



What role will AI play in the future of the superyacht industry? **by Lorna Titley**

How will the future enhance the experience of guests and the efficiency of the crew on luxury superyachts? As a guest, you might not even notice the humanoid cleaning robot that slips quietly into your cabin seconds after you leave. AI assistants, crafted to support each crew role, will increase the efficiency of information management-related tasks such as managing documents, invoices, crew training, troubleshooting systems, payment authorization workflows, and much more.

Artificial intelligence is poised to revolutionize the superyacht experience. Imagine chefs liberating themselves from the tedious tasks of menu planning, shopping, and provisioning by entrusting these chores to sophisticated AI systems, freeing their creativity to shine. Engineers, equipped with Augmented Reality (AR) and AI assistants, will seamlessly troubleshoot and connect to onboard systems, accessing a virtual library of thousands of pages of technical documents in an instant. Digital twins will enable real-time monitoring and predictive maintenance, ensuring every part is in optimal condition while significantly reducing costs and downtime.

Ahead of **NextGen Owner: Managing Tomorrow's Superyacht**, Quaynote's conference in Monaco on 27 June, we caught up with **Fabrizio Ottoni Limena**, CEO at YachtMind, an AI entrepreneur and yachting enthusiast who joins a line-up of experts to discuss the impact of artificial intelligence on the industry.

Fabrizio had the opportunity to work for IBM in the early 2000s, as well as with large telecommunications companies and banks, in positions related to IT systems. After taking a sabbatical to sail around the world on a sailboat, he became professionally involved with the superyacht world, holding various roles both onboard and ashore for a good part of the last two decades.

His journeys took him to far-flung destinations such as the Antarctic, the Red Sea, French Polynesia, and the Amazon. He participated in the Superyacht and Classic Regatta circuits on both sides of the Atlantic for many years. For the better part of the last decade, he has also been developing data analytics technologies and conversational bots for the luxury real estate and hospitality industries.

Combining his background in technology with his extensive experience and subject matter expertise in yachting, Fabrizio set out to bridge the gap between rapidly developing AI technologies and an industry that requires intimate knowledge of its inner workings. His company, YachtMind, is developing off-the-shelf AI solutions for crew and custom AI products for yachting companies.

I asked him how long AI has been part of our lives. *"People tend to think AI is something new because it's been in the news for the last year and a half or so, but the concept of machine learning, which is the basis for what we call AI, has been around for over 20 years,"* explains Fabrizio Ottoni Limena. *"What has changed is that due to advancements in computing power, deploying these technologies has become viable both in terms of time and cost."*

While time efficiency and cost savings may not be primary drivers for superyacht owners, it's worth noting that not long ago, the tools and computing power available to technology developers were reserved for institutions with supercomputers and would take months to achieve results that now take seconds.

"Our off-the-shelf product for chefs streamlines the capture of guest preferences, generating menus, and provisioning, allowing them to focus on their culinary art," states Limena. His company's AI assistant for chefs works by integrating the chef's profile, which comprises aspects like past menus, cooking style, signature dishes, and recipe books, with the preference sheets of all the charter guests, detailing likes, dislikes, allergies, and intolerances. Parallel to this are the needs of the crew, who may be 20–50 strong, all with their own dietary requirements, along with data concerning the destinations to which the yacht will be sailing.

"The menus can be adapted to different locations, both in terms of using fresh ingredients and ensuring that the food served reflects local specialities," adds Limena. Rather than generating a provisioning list—10 kilos of onions, 10 kilos of meat, 5 kilos of potatoes, and so on—and heading to the supermarket with two crew members in tow, the chef can simply upload the guests' preference sheets. At the click of a button, the system will work out his menus and provisioning list for the charter.

What's more, it can split the list into groups—e.g., dried food, produce, and meats/fish—allowing different crew members to handle specific categories, or the whole list can be sent directly to a provisioning company. *"The chef doesn't need to work out how many kilos of each ingredient to buy and painstakingly type it into his computer,"* observes Fabrizio. "Something that could have taken hours now takes minutes or seconds."

Widely used in the military environment, digital twins are expected to save not just time, but also thousands of dollars. *"This works by creating a virtual copy of the ship or yacht—a parallel simulation on a computer—which provides predictive maintenance whereby you know that a part may fail long before it does,"* says Limena. *"You can book your shipyard in a cheaper place, secure the slot you want in advance, and source parts before they actually break,"* he concludes.

YachtMind is currently developing a system that will allow engineers to chat with their systems manuals, which comes with a troubleshooting assistant, as well as run compliance checks and order new parts via an automated system using voice. Listing the *"almost limitless opportunities for AI-powered systems,"* Fabrizio points to *"onboard safety and security sensors to warn you of fires, floods, intrusion, collision risk; increasingly precise routing and weather software to optimize operations and control emissions more effectively; and AIS systems optimized to work out the best route to avoid collisions."*

So far, so positive. Alongside all the promised benefits, we hear warnings of the downsides and of AI *"taking over."* I ask Fabrizio Ottoni Limena if he considers AI as a force for good, or if we should be concerned. *"The difference with AI applications, as opposed to other technologies, is that we don't always understand how they work. We know that we give it an input and it gives us an output that we like. Should we not use AI because it could take over the world? No, let the governments of the world regulate the technologies we use and how,"* he asserts. *"For centuries, we've adopted technologies that have been for the common good. If you still had to take a ship rather than a plane to cross the Atlantic, or you had to take a chicken to a market to barter for some food, then you would spend the whole day or weeks doing something that now takes much less time thanks to technology."*

Fabrizio Ottoni Limena
YachtMind.ai



Fabrizio's unique blend of technological expertise and extensive yachting experience uniquely positions him to effectively bridge the gap between rapidly advancing AI technologies and the superyacht related activities.

He is currently the CEO of YachtMind.ai, a company that develops crew augmentation AI powered assistants, and provides strategic AI adoption advisory, training, and custom development solutions for companies in the yachting industry.

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