

ANNUAL REVIEW



EDITORIAL

WHAT HAPPENED IN THE MARKET IN 2021 AND WHAT DID IT MEAN FOR ALMACO?



Editorial by Björn Stenwall, President and CEO at ALMACO Group

I would like to start this editorial by thanking our customers, employees, partners, sub-contractors, and suppliers for pulling together and working extra hard as a business community in 2021. It has been fantastic to see us all adapt and reinvent ourselves to reflect the market changes, despite the many challenges and setbacks that we have faced. I dare to say that many of our processes, products, and ways of working are becoming even smarter and more efficient than before the pandemic. As they say, "necessity is the mother of invention". Let's hold on to that thought as we go on and keep up the spirit of improvement and agile adaption in the future as well.

2021 - A YEAR OF PROJECT COMPLETION

2021 was a year of agility, flexibility, and adaptation for the whole industry. The business climate was less dramatic than in 2020 but still filled with uncertainty and cautiousness. The newbuild and modernization markets didn't see many new projects, especially in the beginning, but now towards the end, we are starting to see some signs of a shift for the better.

The slow market situation has affected ALMACO just as it most certainly has affected all companies in our industry. But all things considered, ALMACO has had a good year 2021. Thanks to the big order book that we had built up already before the pandemic, 2021 turned out to be a year of delivering many successful projects to our customers. We completed accommodation and catering projects on MSC Virtuosa, Crystal Endeavor, Royal Caribbean's Odyssey of the Seas, Swan Hellenic's SH Minerva, Costa Toscana, SIEM Shipping's MV Honfleur, and Viking Line's Viking Glory to name a few. We also completed a big confidential offshore living quarter project that we have had a big team working on for the last couple of years.

Although the industry experienced a severe downtime regarding new projects, we were able to secure a substantial number of new contracts for projects in the cruise, expedition, offshore, navy and RoPax ferry sectors.

LOOKING FORWARD

We will continue to streamline our way of working to increase our agility and improve our value. We want to make sure our customers are happy throughout the lifecycle, meaning the entire existence of the ship. We have already started implementing our new concept in a few customer projects. And there is more to come, but that's all I can say about that topic at this stage. So, stay tuned.

We announced our entry into new marine segments in 2021. Further steps will be taken in the upcoming years to deepen our commitment and sharpen our offering for these new customers.

By now, we have grown somewhat accustomed to social distancing, innovative communication technology as well as socializing and collaborating "outside the box". Still, our appreciation for real-life interactions has never been greater and we all hope the world will be open for more exhibitions, events, and meetings so that we can see each other in person. ALMACO plans to have a very active real-life presence as the boards start to open, so we'll probably see you around. Until then, I want to take this opportunity to wish you success and prosperity.





ALMACO IN BRIEF

Our ID Our offering



NEWS Milestones Marine & Offshore Activity

DELIVERED PROJECTS

Viking Glory Costa Toscana SH Minerva Crystal Endeavor MSC Virtuosa



10

ONGOING PROJECT

MSC World Europa



ARTICLES

State of Offshore industry Life cycle digitalization Sustainable ship interiors



GOVERNANCE

Board of Directors Management Team

ALMACO IN BRIEF

STUNNING SURROUNDINGS AT SEA

Eat well, sleep well, relax and enjoy! Our purpose is to create stunning surroundings at sea that make passengers, crew and workers long back the second they leave.

As a full turnkey provider, we offer all catering and interior living areas and lifecycle service solutions to owners and shipyards in the marine and offshore industries worldwide. We take pride in managing largescale turnkey projects while *making it look easy*.

Our customers can lean back and leave the hassle to us. We offer total lifecycle support of the complete product line for newbuilding, modernization, refurbishment, maintenance, equipment and spare parts within each customer segment.





OUR OFFERING

TURNKEY DELIVERY AND LIFECYCLE SERVICE OF ALL INTERIOR AREAS

OUR PRODUCTS



PRE-DEVELOPMENT & PROJECT MANAGEMENT & CONSTRUCTION



SERVICE & LIFECYCLE SUPPORT



YEAR 2021

OUR MILESTONES

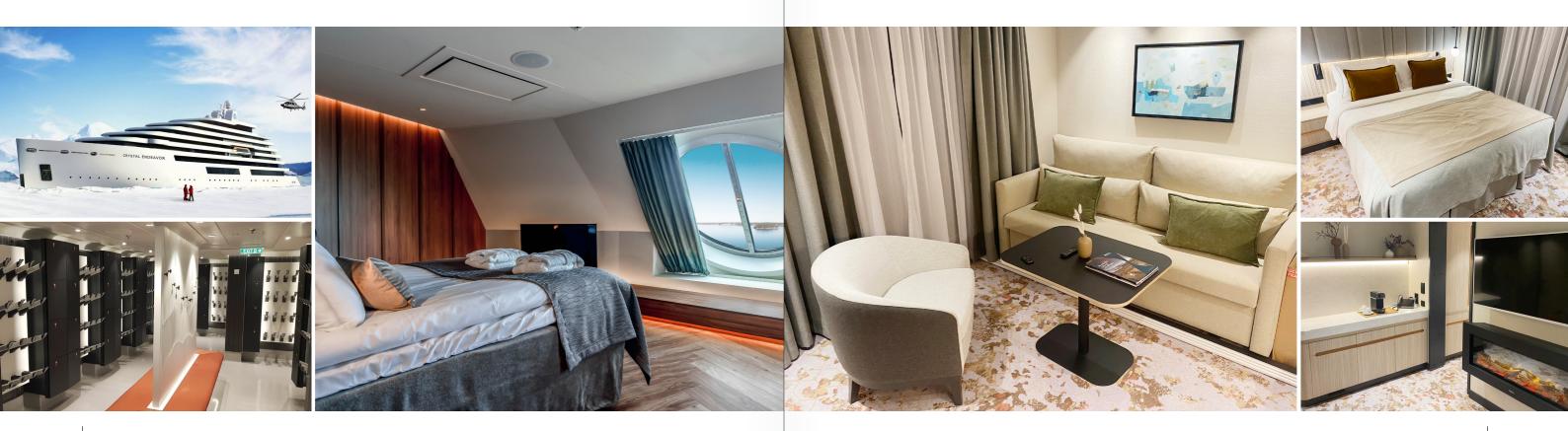
- FEB ALMACO delivers Provision Stores and Waiter Stations for MSC Virtuosa at Chantiers de l'Atlantique. The scope of work consisted of 2400 m² of cold and freezer rooms as well as 92 waiter stations for the restaurants and cafeterias.
- MAR Chantiers de L'Atlantique awarded ALMACO the contract to deliver provision plant refrigeration machinery to Royal Caribbean Cruise Line's vessels, starting with Oasis class vessel #6. The project includes engineering, supply, and commissioning.
- MAR The latest addition to Royal Caribbean's fleet, the magnificent Odyssey of the Seas, was completed at Meyer Werft on March 31st, 2021. ALMACO delivered more than 2000 m²

of provision stores, building on a proud tradition that began in 2001 with the Radiance of the Seas.

