

MarketLine Case Study

Royal Caribbean

Using technology to provide an
immersive guest experience in the
cruise industry

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OVERVIEW

Catalyst

Technological modernization is assuming greater importance in the cruise liner industry as the need to attract millennial travelers becomes increasingly vital. Royal Caribbean is already making great strides with new technologies onboard its cruise fleet. This case study looks at what the company is doing, analyzes the success of its strategies, and speculates on future developments.

Summary

- Royal Caribbean is experimenting with new technologies onboard its cruise fleet.
 - Royal Caribbean International is one of the biggest cruise brands in the world, with its parent company being the second largest by capacity. Currently, the company's fleet contains 25 cruise liners that can accommodate between 2,500 and 6,500 people and it operates in 47 different countries on four continents.
 - In recent years, Royal Caribbean has been engaged in a digital transformation to try to respond to the challenges facing the industry.
- By engaging in technological innovation, the company seeks to broaden its appeal to people who would have never considered traveling by cruise before.
 - By implementing technological features, the company aims to improve the customer experience on board in order to attract younger passengers, who currently only represent a very small proportion of its customers.
 - Cruises are not very attractive to younger travelers, and this is supported by some of the available data; for example, research by the University of Wisconsin-Milwaukee estimates that the average passenger is 49 years old.
- Cruise providers are concerned about industry growth coming to a halt, and eventually reversing, if the industry does not attract a wider range of customers.
 - Royal Caribbean's current efforts to embrace technology underline a general trend in the cruise market.
 - As millennials are gradually overtaking baby boomers as the largest generation worldwide, cruise operators have to challenge age-related perceptions surrounding cruising in order to effectively target younger generations and ensure the future growth of the industry.

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TECHNOLOGICAL TRANSFORMATION CREATES THE “WORLD’S FIRST SMART SHIP”

The digital transformation process for Royal Caribbean started in 2014, with the launch of the Quantum of the Seas; a ship that the company used to experiment with a host of new technologies. The cruise ship combines robotics, augmented reality, and radio-frequency identification (RFID) tags to enhance the entertainment offerings for travelers, while providing a unique technological experience.

Digital canvas, bionic bars, virtual balconies, Wi-Fi, RFID, and skydiving - key digital features of the ‘world’s first smart ship’

The technological transformation rolled out by Royal Caribbean is multi-faceted rather than focused on one specific area. A floor-to-ceiling digital canvas, robotic bartenders, virtual balconies, high-speed Wi-Fi, and skydiving simulators are just some of the features that make up Royal Caribbean’s transformation strategy as it looks to attract younger travelers.

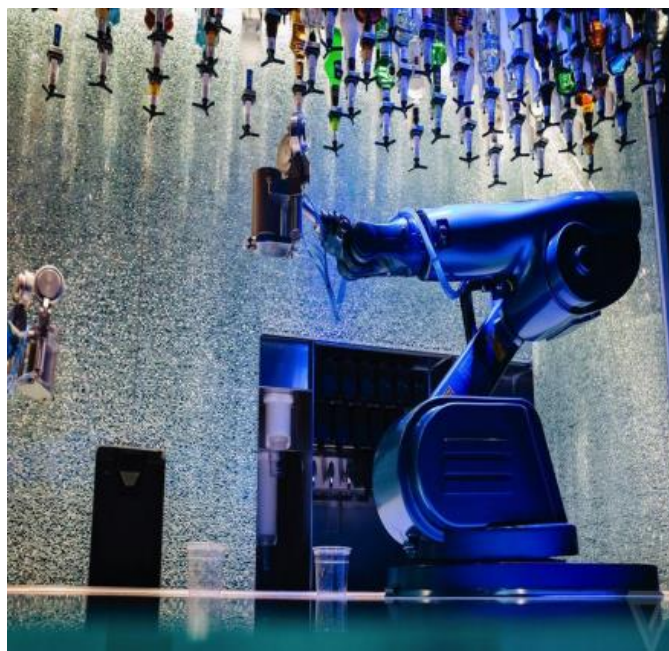
Floor-to-ceiling glass windows that are transformed into a ‘digital canvas’

With a system of 18 coordinated projectors, the floor-to-roof glass window transforms into an immersive 3D display. The display is over 30 meters wide and six meters high, along with six large displays mounted on robotic arms. The system was built by ABB and is capable of creating unique 3D scenery, which has reportedly received very positive feedback from customers.

A bionic bar with robotic bartenders

The company also experimented with robotics and AI customer interaction. For example, it set up a cocktail bar manned by two robots that can mix cocktails for customers. The bar was created by the Italian robotic company Makr Shakr, and is currently available on four of the company’s cruise liners. The so-called ‘bionic bar’ can produce two drinks per minute and can make up to 1,000 drinks each day, offering many cocktail combinations with a choice of 30 spirits and 21 mixers. The robots were reportedly designed to mimic the movements of Marco Pelle, a principal dancer at the New York Theater Ballet, to make them appear elegant and life-like.

