

Bringing together technology and people: an interview with Captain Rajesh Unni

MARCH 12, 2021



Alpha Ori's Control Centre

Capt. Rajesh Unni, CEO of Synergy Group and co-CEO of Alpha Ori Technologies is confident that rapid development and adoption of advanced digital technologies will continue post-COVID as the industry seeks to meet ambitious decarbonisation goals and improve maritime safety.

However, he warns that improvements to businesses will only be achieved if people, processes, and technology work in harmony with one another. We spoke with Capt. Unni about connecting people and technologies, harnessing data for decarbonisation, and why being prepared for change is so important.

Aligning people, processes, and technology

Capt. Unni believes that while technologies play a key role in helping the industry to move forward with its goals around decarbonisation and safety, he is keen to point out that, “technology is only a tool and not a silver bullet,” and connecting the right people and processes is fundamental to empowering individuals to make better decisions.

As CEO of ship management firm Synergy Group and co-CEO of Alpha Ori Technologies, Capt. Unni understands the importance of finding the right partner to navigate this digital transformation. “You need someone who aligns with your vision, someone who has the expertise and experience and someone who understands what you are trying to do with the data you have or where you want to go.” Speaking with Digital Ship he explained, “It is absolutely essential to spend a lot of time thinking and reflecting on your goals and where you want to be. Only then can you identify the right partner, which can be very different for different people.”

Once a company has determined the right partner it should look inwards and see if it has the processes in place to move forward, he told us. “If you find a partner first and then you select the tools, the

processes, and the right talent and skill sets to make that vision possible, then you make sure all these things are aligned and only then are you ready to go ahead and create the impact you want,” he said.

“Digitalisation is about enabling or improving processes by using some of these technologies and so when all these things are aligned, the whole value is unlocked.”

Data and decarbonisation

Capt. Unni has been a strong ambassador for shipping’s decarbonisation. “I personally feel it’s not a choice anymore, and it shouldn’t be a choice anymore,” he noted. “I say this because it’s the right thing to do. Not just for our industry, but for anyone interested in the greater good of making sure that we live on a sustainable planet.”

For Capt. Unni, the first step a company should take at the beginning of its decarbonisation journey is to ensure its data points are being measured correctly. This means having an understanding of what is being measured and how to prove the legitimacy of the measurements to benchmark performance. Moreover, the quality of the measurements is vital. This requires an understanding of their accuracy, which may be determined by whether they are human centred measurements or automatically generated. The second point he mentioned in decarbonising is to ensure there is a quality assured way for companies to record and report their emissions performance.

The third part Capt. Unni sees as being critical to shipping’s successful decarbonisation is ensuring there is a country or regulator that can provide assurance of data trust and confidentiality. “If you look at each of these three things, there’s a huge role that digitalisation can play. I feel that these kind of data points and the quality of instruments used to measure these points are extremely important. The least human interference we have in these measurements, the better. The technology should be such that your obligations are fulfilled in a very simple, automated and cost-effective way.”

Being prepared for change

The expansion of digital tools and technologies onboard ships will in some part alter the roles of those working in the industry. New technologies may demand a change in skillset or modify job roles. Some are concerned that machines will replace human jobs. Capt. Unni is a firm believer that any tool, digital or not, should only support seafarers, rather than adding to the pressure they are under. That’s why Synergy Group’s digital transformation is focussed on investing in tools that enable rather than disable and upskill people so that they can do their jobs better.

“You can invest in and create technology and tools, but if you don’t invest in people and prepare the requisite workforce and talent to be able to manage these tools, then I think you will suddenly feel that it’s a complete waste. It’s not going to converge, but it’s going to divert.”



Capt. Rajesh Unni, CEO of Synergy Group and co-CEO of Alpha Ori Technologies

Capt. Unni explained that sometimes a change in learning approach is required. “Sometimes you have to unlearn and relearn things and find new ways of learning so that you are better prepared to manage change. One thing that the human brain is not wired very well to process is uncertainty and the fallout of events like COVID. I think the first thing that we as leaders in this industry can do, is to prepare ourselves well enough for the next challenge that is around the corner. These challenges may be in different forms but there will always be disruptions going forward and if we don’t prepare ourselves and our teams and the industry to be able to deal with these disruptions, I think we are in for a bigger challenge.”

Data harnessing

Alpha Ori Technologies’ own solution SMARTShip, which was launched in 2017, aims to help shipping companies better understand their vessel performance, improve productivity, mitigate the risks in ship operations and bring in savings through fuel optimisation and predictive maintenance solutions. The system pulls and analyses data from over 5,000 data points from onboard machinery (navigation, cargo, and engine control systems) and develops analytics enabling ships’ crew and shore managers/operators to make data driven decisions.

The idea was born when Capt. Unni realised that there were a lot of issues shipping companies were having when it came to understanding their data.

“Ship architecture is so different now compared to how it was 30 or 40 years ago and there is so much data available now,” Capt. Unni told us. “We started looking at all this data and it got very interesting and we thought, can we leverage this? Can we create something, and become successful?”

Capt. Unni admitted that one stumbling block they faced early on was determining which data points would be able to deliver meaningful insights. A further hurdle was ensuring the solution they built would enable various systems to communicate with one another and understand the data protocols that are around this. “We had to solve these two fundamental things before even we could take the first step and create an application,” he explained to us.

Capt. Unni’s background in ship operations and technical management meant that he had some insight into which data points would be most important to analyse. In addition, the team spoke with various stakeholders with commercial operations and those with different interests in the industry to ascertain what kind of data would be useful to them.

Speaking about the launch of SMARTShip and the industry-wide adoption of the solution, Capt. Unni said that timing was everything. He explained that before they went ahead with the solution, they needed to make sure there were certain prerequisites in place first that would allow them to proceed. The fast-growing maritime IoT environment, growing bandwidth availability, the developments in machine learning and artificial intelligence (AI) were all moving fast and would work in their favour to facilitate the creation and growth of the solution they had envisioned. Referring to the global success of Airbnb, which launched in 2008 under the recession, he explained that timing was everything here. “It was when people were looking at how they could make additional financial gain with the assets they already

had. Prior to this, people would never have thought about sharing a room in their house with a complete stranger. It's all about the timing," he said.

Capt. Unni and his colleague began work on the solution in the summer of 2016 and in 2017 Alpha Ori Technologies was formed. "We were just brainstorming for about a year, working out what we could do

with all this data and in 2017 we got our prototype," he explained. The Group worked with the classification society Lloyd's Register to obtain the AL-SAFE notation and tested the SMARTShip solution onboard a Singapore-flagged LPG carrier newbuilding owned by Global United Gas Carriers.

"We actually had three ships that were involved during the newbuilding supervision phase, so we had a lot of room to explore what we wanted to do. That helped us as we were able to talk to different makers and understand about the data protocols and all that," he explained.

SMARTShip has been designed with affordability in mind to enable various types of companies to digitise their assets. The solution is based on a low capex, with a cost assigned only once the customer sees the value in the service. "Creating the value out of the data is the key part and comes from customers realising the value they can create. A company will pay for the hardware costs at the minimum price. Only once they see the value the solution creates, and when they are confident in it, we discuss a subscription with them," Capt. Unni explained.

Alpha Ori currently has around 150 ships signed up to its solution and expects to be near to 200 in the near future.

Last month, Bahri Ship Management (BSM) confirmed its roll out of SMARTShip on 40 ships with the remaining ships in the fleet to follow.