- JUL ALMACO delivered crew and public areas for expedition vessel Crystal Endeavor. The construction of the vessel took place in Stralsund in MV WERFTEN shipyard.
- OCT MEYER WERFT and ALMACO complete catering project for P&O cruises' vessel IONA. ALMACO's scope of work consisted of the turnkey delivery and installation for all the cold rooms and freezer rooms, an area around 1900 m².
- DEC Viking Glory, the newest addition to Viking Line's fleet, was delivered to the owner.

ALMACO's scope of works included all cabins, manufactured in the temporary cabin factory located in the Xiamen shipyard, as well as turnkey delivery and installation of provisions stores and equipment for the galleys and pantries.

- DEC SH Minerva, the first ship of the "Vega series" for Swan Hellenic, was completed at Helsinki Shipyard. ALMACO delivered all the crew and passenger cabins as well as crew public areas.
- DEC ALMACO delivered all galley, pantry, and bar equipment and counters for Costa Toscana. The vessel was built at Meyer Turku shipyard. The galleys are also equipped with ALMACO's state-of-the-art Lifecycle service



solution for easy maintenance and monitoring.

- DEC One of our modernization projects during 2021 was onboard MV Honfleur of SIEM Shipping. The scope of work was visual turnkey delivery of catering areas and galley equipment on deck 2, 8 and 11.
- >> DEC ALMACO has had a big team working on a confidential offshore living quarter project for the last couple of years. Our part of the project was successfully completed in the end of 2021.
- DEC Hull 709 was equipped with ALMACO's provision stores and Fast Thawing Chambers at Meyer Werft in Papenburg, Germany.

YEAR 2021

MARINE & OFFSHORE ACTIVITY

2021

ROYAL CARIBBEAN CRUISES LTD

Quantum 5 – Over 2,000 m2 of Provision Stores at Meyer Werft.

CRYSTAL CRUISE LINES

Crystal Endeavor – Steel-to-steel outfitting of 105 crew cabins, crew mess room and recreation areas, and luxury changing rooms at MV Werften.

ROYAL CARIBBEAN INTERNATIONAL

Oasis 5 – Provision Stores at Chantiers de l'Atlantique.

CHANTIERS DAVIE, CANADA

2. Ice Breaker – Galley and Provision Store design; Equipment delivery; Supervision on site.

AIDA CRUISES

AIDAnova – 2600 m² of provisions stores and FTC (Fast Thawing Chambers). First LNG-powered large cruise vessel at Meyer Werft.

COSTA CRUISES

Costa Toscana – Galley equipment at Meyer Turku.

VIKING LINE

Viking Glory – Visual turnkey installation and delivery of all cabins, crew public area, galleys, and provision stores. Some background works included. At Xiamen Shipyard.

SWAN HELLENIC

SH Minerva – Crew and passenger cabins, crew public areas at Helsinki Shipyard.

2022

CHANTIERS DAVIE, CANADA

Chantier Davie's 2. Ice Breaker – Galley and Provision Store design; Equipment delivery; Supervision on site.

CELEBRITY CRUISES

Celebrity Edge – Provision Stores and Refrigeration Machinery at Chantiers de l'Atlantique.

STAR CRUISES

Star Cruises' Global Class 1 – Installation of almost 1,000 crew and passenger cabins. Various crew public areas and staircases. VTK on Global Class wheelhouse. Wheelhouse to be show type of wheelhouse for passengers to enter and visit. Total background and interior outfitting areas over 40,000 m² (131,000 sq. feet) at MV Werften.

SWAN HELLENIC

SH Vega – Crew and passenger cabins, crew public areas at Helsinki Shipyard.

NORWEGIAN CRUISE LINES

NCL Leonardo Class NB6298 – Refrigeration Machinery at Fincantieri.

MSC

MSC World Europa – Galley design, material supply, and installation of Galley equipment. Also design, material supply, and installation of Laundry areas at Chantiers de l'Atlantique.

DISNEY

Disney's hull NB705 – Refrigeration machinery at Meyer Werft.

SWAN HELLENIC

SH Diana – Crew and passenger cabins, crew public areas at Helsinki Shipyard.

P&O CRUISES

P&O Cruises' Hull NBS716 – Provision Stores Delivery at Meyer Werft

2023

ROYAL CARIBBEAN CRUISES LTD

Royal Caribbean's ICON NB1400 – Provision Refrigeration Plant and Ice Rink cooling system at Meyer Turku.

FLOTLOG

Flotlog's Hull C35 – Galley, provision stores and laundry at Chantiers de l'Atlantique.

SILVERSEA

Silversea's Hull NB719 – Galleys and provision stores at Meyer Werft

NORWEGIAN CRUISE LINES

NCL Leonardo Class NB6299 – Refrigeration Machinery at Fincantieri.

CARNIVAL CRUISE LINE

Carnical Cruise Line's 1. Vessel Hull NB1508 – Galleys and pantries equipment with visual turnkey installation Provision Stores with visual turnkey installation at Shanghai Waigaogiao Shipbuilding & Co Ltd.

MSC

MSC's Hull V34 – Provision Stores with visual turnkey installation and Waiter Station at Chantiers de l'Atlantique.

RCCL, EDGE CLASS

Royal Caribbean's Hull M34 – Provision Stores with visual turnkey installation and refrigeration machinery at Chantiers de l´Atlantique.

2024

DISNEY CRUISE LINE

Disney Cruise Line's Hull NB718 – Refrigeration machinery at Meyer Werft

SILVERSEA

Silversea NB720 – Galleys and provision stores at Meyer Werft.

NORWEGIAN CRUISE LINES

NCL Leonardo Class NB6300 – Refrigeration Machinery at Fincantieri.

ROYAL CARIBBEAN CRUISES LTD

Royal Caribbean's ICON NB1401 – Provision Refrigeration Plant and Ice Rink cooling system at Meyer Turku.

