45	02:10	02:25	07:15	Fri			
Fri	10:45	15:30	15:45	20:10				
	21:45	02:10	02:25	07:15	Sat			
Sat	10:45	15:30	15:45	20:10				
	21:45	02:10	02:25	07:15	Sun			
Sun	10:45	15:30	15:45	20:10				
	21:45	02:10	02:25	07:15	Mon			

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SWEDEN

Malmö booking@nordoe-link.com Phone +46 40 176 800

GERMANY > SWEDEN							
DEPAR	RTURE	ARRIVAL					
Traver	nünde	Mal	mö				
Mon	03:00	11:45	Mon				
	22:00	07:15	Tue				
Tue	02:30	11:15	Tue				
	10:00	19:15	Tue				
	21:45	07:15	Wed				
Wed	02:30	11:15	Wed				
	10:00	19:15	Wed				
	21:45	07:15	Thu				
Thu	02:30	11:15	Thu				
	10:00	19:15	Thu				
	22:00	07:15	Fri				
Fri	02:30	11:15	Fri				
	10:00	19:15	Fri				
	22:00	07:15	Sat				
Sat	03:00	12:00	Sat				
	11:00	20:00	Sat				
	22:00	07:30	Sun				
Sun	01:00	10:30	Sun				
	22:00	07:30	Mon				

	SWEDEN	> GERMANY	
	RTURE lmö	ARRI Traven	
Mon	16:00	00:45	Tue
	22:00	07:00	Tue
Tue	10:00	19:00	Tue
	16:00	00:45	Wed
	22:00	07:00	Wed
Wed	10:00	19:00	Wed
	16:00	00:45	Thu
	22:00	07:00	Thu
Thu	10:00	19:00	Thu
	16:00	00:45	Fri
	22:00	07:15	Fri
Fri	10:00	19:15	Fri
	16:00	00:45	Sat
	22:00	07:00	Sat
Sat	10:00	19:15	Sat
	13:30	23:00	Sat
	22:30	08:30	Sun
Sun	16:00	01:15	Mon
	22:00	07:15	Mon

More than 170 weekly freight departures and 80 passenger departures.



Bilbao

ROUTE	LOADING	SAILING	DISCHARGING	ARRIVAL	Additional info
Belgium - Estonia	Antwerp	Sat 14:00	Paldiski	Wed 04:00	fortnightly service
	Zeebrugge	Thu 23:00	Paldiski	Wed 04:00	fortnightly service
Belgium - Finland	Antwerp	Sat 14:00	Kotka	Wed 06:00	
	Antwerp	Sat 14:00	Helsinki	Tue 15:30	
	Zeebrugge	Thu 23:00	Helsinki	Tue 15:30	
	Zeebrugge	Thu 23:00	Hanko	Tue 12:00	fortnightly service
	Zeebrugge	Thu 23:00	Kotka	Wed 06:00	
Belgium - Ireland	Zeebrugge	Tue 21:00	Rosslare	Thu 04:30	
	Zeebrugge	Thu 22:00	Rosslare	Sat 04:00	
	Zeebrugge	Sat 15:00	Rosslare	Sun 20:00	
Belgium - Spain	Zeebrugge	Sat 14:00	Bilbao	Mon 08:00	
	Antwerp	Fri 22:00	Bilbao	Mon 08:00	
	Antwerp	Sat 14:00	Hanko	Tue 12:00	fortnightly service
Denmark - Finland	Aarhus	Tue 18:00	Helsinki	Fri 06:45	
	Aarhus	Fri 19:00	Helsinki	Mon 06:45	
Estonia - Belgium	Paldiski	Wed 06:00	Zeebrugge	Thu 06:00	fortnightly service
	Paldiski	Wed 06:00	Antwerp	Fri 06:00	fortnightly service
Estonia - Great Britain	Paldiski	Wed 06:00	Tilbury	Sat 07:00	fortnightly service
Estonia - Spain	Paldiski	Wed 06:00	Bilbao	Mon 8:00	fortnightly service
Finland - Belgium	Kotka	Fri 22:00	Zeebrugge	Thu 06:00	
	Helsinki	Fri 20:00	Antwerp	Fri 06:00	
	Kotka	Fri 22:00	Antwerp	Fri 06:00	
	Helsinki	Fri 20:00	Zeebrugge	Thu 06:00	
	Turku	Fri 20:00	Zeebrugge	Thu 06:00	
	Turku	Fri 20:00	Antwerp	Fri 06:00	
Finland - Denmark	Helsinki	Tue 21:00	Aarhus	Fri 07:00	
	Helsinki	Fri 22:30	Aarhus	Mon 07:00	
Finland - Estonia	Helsinki	Tue 22:00	Paldiski	Wed 04:00	
Finland - Germany	Uusikaupunki	Tue 13:00	Travemünde	Wed 21:30	
	Helsinki	Tue 21:00	Travemünde	Wed 07:00	
	Helsinki	Fri 22:30	Travemünde	Thu 09:30	
	Hanko	Tue 12:00	Rostock	Wed 16:00	
	Kotka	Fri 22:00	Travemünde	Mon 05:00	
	Hanko	Thu 14:00	Rostock	Fri 18:00	
	Turku	Fri 23:00	Travemünde	Sun 09:00	
	Hanko	Sat 15:00	Rostock	Sun 20:00	

