

# FerryBusiness

In association with **INTERFERRY**

## REACHING FOR NEW HEIGHTS

Global trade association Interferry is shaping up for an ambitious extension of its activities



## THE INNOVATION CHALLENGE

Ferry executives discuss the greatest opportunities and challenges facing the global sector

### SUCCESS

Freda Newton highlights how Loch Ness by Jacobite delights passengers



### ENVIRONMENT

Michael Grey considers how ferries can go carbon neutral



### GROWTH

Virtu Ferries' Francis Portelli champions the virtue of hard work



# Rising to the innovation challenge



**Simon Johnson,**  
director of  
Shipshape  
Consulting

*ICFR's expert ferry advisor Simon Johnson asks three ferry executives to discuss the greatest opportunities and challenges facing the global ferry sector*



**Jamie Marshall,**  
vice president  
of business  
development  
and innovation  
at BC Ferries

**I**n the Spring/Summer 2019 issue of *ICFR*, we focused on how ferry operators are creating a sustainable future. It was evident that many leaders in the industry have already embarked on innovative projects that are not only delivering positive environmental results, but have also caught the imagination of customers and the media.

*Jamie Marshall, vice president of business development and innovation at BC Ferries:* We have a small business development team that assesses around 100 opportunities for implementing new technologies and systems every year. The team uses a quantitative and qualitative decision criteria matrix to determine which opportunities merit further investigation and/or implementation.



**Paavo Nõgene,**  
CEO of Tallink  
Grupp

Here, three ferry executives share how they are rising to the innovation challenge, explaining how investments in research and development, business transformation and technological advancements are generating impressive operational efficiencies and improving the overall customer experience. This roundtable also provides a valuable introduction to the theme for this year's Interferry Conference, which will be held in London this October. I'm very much looking forward to discussing the topic with more industry colleagues and friends than.

*Paavo Nõgene, CEO of Tallink Grupp:* As the leading provider of high-quality mini-cruise and passenger ferry services in the Baltic Sea region, innovation has always been important to us. We've invested a great deal into developing innovative technologies for our ships and we keep an eye out for the latest technological advancements to stay ahead of our competition. We're also very open to partnering with universities, IT start-ups and other maritime companies to develop solutions that will improve our energy efficiency, further reduce our emissions and enhance the overall passenger experience. We've successfully participated in several European Union-funded projects to improve the overall ferry industry, but we've also made great advances ourselves.



**Adolfo Utor,**  
chairman of  
Baleària

**What is your corporate approach to researching, reviewing and implementing new technologies for improving operational performance or the passenger experience?**



Tallink's Megastar operates between Tallinn and Helsinki and was the first fast ro-pax ferry in the world to be powered by LNG fuel

Last year, for example, our energy efficiency projects helped reduce fuel consumption by 3.2% per nautical mile. We also debuted Megastar, the world's first LNG-powered, fast ro-pax ferry, in January 2017. Rauma Marine Construction will begin building our second LNG-powered vessel in early 2020 for completion at the end of 2021. Thanks to these investments and our fleet renewal programme, we now have some of the most advanced cruise ferries on the Baltic Sea.

*Adolfo Utor, chairman of Baleària:*  
If we want to continue to grow in the ferry market, we need to adapt to new digital technologies. That's why Baleària is currently immersed in a triple process of change. First, we're developing a new organisational model and culture based on cooperation, multidisciplinary projects and the cloud. Second, we'll apply new digital technologies like artificial intelligence (AI) to make us more efficient and competitive. Third, we'll explore new energy sources and more environmentally sustainable ways of operating. This September, we'll also launch a new management system to improve how we engage with customers and we'll enhance our loyalty club, upgrade

our digital signage, add smart televisions to cabins, expand our content platform and implement other measures to improve the onboard experience.

**Which technologies and other innovations are currently being reviewed within the business?**

*Marshall:* BC Ferries is looking at automation, AI, augmented reality, virtual reality, alternative energy solutions and multi-modal transportation opportunities.

*Nögene:* Currently, the main technologies Tallink Grupp is focusing on are LNG, digitalisation, automation (sensors),

internet of things, machine learning and electrification. We've been collaborating with Estonia's TalTech University and maritime experts at its naval academy on several innovation projects for a very long time. Our most recent project – Smart Car Deck – aims to further automate and expedite the vehicle loading and unloading process to reduce waiting times. The Smart Car Deck would enable us to automatically create digital plans for how best to load passenger cars, other vehicles and cargo onto the ferries to achieve optimal stability and reduce fuel consumption. We're already using Smart Port solutions, such as

**“Reducing our environmental footprint through continued investment in leading-edge environmental stewardship is a top priority”**

**Jamie Marshall, BC Ferries**



digital screens, to guide passengers' vehicles into the right lanes in waiting areas at ports. By using Smart Car Deck, we could automatically pre-sort the vehicles and reduce (and eventually eliminate) waiting times for passengers.