CARNIVAL CRUISE LINE

Carnical Cruise Line's 2. Vessel Hull NB1509 – Galleys and pantries equipment with visual turnkey installation Provision Stores with visual turnkey installation at Shanghai Waigaogiao Shipbuilding & Co Ltd.

TUI CRUISES

TUI Cruises' Hull NB6312 – Refrigeration machinery at Fincantieri

2025

NORWEGIAN CRUISE LINES

NCL Leonardo Class NB6301 – Refrigeration Machinery at Fincantieri.

DISNEY

Disney Cruise Line's Hull NB705 – Refrigeration machinery at Meyer Werft

TUI CRUISES

TUI Cruises' Hull NB6313 – Refrigeration machinery at Fincantieri

FLOTLOG

Flotlog's Hull D35 – Galley, provision stores and laundry at Chantiers de l'Atlantique.

MSC

MSC's Hull X34 – Galley design, material supply, and installation of Galley equipment. Also, design, material supply, and installation of Laundry areas at Chantiers de l'Atlantique.

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VIKING LINE GLORY

The green and modern Viking Glory, owned by Viking Line, has been completed and is now ready for cruising in the Baltic Sea archipelago. ALMACO was in charge of all the catering areas, guest cabins, as well as the crew cabins and public areas onboard the ship.



At the end of 2018, ALMACO secured the full turnkey order to design, build and deliver the catering and cabin areas for Viking Glory. The scope of works consisted of 1124 passenger and crew cabins plus all the galleys, bars, pantries, and provision stores, including cold freezer rooms, and walk-ins. The construction took place at the XSI (Xiamen Shipbuilding Industry) shipyard in China.

A PROJECT BASED ON AGILITY AND CO-OPERATION

The construction phase was initialized in April 2019 the project was about a year in when the severity of the pandemic became evident. Lockdowns, quarantines, logistical challenges, and the closing of the Chinese borders affected all the companies involved in the project.

John Petrie, VP Project Management for ALMACO's Accommodation Systems Division, was in charge of the accommodation areas. He says, "We really had to think on our feet and stay even more flexible in this project. Our team, subcontractors, and suppliers continuously worked with the yard and owner on several different scenarios to be able to adapt and react as quickly as possible. Viking Line had a very active presence in the project and the cooperation with them had a big impact on the success of the project. Despite the challenges in the project, we all made it over the finish line and the areas onboard look spectacular. I am very proud of the end result that was handed over to Viking Line."

FANTASTIC FOOD EXPERIENCES

"Viking Glory offers its guests around ten restaurants with different concepts and menus. The catering areas that support the restaurants are wellequipped with modern and energysaving solutions. Additionally, they meet the highest quality standards for safety and hygiene in the industry", says Vincent Querard, Project Manager for ALMACO's Catering Systems Division.

A lot of the food onboard Viking Glory comes from local suppliers and has



a Scandinavian flair to it. The guests can choose from exciting theme restaurants, cozy brasseries, and, of course, a classic buffet created by Sweden's National Culinary Team. Wherever the guests choose to eat, their meals will be accompanied by lovely views of the archipelago and local stories about everything from local smugglers, brave sailors, to flashing lighthouses and historic sites.

COMFORTABLE CABINS

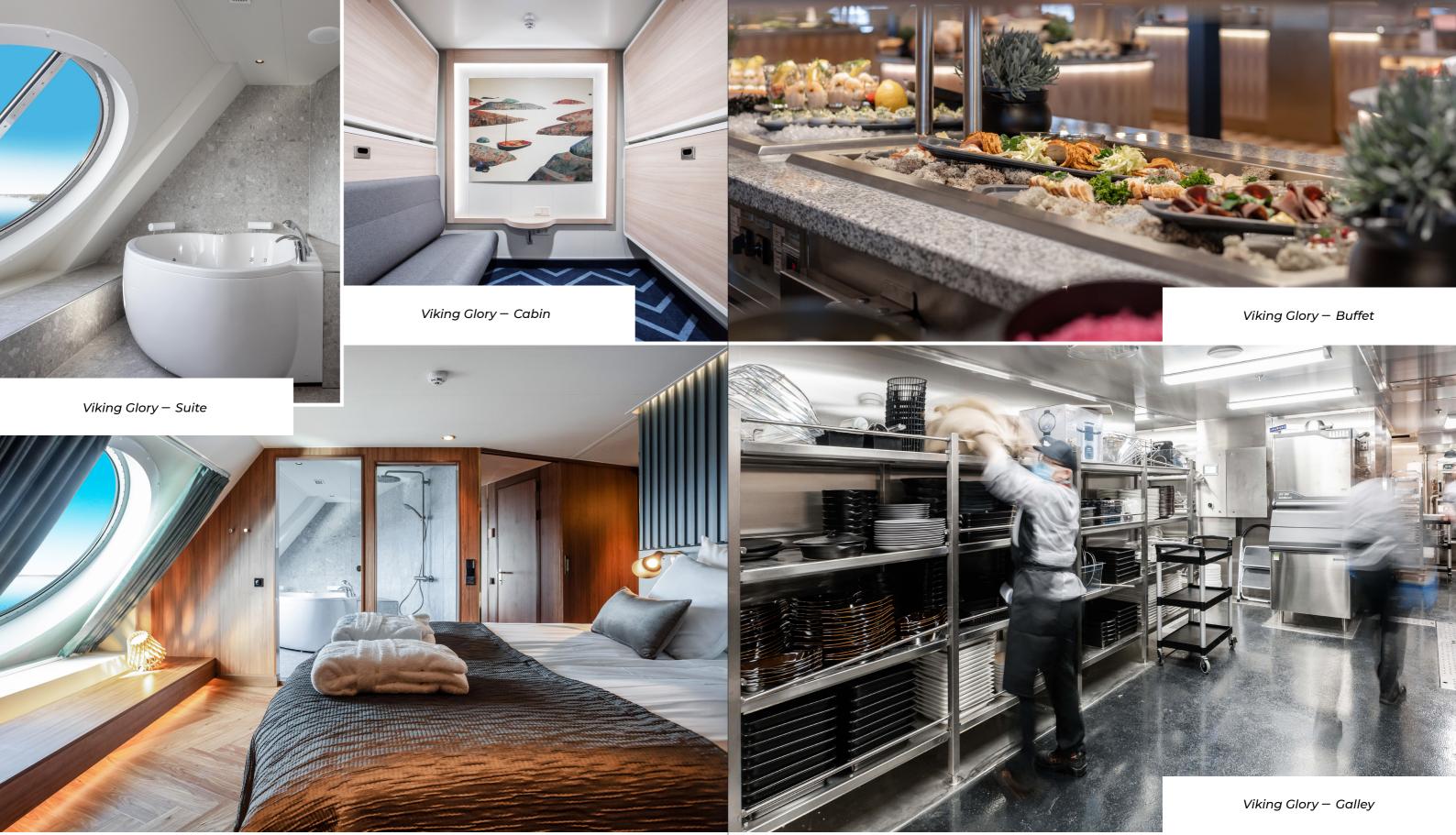
The cabins onboard Viking Glory come in several different categories and price ranges, but they all have one thing in common which is well-designed comfort. The surfaces, furniture, and mattresses are top-standard, and the layouts are smart and well-functioning. Viking Line wants all its guests to be able to retire, relax, and have an exceptionally good night's sleep. And it's not just the guests that sleep well on Viking Glory. The crew cabins are also designed to make sure the crew can relax and feel comfortable in their "second home" onboard. When off duty, the crew can enjoy well-functioning and beautiful spaces such as the crew mess. gym, and comfortable hang-out spaces.