Figure 1: One of the two robotic bartenders on the Quantum of the Seas



SOURCE: GlobalData

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Virtual balconies and technologically enhanced games

The use of technology was also employed in order to improve on board activities, with Escape the Rubicon, an escape room puzzle enhanced with technology being particularly popular. Moreover, virtual balconies bring real-time views of the ocean and destinations inside the rooms. All inside rooms on seven cruise ships are equipped with 80-inch floor-to-ceiling screens that are framed to look like an actual balcony. Although virtual balconies cannot completely replace the 'enjoyment' of relaxing on a real balcony, travelers who are seeking to save some money by staying in the inside rooms, viewed the addition as a great technological enhancement that improved their experience.

Figure 2: Virtual balconies in windowless cabins of Quantum of the Seas



SOURCE: Gizmodo

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High-speed Wi-Fi on the high seas

Given the growing expectation for continuous internet connectivity, Royal Caribbean has created a high-speed Wi-Fi connection to ensure seamless video streaming and real-time chatting. To make this possible, the company uses the O3b Network of low orbit satellites. By utilizing O3b's technology, Royal Caribbean International has taken a step forward in terms of providing internet connectivity on the high seas. Naturally, providing this connectivity is costly to the company and therefore Royal Caribbean charges customers for this access. It offers two internet packages that charge per device, rather than per minute – the common standard in the cruise industry. The packages cost US\$19.95 per device for a service that does not support streaming and a package with higher bandwidth for US\$27.99 per device. However, according to the company's CIO, Mike Giresi, one of the company's priorities is to extend its Wi-Fi connection and decrease the charging rates in order to meet the increasing expectation of free connectivity on board, which is what more customers expect from the industry.

RFID technology and digital kiosks

To improve guests' experience on board, Royal Caribbean made extensive use of RFID technology for luggage tagging and tracking. RFID is also embedded in the WOWband wristbands that enable access to staterooms, or can be used to make purchases or check in for entertainment offerings. Digital kiosks allow guests to find the most efficient way to their destination on the ship, locate any ship in Royal Caribbean's fleet, and obtain more information about their journey.

Skydiving simulator

Royal Caribbean, in partnership with RipCord, introduced a skydiving simulation experience on-board. Participants receive training and after being given goggles and a special suit, they get to 'fly' inside a wind machine. Even though the 'flying' experience lasts no more than a minute, the overall process lasts almost two hours and participants reportedly enjoy this unique and adventurous activity.

Figure 3: Ripcord by iFly is the skydiving simulator on-board Quantum of the Seas



SOURCE: Cruise Critic

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‘Come Seek’ campaign

Besides the digital transformation on-board, the company invests in social media campaigns. In particular, Royal Caribbean’s ‘Come Seek’ campaign won the company an award at the 2017 North American Effie Awards in Media Innovation. The campaign presented the company as an ‘anti-cruise’ line, focusing on the unique, immersive, and adventurous activities that travelers can undertake on its fleet. With phrases such as ‘This is not a cruise’ and ‘You are not a tourist’, the company sought to target millennials; a generation known to be looking for more authentic experiences.

Figure 4: Royal Caribbean’s Come Seek campaign



SOURCE: Royal Caribbean

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TECHNOLOGY CRITICAL IN ATTRACTING YOUNGER TRAVELERS

Cruise liners have not readily kept up with changing consumer behavior with regards to technology, but Royal Caribbean has realized a need to mirror the growing influence of innovative technologies in many aspects of our lives. Expectations have shifted among consumers and particularly younger travelers place great importance on modernity. To attract these travelers, Royal Caribbean knows it must provide what they want. The cruise industry is currently growing, but more needs to be done to ensure long-term success.

The technology imperative cannot be ignored by cruise liners

For a long time cruises lagged behind the rest of the travel industry when it came to technology. However, the growing influence of innovative technologies in many aspects of our lives and the rapidly changing consumer expectations have underlined the fact that cruise liners cannot afford to ignore the technological boom. During the last five years, the industry has made great steps towards embracing technology and is currently undergoing a digital revolution.

The rise of the millennial traveler creates high expectations about technology-enabled holidays

The cruise industry has been growing steadily for nine consecutive years. The number of passengers increased from 17.8 million in 2009 to 24.7 million in 2016, while 27 new ships were ordered by the end of 2016 by all players. Despite the impressive boom in the industry, there are several challenges lying ahead. To ensure the success of the sector in the long-run, cruise liners have to adapt to the consumers' rapidly evolving needs and expand their appeal to a new demographic.

One of the key challenges that the cruise sector has to deal with is the common perception regarding the older age of tourists choosing this type of holiday, which in turn makes cruises less attractive among younger people. With the average age of passengers being 49, the cruise sector has to speed up its efforts to effectively target different generations.