ROUTE	LOADING	SAILING	DISCHARGING	ARRIVAL	Additional info
Finland - Great Britain	Helsinki	Thu 14:00	Hull	Sun 08:00	Additionatimo
Thilding Great Britain	Kotka	Fri 22:00	Tilbury	Sat 07:00	transhipment in Zeebrugge
	Helsinki	Fri 20:00	Tilbury	Sat 07:00	transhipment in Zeebrugge
	Turku	Fri 20:00	Tilbury	Sat 07:00	
Finland-Ireland	Helsinki	Sat 15:00	Rosslare	Sat 04:00	
	Turku	Fri 20:00	Rosslare	Sat 04:00	
	Kotka	Fri 22:00	Rosslare	Sat 04:00	
Finland - Poland	Hanko	Tue 23:00	Gdynia	Wed 18:00	
	Hanko	Fri 13:00	Gdynia	Sat 08:00	
	Hanko	Sun 18:00	Gdynia	Mon 13:00	
Finland - Spain	Kotka	Fri 22:00	Bilbao	Mon 08:00	
	Helsinki	Fri 20:00	Bilbao	Mon 08:00	
	Turku	Fri 20:00	Bilbao	Mon 08:00	
Germany - Belgium	Travemünde	Mon 14:00	Antwerp	Fri 06:00	
	Travemünde	Mon 14:00	Zeebrugge	Thu 06:00	
Germany - Finland	Rostock	Mon 23:00	Hanko	Wed 06:00	
contractly initiation	Rostock	Wed 24:00	Hanko	Fri 06:00	
	Travemünde	Thu 07:00	Turku	Fri 15:30	
	Rostock	Sat 22:00	Hanko	Mon 06:00	
	Travemünde	Sun 19:00	Uusikaupunki	Tue 07:00	
	Travemünde	Sun 21:00	Kotka	Wed 06:00	
	Travemünde	Sat 20:00	Helsinki	Mon 06:45	
	Travemünde	Wed 16:00	Helsinki	Fri 06:45	
Germany - Great Britain	Travemünde	Mon 14:00	Tilbury	Sat 07:00	transhipment in Zeebrugge
Germany - Ireland	Travemünde	Mon 14:00	Rosslare	Sun 19:00	
Germany - Spain	Travemünde	Mon 14:00	Bilbao	Mon 08:00	
	Rostock	Mon 05:00	Bilbao	Mon 08:00	fortnightly service
Great Britain - Finland	Hull	Sun 20:00	Helsinki	Wed 15:30	0,
Great Britain - Spain	Tilbury	Thu 18:00	Bilbao	Mon 08:00	
	Teesport	Sat 14:00	Bilbao	Mon 08:00	transhipment in Zeebrugge
Ireland - Belgium	Rosslare	Mon 03:00	Zeebrugge	Tue 13:00	
	Rosslare	Thu 22:00	Zeebrugge	Sat 06:00	
	Rosslare	Sat 14:00	Zeebrugge	Sun 23:00	
Ireland - Finland	Rosslare	Mon 03:00	Helsinki	Tue 06:45	
	Rosslare	Mon 03:00	Kotka	Wed 06:00	
	Rosslare	Mon 03:00	Hanko	Tue 12:00	fortnightly service
Ireland - Spain	Rosslare	Thu 22:00	Bilbao	Mon 08:00	
Poland - Belgium	Gdynia	Sun 15:00	Zeebrugge	Thu 06:00	fortnightly service
	Gdynia	Sun 15:00	Antwerp	Fri 06:00	fortnightly service
Poland - Finland	Gdynia	Mon 20:00	Hanko	Tue 17:00	
	Gdynia	Thu 07:00	Hanko	Fri 06:00	
	Gdynia	Sat 15:00	Hanko	Sun 12:00	
Poland - Spain	Gdynia	Sun 15:00	Bilbao	Mon 08:00	fortnightly service
Spain - Belgium	Bilbao	Mon 23:00	Zeebrugge	Thu 14:00	
	Bilbao	Mon 23:00	Antwerp	Sat 06:00	
Spain - Estonia	Bilbao	Mon 23:00	Paldiski	Wed 04:00	fortnightly service
Spain - Finland	Bilbao	Tue 18:00	Helsinki	Tue 15:30	
	Bilbao	Tue 18:01	Hanko	Tue 12:00	fortnightly service
Spain - Germany	Bilbao	Mon 23:00	Rostock	Wed 20:00	fortnightly service
Spain - Great Britain	Bilbao	Mon 23:00	Tilbury	Sat 07:00	transhipment in Zeebrugge
	Bilbao	Mon 23:00	Teesport	Sun 08:00	transhipment in Zeebrugge
Spain - Ireland	Bilbao	Tue 18:00	Rosslare	Sun 19:00	
Spain - Norway	Bilbao	Mon 23:00	Frederikstad	Mon 08:00	transhipment in Zeebrugge
Spain - Poland	Bilbao	Mon 23:00	Gdynia	Thu 18:00	fortnightly service
Spain - Sweden	Bilbao	Mon 23:00	Gothenburg	Mon 08:00	transhipment in Zeebrugge
Sweden - Spain	Gothenburg	Sat 14:00	Bilbao	Mon 08:00	transhipment in Zeebrugge

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