GREEN TECHNOLOGY AND ENVIRONMENTAL FOCUS

Viking Glory is one of the world's most climate-smart passenger ships. It consumes 10 % less fuel than its sister ship and runs on completely sulfur-free liquefied natural gas (LNG). The ship will also, as the first in the world, recover the waste cold from the use of LNG and recycle it for use in cold counters, cold rooms, and other special rooms. In the galleys, Viking Glory is utilizing ALMACO's Galley Energy Management (GEM) solution to monitor and control the energy usage of the equipment in the galleys.

The environment and surroundings are in focus anywhere you go on Viking Glory. The Northern archipelago, where it sails, floats through the view, design, cuisine, and overall atmosphere of the ship. We wish Viking Glory and her guests green and happy sailing in the archipelago!

VIKING GLORY INTERIORS





COSTA TOSCANA

The construction of the grand ship Costa Toscana took place at MEYER TURKU shipyard. ALMACO's wide scope of work consisted of design, engineering, production, delivery and commissioning of all galley, pantry and bar counters and equipment on the vessel. The next-generation catering system of Costa Toscana is equipped with ALMACO's digital Lifecycle solution.



Aleksandr Hokkanen , Project Manager at ALMACO

The project was one of the largest catering projects of ALMACO, not only because the scope covered more than 3000 m² of galleys, galley area pantries, bar pantries, cabin pantries and lounge pantries, as well as over 30,000 pieces of catering equipment, but also because ALMACO was in charge of many different aspects and phases of the project and planning of operations and service. ALMACO did all aspects of the design and engineering of the catering areas, as well as design and production of all tailor-made counters and cooking arrangements. Supply of all buyout equipment, pantry equipment and logistics were also handled by ALMACO, as well as commissioning, planning of maintenance and equipment training of the crew.

PREMIUM-CLASS CATERING EQUIPMENT AND COUNTERS

Costa Toscana, inspired by Italian food, art, and culture, serves 6,554 passengers and 1,646 crew members in its 16 restaurants, up to 18 themed bars, luxury room service and crew messes. It offers its guest special experiences such as the LAB Restaurant, where guests can learn how to cook together with master chefs. The catering areas for all these purposes and concepts are equipped with premium catering solutions with the latest technology that fulfills every chef's dreams. The installed double-size blast chillers provided by ALMACO are standalone fridges that reach the required temperature within minutes. The ship is also equipped with two massive 19-meter long bain-maries per counter, robot-like Roboqbo multi-cooking and baking machines, as well as specific equipment like ChefCut waterjet cake cutting machines.

DIGITAL CATERING LIFECYCLE SOLUTION

The Lifecycle solution provided to the owner consists of a digital system for monitoring the equipment, providing instruction manuals, and maintenance management during operation. The solution is based on service tablets and individual QR-code labels attached to the equipment. The galley equipment

Cut







Lifecycle solution supports the crew in their daily tasks and minimizes the risk of equipment failure.

SUSTAINABILITY AND HIGH-END DESIGN IN FOCUS

Costa Toscana is a 185 000 tons LNGpowered ship and is considered one of the most environmentally friendly cruise ships in the world. Along with other sustainable design features, it is equipped with special desalination plants onboard to process seawater to be used for the ship's daily water consumption.

CO-OPERATION WAS THE KEY TO SUCCESS

Aleksandr Hokkanen, who was in charge of the site management says: "This project has been one of the most interesting projects in my entire career. It was a pleasure to work with MEYER TURKU and I am impressed by their professionalism. Thanks to the good co-operation between ALMACO, MEYER TURKU and our local partners, we were able to commission the equipment on schedule despite the challenging logistic situation in the market. And I must say, the end-result is fantastic." The ship was delivered to the owner on the 2nd of December 2021 and has headed for its maiden voyage. Buon viaggio, Costa Toscana!





COSTA TOSCANA CATERING SOLUTIONS





SH MINERVA

The first ship of the Vega series, SH Minerva, has been completed and delivered to Swan Hellenic. ALMACO was in charge of all guest and crew cabins as well as crew public areas. The work was performed at Helsinki Shipyard in Finland.



Esko Ryyppö, Project Manager at ALMACO

On December 27, 2021, the magnificent expedition and boutique ship SH Minerva boarded its first guests in Ushuaia and set sail for an adventurous journey to explore stunning untouched nature sceneries from north to south.

CO-OPERATION WITH HELSINKI SHIPYARD AND SWAN HELLENIC

ALMACO was tasked with designing, procurement, and construction of all of the ships' passenger cabins, crew cabins, and crew public areas. The construction took place at Helsinki Shipyard, a valued client of ALMACO.