Millennials are gradually overtaking baby boomers as the largest generation in the world; in the US, millennials have been the biggest cohort since 2016. Similarly, in the tourism industry, millennials' spending is soon expected to surpass the tourism spending of baby boomers. If cruise liners want to safeguard the growth of the industry, they should increase their appeal among millennials. To do so, they have to get rid of their stereotypical 'old-fashioned' image and tailor the products and services they offer in order to match the tastes and needs of this generation. Given the millennial's reputation as the most tech-savvy generation — a generation not only familiar, but also dependent on technology — one of the best ways to effectively capture this consumer segment is by engaging in a digital transformation.

Figure 5: Cruise Industry Key Statistics, 2016



SOURCE: GlobalData

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CONTINUED INNOVATION AND AI – THE FUTURE OF ROYAL CARIBBEAN

The company is showing its commitment to digital innovation through its detailed strategy and the company will continue to build on its modernization program. The company has launched an Innovation Lab to develop new innovations that will help to attract younger travelers. The company is also investing in artificial intelligence (AI) to boost customer experience.

The company has launched an Innovation Lab

Royal Caribbean is still in the early stages of its digital transformation, but does seem to be taking it seriously. In order to explore new technology, the company has created an Innovation Lab in Miami that uses virtual reality and collaborative workspaces to support the ship designing process. By using virtual reality, engineers and designers can implement new, inventive designs and features throughout the whole construction process. Royal Caribbean bets on this technology and plans to increase its investments in order to improve its construction process by combining human talent with innovative technology.

Royal Caribbean turns to Artificial Intelligence (AI) to improve customer experience

In addition, Royal Caribbean is increasing its activity in Big Data and AI and has created a chief data and cognitive officer position in order to manage all data and AI processes within the company. As a first step in this investment, the company plans to integrate the AI software Amelia by IPSoft into its cruise experience to analyze and classify the collected data video analytics, customers' past preferences, and sailing information. Amelia's ability to comprehend language contextually and emotionally and to understand more than 40 languages in a completely natural, contextaware dialog facilitates new opportunities for machine-powered analytics. By offering personalized experiences, Royal Caribbean aims to attract new customers and to maintain existing ones.

Figure 6: Example modern cruise liners



SOURCE: Shutterstock

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CONCLUSIONS

Royal Caribbean's transformation strategy provides a number of lessons for cruise operators

Royal Caribbean's transformation strategy is necessary as the importance of millennial travelers increases. This is relevant to all cruise operators and lessons can be learned from what Royal Caribbean has done so far.

Engage in digital transformation on-board

To dispel notions that they are 'old-fashioned', cruise liners should be committed to transforming on-board digital amenities and experiences for guests. The introduction of robots, artificial intelligence, and RFID technology can reduce the time required for baggage handling, or for passengers to pay for amenities, boosting operational efficiency. Moreover, the development of mobile applications, faster Wi-Fi, and technologically-enabled activities and games would help target younger generations more effectively, which would allow the industry to both modernize and meet the demands of a larger audience.

Build a strong social media presence

The cruise industry should attempt to capitalize on digital outlets, especially social media platforms such as Twitter, Instagram, and Snapchat. A strong presence on such platforms is essential for cruise liners to reach a larger audience of potential visitors, particularly millennials, who are highly influenced by social media. However, cruise liners should ensure a variety of advertisement techniques, because if too much focus is placed on younger generations, older travelers that have been traditionally choosing cruises for their holidays may feel alienated.

Use technology to develop unique on-board activities for different ages

As cruise liners are seeking to expand their appeal to new demographics, they should employ technology in order to develop more innovative and unique activities for different types of passengers such as Royal Caribbean's skydive simulator and the virtual game escape the Rubicon. In order to attract young families with kids, cruises should offer more daily sports activities and games for kids, which at the same time allow parents to relax and focus on their entertainment on-board. Moreover, differentiated wellness and medical activities could be of interest to both millennials and older generations; while both a retiree and a millennial may enjoy the spa and yoga, different levels of classes targeted to the specific physical needs of each age group may help to boost the appeal for cruises across generations.

Focusing on millennials, as they are increasingly valuing authentic experiences, cruise lines should seek to provide more refined offerings focusing on the 'experience' — with or without the use of technology — such as wine tasting sessions, meditation, and sky-diving, which could help attract such customers. Similarly, given that millennials are the most eco-conscious generation, cruises should capitalize on this by 'going green' either by adopting strategies and technologies that promote the reduction of emissions, or developing partnerships with organizations that support environmental sustainability.

APPENDIX

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Further Reading

Royal Caribbean Cruises Ltd – MarketLine Company Profile

Global Travel & Tourism – MarketLine Industry Profile

Travel & Tourism in the United States – MarketLine Industry Profile

Ask the analyst

We hope that the data and analysis in this brief will help you make informed and imaginative business decisions. If you have any questions or further requirements, MarketLine's research team may be able to help you. The MarketLine Research team can be contacted at ReachUs@MarketLine.com.

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