In addition, we've installed an innovative wireless antenna tracking system from Nowhere Networks on our newest ferry, Megastar, to provide a 400 megabit per second internet connection for guests and crew sailing the two-hour journey between Tallinn, Estonia and Helsinki, Finland. It's the fastest and most stable internet connection currently available on the Baltic Sea.

*Utor:* We know that a ferry trip is more than just a way to get from one destination to another – the ferry is a destination in itself – so we must create positive and unforgettable experiences. Consequently, we're focused on our new Smart Maritime concept, which will involve us applying digital technology to improve three areas of the customer experience: reservation management; the embarkation and

disembarkation processes; and the onboard services and amenities. Our aim is to minimise queues and make the whole experience more tranquil and relaxing for passengers. We're also digitising onboard services, allowing our passengers to access information about the ships and accommodation via their smartphones, offering on-demand entertainment via mobile devices and smart televisions in cabins, pet video surveillance, and access to the internet and communications services like WhatsApp throughout the journey.

In addition, we will focus on using technology to fight against climate change and preserve the marine environment. This will help us achieve to ensure that we're an environmentally responsible company, while improving our reputation as a brand that protects our planet.

**What initiatives do you have in place to work towards a zero-emission fleet?**

*Marshall:* BC Ferries has appointed a manager to work on finding ways to electrify vessels less than 85 metres long.

The manager is working closely with local electric services company BC Hydro to develop shore power and charging solutions for these electric vessels.

*Nögene:* We have several ongoing projects to reduce our emissions – over the past 10 years we have reduced the carbon emissions per passenger by 44%. Our ultimate aim is to create a carbon-neutral fleet and, as a first step, we're concentrating on reducing how much energy and fuel our ships consume while they are in port and at sea. We're working on projects to improve the onboard energy and heat recovery systems, as well as the hydrodynamics of the ships' hulls. We're already using shore power at the Port of Stockholm in Sweden, but we're working in close cooperation with the other ports that our vessels visit to explore possibilities for expanding our shore power use. Gradually, we aim to have our ships connecting to 11 kilovolt shore power grids during all port stays.

*Utor:* Baleària is a global pioneer when it comes to using LNG as a fuel – we first committed to using it seven years

BC Ferries and Baleària have both built new ferries that operate on greener fuels to reduce environmental footprint



ago and in 2019 we became the first to introduce dual-fuel LNG vessels to the Mediterranean and the Canary Islands. Our 2018-2021 fleet strategy includes building three new ferries and retrofitting six older vessels to operate on LNG – four are already sailing. We want to go beyond industry requirements when it comes to minimising our pollutant gas emissions. Our aim to be as eco-efficient as possible has also guided other projects, such as the introduction of the four eco fast ferries that were launched in our Ibiza-Formentera route in the Mediterranean in 2018 with greener engines than our older vessels. In addition, we use antifouling paints on the ships' hulls to reduce fuel consumption and we've introduced biodegradable utensils for passengers. Plus, we have circular economy projects to build furniture for ships from plastic generated onboard.

**How do you expect that your business will need to evolve in order to stay relevant in the future?**

*Marshall:* Transporting people and

vehicles between the coastal and island communities in Canada's British Columbia province is the core of our business, so it's important that we understand the impacts of autonomous vehicles, ride sharing and other changes to modes of transportation. It's the only way we can analyse how they will impact our business model. Reducing our environmental footprint through continued investment in leading-edge environmental stewardship is a top priority as we build a ferry system for the future. Every day we study, engineer, invest and act. We're moving along a carefully structured path designed to protect coastal communities and bring sustainability and cleaner operations to our coastal ferry system.

*Nógene:* Our customers, partners and investors will all expect us to become greener and more environmentally responsible in the coming years, so doing that will be the key to keeping us relevant. The other area we'll continue to focus on is the advancement of technology,

innovation and digitalisation. Digital technology is gathering speed in every aspect of our lives and we need to invest in it to ensure that we not only keep up with the developments, but also remain ahead of the game by offering our customers new solutions before they even know they want them. It's a big challenge, but if we're not at the top of the technology game, we'll have no chance of staying relevant. Finally, we continue to always have a strong focus on delivering the best service, most memorable experiences and the ultimate comfort for all our customers.

*Utor:* There's no doubt that data science and AI will bring us unlimited levels of efficiency and exponential economic growth, but any new digital technologies must be used in an ethical and sustainable way that also supports economic development. We must approach the digital revolution rationally. That's why Baleària has signed the United Nations 2030 agenda and shares the 17 Sustainable Development Goals – it will secure our future in the ferry industry. **C&F**