"It has been great to work with Helsinki Shipyard and Swan Hellenic on this project", says Esko Ryyppö, Project Manager in charge of the Vega series project at ALMACO. He continues, "The

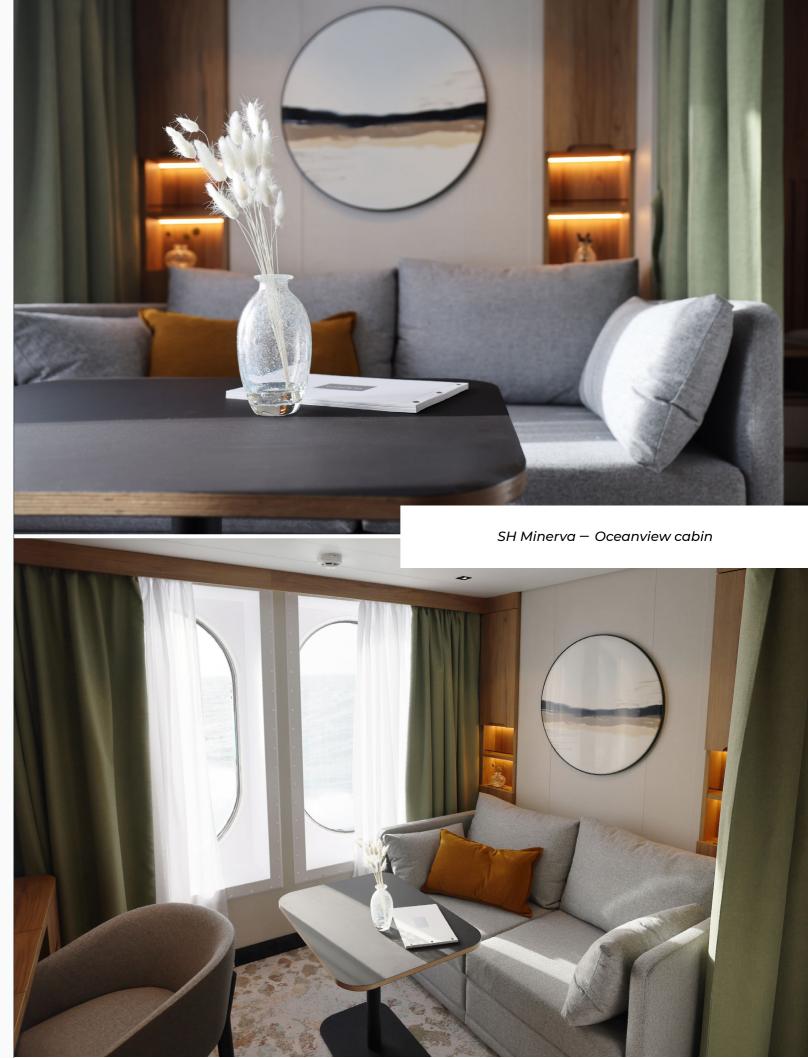
project got off to a good start already in April 2020 and was completed in 1,5 years. We were expecting challenges due to the unstable market situation and took extra precautions to ensure the project was a success. Thanks to the great co-operation with Helsinki Shipyard and Swan Hellenic we were able to deliver the project successfully."

LUXURY CABINS FOR GUESTS AND CREW

SH Minerva offers its guest 76 cabins including 6 suites. The cabin types are Oceanview 19 m², Balcony 28 m², Suite 44 m², and Premium Suite 49 m². Suite or not, the cabins all offer topclass luxury standard and have all the amenities any guest could dream of. The well-planned cabins are spacious with large bathrooms and they allow comfortable in-room dining with a spectacular view. The interiors onboard have an elegant 'Scandi-luxe' Chic design.

COMFORTABLE CREW AREAS

With 120 crew members and 152 guests, the number of crew cabins was almost as big as the number of guest cabins in this project. SH Minerva offers its crew members beautiful surroundings and comfortable spacious cabins. Crew wellbeing and high retention are important for Swan Hellenic and they know the motto "happy crew, happy guests" to be true.



SH MINERVA LUXURY STATEROOMS







ALMACO DELIVERED CREW AND PUBLIC AREAS FOR EXPEDITION VESSEL CRYSTAL ENDEAVOR



ALMACO's scope of delivery consisted of all crew areas and some of the state-of-theart public areas, where the guests prepare themselves for the expeditions that the vessel offers. The construction of the vessel took place in Stralsund in MV WERFTEN shipyard.

ALMACO completed the areas onboard Crystal Endeavor on time prior to the vessel delivery. The steel-to-steel installation included interior and background outfitting. The installation of all 109 crew cabins and crew public areas were done by ALMACO's team on site. The scope of work included full turnkey that covers everything from planning the entire project, design and engineering, material delivery and

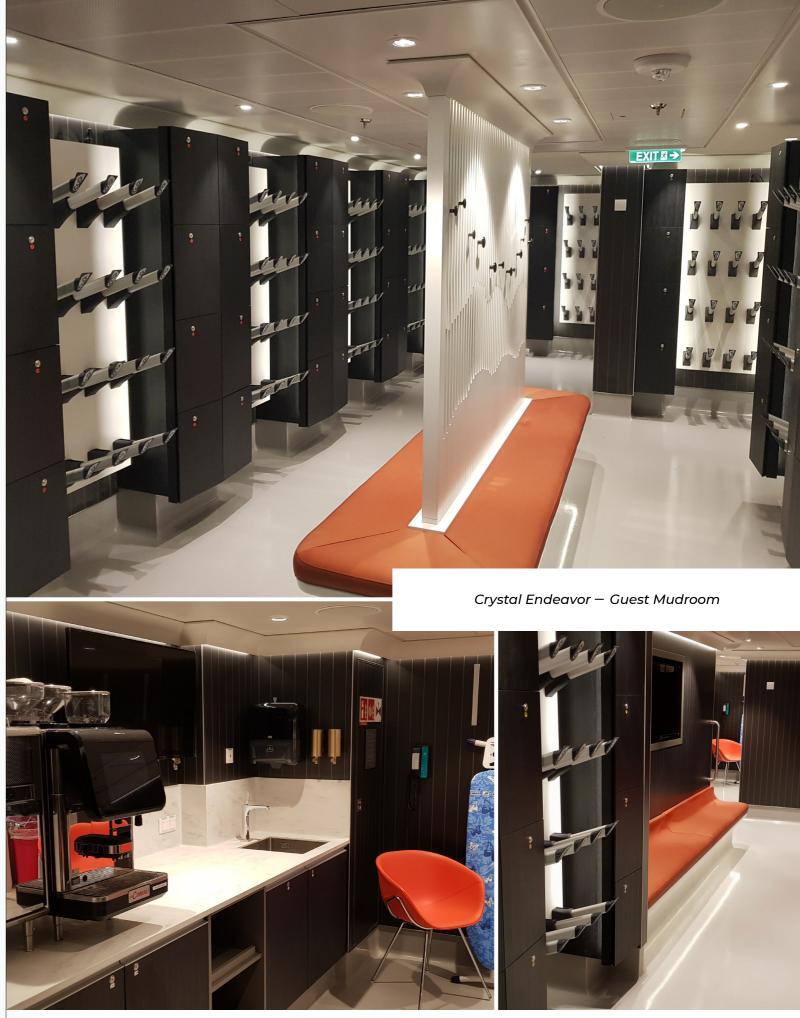
installation of the background systems to interior outfitting.

The project took place in Germany at MV WERFTEN shipyard, where the luxurious expedition yacht was built. ALMACO was supporting the shipyard and owner from the very start of the project all the way to the completion of the vessel.

The vessel accommodates 200 guests and contains luxurious facilities for its crew and guests alike. It will serve its clients from pole to pole in various expedition routes and departed from Reykjavik on the 17th of July to sail on its maiden voyage, a 10-night circumnavigation of Iceland.

"It's great to see the vessel travel to exotic locations with our areas supporting both quests and the crew." -Eric Guiot, Project Manager at ALMACO.





www.crystalcruises.com

MSC VIRTUOSA

The MSC Virtuosa is the 4th vessel of the Meraviglia class and the second Mervigliaplus vessel after its sister, MSC Grandiosa. ALMACO is proud to be part of the long relationship with MSC and Chantiers de l'Atlantique.

The new flagship of the MSC Cruises fleet, MSC Virtuosa, was handed over on February 1st, 2021, with ALMACO delivering more than 2400 m² of cold and freezer rooms as well as 92 waiter stations for the restaurants and cafeterias.

The project was a success due to the extraordinary, combined efforts of the project teams from ALMACO, MSC and Chantiers de l'Atlantique.

The vessel was delivered according to the updated schedule and ALMACO's areas were ready to be handed over before the new delivery deadline. "The whole of ALMACO is immensely proud of our project team and thankful for the outstanding flexibility, cooperation and help received from both MSC Cruises and Chantiers de l'Atlantique", says Frédéric Vasseur, President of the Catering Division at ALMACO.

MSC VIRTUOSA



ONGOING PROJECT

MSC WORLD EUROPA

In December 2018, ALMACO was contracted by Chantiers de l'Atlantique and MSC Cruises to equip the newbuild MSC World Europa (W34) with state-of-the-art catering and laundry solutions.

MCS Europa W34 is part of the Worldclass series that consists of 2 ships. The World-class ships will be the largest ships built for a European owner at Chantiers de l'Atlantique and can host over 6,700 guests.

The ships all feature a large number of outstanding technologies for meeting high sustainability standards and for creating a renewed guest experience onboard. A big portion of the public areas are located outdoors, and guests can enjoy the stunning view and delicious cuisine prepared by some of the best chefs in the world right under the stars.

BIGGEST CATERING AREA DELIVERY IN ALMACO'S HISTORY

The project on MSC World Europa at Chantiers de l'Atlantique is historical for ALMACO. It represents the largest catering and laundry scope we have ever had.

THE CATERING AREAS

The catering area scope entails delivery of all equipment to all catering areas consisting of 12 galleys and 58 pantries, a total of more than 5,000 m2. The catering scope also includes providing equipment for 46 provision stores totaling 2,150 m2. The work started in January 2021 and as of today, February 2022, one-third of the galley, pantry provision store, and equipment has been delivered to the ship. All equipment is expected to be delivered by August 2022.

THE LAUNDRY AREAS

The laundry area scope consists of planning, equipment delivery, installation, and commissioning of all laundry equipment and areas. As of this moment, 95 % of the laundry equipment is installed and connected. The team is preparing for the start-up phase and commissioning will start in March 2022.





GREAT COLLABORATION WITH LONG-TERM PARTNER CHANTIERS DE L'ATLANTIQUE

Vincent Querard, ALMACO's Project Manager at the site says, "We have had excellent co-operation with Chantiers de L'Atlantique for many years. Although we have had galley and refrigeration machinery projects together before, most of our projects have consisted of provision store areas. So, we are thrilled to have the privilege to work with them on a full catering and laundry area scope this time. At this point, we have completed the design phase and the installation phase is ongoing. As expected, the work and collaboration are going very well."

The project, including all catering and laundry areas, will be delivered to the shipowner in October 2022. MSC World Europa will welcome its first guests and set sails for its maiden voyage in November 2022.



ARTICLE

WHAT'S HAPPENING IN THE OFFSHORE INDUSTRY?

Article by Justin Hoffman, Vice President Offshore Business Developement, ALMACO

In 2021, the need for offshore oil & gas field development did not diminish and FPSOs are still the preferred solution. Standardization of design has been the big push to expedite the time to first oil for the likes of SBM and MODEC. We are also seeing that zero-emission or green floating assets are on the drawing board.

Some operators are rethinking their energy portfolio. They are consolidating and focusing on their core assets while also looking towards a lower carbon footprint. Companies are challenging themselves to look at how they can align project design and supply chain with the high-level ESG policies that are driving investments and shareholder engagement.

OFFSHORE WINDFARM

Offshore windfarm projects have dominated the investment discussions, courtesy of renewable energy incentives and falling technology costs. Impressive gigawatt (GW) goals were announced and later increased at COP26. 2021 could well be remembered as a transformative year for offshore wind as the spending doubled compared to 2019 levels. Over 2 billion in new investment was reported in the US alone. The development of offshore windfarm requires a plethora of installation, maintenance, and support vessels, which should ideally be energy-efficient and have lower carbon emissions. These vessels are typically of European design, which plays well to our capabilities and experience. At the time of publication, the US has three Jones Act Compliant vessels currently being fabricated for their market. Hundreds more purposebuilt vessels will be required to meet global offshore windfarm project demand.

INVESTMENT GROWTH AHEAD

You could be forgiven for thinking this is the end of the road for oil & gas. But rising oil prices, with speculations of \$100+ barrel oil for a prolonged period in 2022, can lead to investment growth. Different financing models are being deployed, but when it comes to new discoveries and rising oil prices, financing is always attainable as long as the terms are good and stable. For shorter-term redeployments in unstable regions and questionable fields, it will be more challenging to get financing.

There will be caution ahead for any major capital commitments. Challenges in the global supply chain will lead to operators considering various execution strategies to ensure profitability. The most typical contracting model still leans towards "most competitive", which in turn tends to favor emerging markets, opportunities for new players, standardization of design, and a focus on high-performing fields.

Oil & gas demand will continue to rise to meet the desire for reliable and economical energy. Unless consumers change their energy habits, oil & gas demand will steadily increase especially from developing nations. Simultaneously, the industry will bring along and gradually transition to alternative energy sources.



OFFSHORE PROJECTS ON THE HORIZON

Energy Maritime Associates recently estimated that more than a hundred FPSO projects are in the pipeline to be taken into operation after five years or longer. They will primarily be operating in South America, Africa, and Asia. 69 of these projects are in the planning phase and 35 in the bidding or final phase. In the medium-term span, mature markets that don't need large FPSOs are suitable for the redeployment of existing vessels. In the new markets, where there is a lack of local infrastructure, FPSOs are the obvious solution.

Ownership and execution strategy can change during the evolution of a project. Still, with FPSOs being designed and operating for more than 25 years, companies are planning for an of

XIN

ARTICLE

LIFE CYCLE DIGITALIZATION & EVOLVEMENT AT ALMACO

In this interview with Tero Rantanen, he shares the story of how ALMACO started its digitalization journey as early as over 20 years ago. The visions were grand already back then. Today, many of them have become reality.

Tero Rantanen, Vice President of Technology & Business Process Management at ALMACO Group.

I started working at ALMACO two decades ago. Back then the company had already realized the importance of digitalizing our business and services – something that the market wasn't quite ready for back then, but most certainly is now. The visionary mindset, agility, and short chain of command in the company attracted me. These traits still remain a part of ALMACO's DNA today.

ALMACO'S FIRST DIGITAL PLATFORM

At first, the ALMACO's digital platform mainly contained lists of equipment with basic information. With time, it evolved to entail more and more technical information, not only about the equipment but also about the surrounding areas.

One of our favorite creations was the technically brilliant "Electrosonic" maintenance tool. Although it only contained a fraction of the data, it had advanced features like planned maintenance scheduling, work orders, logging and commenting of maintenance, spare parts, etc.

This was all in the time before sensors and remote smart devices. Teams of experts regularly entered the ships for a week at a time to do thorough on-site condition inspections. They systematically entered every single cabin that was free to check them individually. They interviewed housekeeping and reported everything they found, not just what they originally came to check. The areas were scored from 0 to 100 and divided into yellow and red zones depending on how acute the service intervention was. The learnings from inspecting the ships were used for creating optimally scheduled maintenance plans for the whole fleet.

WHAT HAPPENED WHEN ALMACO'S SCOPE GREW FROM ACCOMMODATION AREAS TO INCLUDE CATERING AREAS?

ALMACO experienced its biggest transformation in 2005 when it acquired the Catering Division from MacGregor. We merged their digital service system for catering areas and equipment with the Product Database that we were using. This gave us a companywide service tool, still named Product Database, that our Service team still uses. Nowadays the tool has evolved to include more advanced solutions.

Our current digital best-seller is our GEM – Galley Energy Management tool, which helps shipowners monitor and control their galley equipment and energy consumption. We are also working on another big digital innovation that I can't reveal more about just yet.

WHERE DO OWNERS BENEFIT THE MOST FROM THE DIGITAL TOOL?

The biggest perk that the shipowners notice is that the inspection teams are able to prevent expensive breakdowns before they happen. Convenience and cost savings are the main benefits that our Service team strives to bring to our



customers. We can see that the system works at its best when the whole fleet is handled in the same system, so that's what we recommend for our customers.

Although the biggest benefits lie in overall convenience, efficiency, and cost savings, they also lie in the smaller details. I remember a case with balcony cabins that had tables with metal legs. In an inspection round, our team noticed that the passengers tended to move the tables outside to the balconies, which made the metal legs rust. After reporting this, the owner decided to change the plan and use weatherproof tables on the sister ships. Information like this seldom becomes visible and actionable knowledge without fleet-wide digital service systems. There are so many steps and people involved from housekeeping and maintenance all the way to the architects, designers, and purchasers.

Information easily gets lost on the way without a good digital service and reporting system. But that's not the only challenge here. Who is actually in charge of considering cross-department cost savings? Sometimes an expense in one department can mean a big saving in another department. In the example before with the tables, it meant an additional cost for the owner to adjust the plan and exchange the tables. But this expense was saved many times over in repair and service costs. The bigger a company is, the more difficult it is for people in their respective departments to see the holistic cost and budget perspective of the whole company.

WHAT IS YOUR VISION FOR THE FUTURE OF MARINE SERVICE TOOLS AND PROCEDURES?

I think the basics will remain the same. It will still be all about gathering data and turning it into information that we can analyze and convert into actionable knowledge. The difference is how we do it. Instead of relying solely on physical inspections, we can gather data and perform service remotely. The digital systems will become more evolved and artificial intelligence will be part of the creation of service plans, design, and engineering. Another huge benefit of analyzing data and converting it into actionable knowledge, is that we can improve designs and layouts based on facts rather than on feelings.

Generally, I think the trend in the industry is moving toward new business models, like e.g. area and equipment leasing models. Outsourcing the whole package is convenient and reduces risks for the owners. We can also already see that service and maintenance will be partially performed with the help of 3D models and virtual reality in the future. Technical experts can use this technology to instruct crew members onboard to do minor repairs themselves instead of sending in separate teams. When it comes to concept creation, design, and engineering, 3D models and virtual reality are already important tools, not only for internal processes, but for offering the customer a chance to experience the areas before they exist and try out different layouts, workflow models, styles, and color schemes.

ARTICLE

SUSTAINABLE SHIP INTERIORS AND CATERING SOLUTIONS

As a full turnkey and life cycle service provider, we manage largescale newbuild and modernization projects as well as serve the ships and rigs throughout the whole life cycle. Instead of only having our own production, we have chosen to use a large pool of trusted longterm suppliers in order to stay scalable and be able to provide a large, innovative, and diverse portfolio all over the globe. This large pool provides us with the tools to ensure supplier sustainability and reliability no matter where the project is located.

SUSTAINABLE VALUE ENGINEERING

Sustainability is becoming increasingly important for our customers. When we see that higher sustainability levels could be reached in a project, we are able to present alternative solutions to our customers as part of our "value-engineering" process. In the word value, quality, functionality, cost as well as sustainability can all be included. In the same process it is important to acknowledge that the sustainable alternatives that we present to our customers also must give them good value for their money in order to ensure all stakeholders are able to stay competitive.

SUSTAINABILITY CRITERIA

When we look at suppliers with "sustainability glasses" on, we mainly focus on the following criteria; Are they using sustainable materials and low consumption solutions? Can they offer good quality products with a long lifetime that comply with maritime standards? How sustainable is the product from creation all the way to end-of-life? And, last but not least, how easy is it to serve the products? Is it possible to repair and exchange parts instead of having to replace the whole product completely?

Logistics, Co2 calculations, and recycling possibilities also play an important role in ensuring the areas are planned and built in a sustainable way.

RELIABLE NETWORKS

The best way to ensure reliability in supplier pool management is to build deep, long-term connections and partnerships. At ALMACO we have preferred partnerships with suppliers that we have evaluated thoroughly and



Article by: Juha Pakomäki, Vice President Estimation & Purchasing Accommodation Systems & Stéphane Denis, Vice President Estimation & Purchasing Catering Systems at ALMACO Group

that have provided proper certification for the required industry standards and regulations.

ENERGY-SAVING CATERING

ALMACO is committed to developing digital tools that help keep down consumption of energy, water, and steam in the catering areas. The tools also offer preventative maintenance functionalities that prolong product lifetime. We have preferred partnership agreements with suppliers that comply with high-quality USPHS standards for catering areas. Our preferred laundry suppliers have solutions that consume less energy and water, as well as use Ecolabel chemicals.

SUSTAINABLE ACCOMMODATION SOLUTIONS

In accommodation areas our focus is not only on choosing sustainable furniture and materials with high





quality and long lifetime, we can also support our customers in the planning of operational aspects like maintenance and environmentalfriendly cleaning.

SUSTAINABILITY STANDARDS LEAD TO A GREENER FUTURE

We have learned that suppliers that are used to complying with highquality standards and regulations, also have the potential to reach high sustainability goals and present proper certification throughout the process. Working with people that we know and trust makes it easier to monitor and audit all aspects of the projects. Sustainability has always been one of our core values, and we know that we share this value with many of our customers. A green future maritime industry is in all our interest and we hope to be part of making it happen.

ALMACO GOVERNANCE

BOARD OF DIRECTORS



VILHELM ROBERTS

EXECUTIVE CHAIRMAN SINCE 2018 BOARD MEMBER SINCE 2005

ALMACO Group | President & CEO 2005-2017 MacGregor Group | Managing Director Passenger Ship Division 1996–2004 | General Manager Reefer Engineering 1994-1995

MIKAEL HEDBERG

ADMARES Group | Chairman since 2020 | CEO 2015 – 2020

2005-2014 | President & COO 1998-2004

MacGregor Group | Director Passenger Ships

ALEXANDER HEDBERG

JUNIOR BOARD MEMBER SINCE 2021

Brightland | Group Producer since 2021

ADMARES | Purchasing 2016-2020

ALMACO Group | Executive VP & COO

BOARD MEMBER SINCE 1998

1994 - 1997



ULF HEDBERG

EXECUTIVE VICE CHAIRMAN SINCE 2018 EXECUTIVE CHAIRMAN 2005-2017 CHAIRMAN & CEO 1998-2004

MacGregor Group | President & CEO 1986–1997 | Executive Vice President & COO 1984–1985 Navire Cargo Gear Oy | Managing Director 1982–1983 | Deputy Managing Director 1972-1981



RAINER AALTO

BOARD MEMBER SINCE 2004 VICE CHAIRMAN 2012-2017

Cargotec Corporation | Corporate Advisor 2005–2008 Kone Corporation | Corporate Advisor 2004 Konecranes Plc | CEO Asia Pacific 1998-2003 MacGregor Group | Senior VP & CFO 1987-1997



THOMAS LUNDBERG

BOARD MEMBER SINCE 2020

Åland's Mutual Insurance Company | CEO since 2021 Crosskey | CEO 2012-2021 Paf | Deputy CEO 2006-2012 Lehman Brothers | Lawyer 2005 Linklaters | Lawyer 2002 – 2006 Ålandsbanken | Lawyer 1998. 2000 – 2001



MANAGEMENT TEAM



BJÖRN STENWALL

PRESIDENT & CEO ACTING PRESIDENT, ACCOMMODATION DIVISION

Holds position since 2020 BSc (Nav. Arch.) Employed 2014 Management Team member since 2014 **GUILLAUME FAYSSE** SENIOR VICE PRESIDENT & CFO

Hold position since 2005 MSc (Econ.) Employed 2005 Management Team member since 2005



JUSSI LAIMI

DEPUTY TO THE PRESIDENT OF ACCOMMODATION SYSTEMS

Holds position since 2015 BSc (Mechanical Engineering) Employed 2013 Management Team member since 2021 Holds position since 2019 MSc (Sales and Marketing) Employed 2009 Management Team member since 2019



TERO RANTANEN

VICE PRESIDENT, TECHNOLOGY & **BUSINESS PROCESS MANAGEMENT**

Holds position since 2003 BSc (Political Science) Employed 2001 Management Team member since 2003

INES STENIUS VICE PRESIDENT, PEOPLE &

Holds position since 2008 BA (Language Arts) Employed 2005 Management Team member since 2008

ORGANIZATION



MATHIAS ROBERTS

JUNIOR BOARD MEMBER SINCE 2021

ALMACO Group | Sales Manager Service Division since 2020 APC All Copy Products | Business Solutions Consultant 2018–2019 ALMACO Group | After Sales Management 2013-2017 Hyatt Place Hotel | Supervisor 2011-2012



MELANIE HERNANDEZ

BOARD MEMBER SINCE 2020 DEPUTY BOARD MEMBER 2018-2019

ALMACO Group | People & Organization Management since 2014 | After Sales Management 2008 – 2014







FREDERIC VASSEUR

PRESIDENT, CATERING DIVISION

Holds position since 2021 MSc (Mechanical & Civil Engineering); MBA Employed 2014 Management Team member since 2020



JEAN-PIERRE LEPAGE

PRESIDENT, SERVICE DIVISION



HANNA LÅNGSTRÖM

VICE PRESIDENT, MARKETING

Holds position since 2021 MSc (International Marketing) Employed 2020 Management Team member since 2020



MARITIME INTERIOR AREAS AND LIFECYCLE SOLUTIONS AROUND THE WORLD

GALLEYS | PROVISION STORES | REFRIGERATION MACHINERY | LAUNDRY | CABINS | MOBILE CABIN FACTORY | PUBLIC AREAS | SUPERSTRUCTURES



