

**BROADCASTING MARKETING INFORMATION WITH RFID-DRIVEN IOT
CONNECTIVITY FOR A SELF-SERVICE POINT OF SALE SYSTEM.**

CASE STUDY

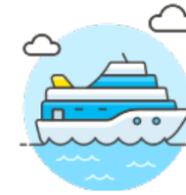
A CASE STUDY ON IOT DESIGN & DEVELOPMENT



A pioneer of modern cruising in the world and Britain's leading cruise line, sailing the U.K.'s largest and most modern fleet, wanted to eliminate the need for constant staffing for onshore marketing of shore excursions, bookings, pass issuance, rebooking, and payments.

The client's objective was to provide a self-service unattended point of sale system with 360-degree connectivity across platforms (Kiosk, TV, Web, & Mobile) to improve employee efficiency and provide a seamless travel experience to customers.

ABOUT CUSTOMER



Our client is the world's largest leisure company with a fleet of more than 100 ships visiting more than 700 ports globally. Currently, the client offers a diverse range of venues for relaxation and entertainment for over 11.5 million customers every year.

PROBLEM STATEMENT

With the increasing number of customers, the company faced difficulties offering a wealth of shore experiences for all tastes and activity levels. The client's entire shore excursion sales, marketing, and servicing process was paper-based, manual, and prone to errors. Staff had to be on hand at all times in case customers arrived at the help desk.

In order to meet the demand of customer requirements every year, our client had to onboard an increasing number of staff for shore excursion promotions, sales, and administration.

To overcome these challenges, the client wanted a technology solution that supports the employees and offers a seamless, convenient, and personalized travel experience to customers.

BUSINESS GOALS



Collaboration of web and mobile services



360-degree connectivity across platforms (Kiosk, TV, Web, & Mobile)



Use of touch screens & RFID for easy interaction across platforms



Better assistance to tourists through a self-service point of sale system



Automating all manual shore excursion booking processes



Ease-of-use, scalability, and cost-effectiveness

SOLUTION

After understanding our client's requirements, Zuci Systems partnered to develop an omnichannel customer experience with RFID-driven IoT connectivity for shore excursion marketing and sales, bookings, pass issuance, rebooking, and payments.

Our project architect designed the IoT infrastructure with an RFID-driven IoT connectivity that would serve as a central hub for broadcasting all the marketing promotions and administration of shore excursion bookings, minimizing manual interface operations. The solution was designed to offer the client the flexibility and scalability required to integrate RFID technology into their pre-existing platforms (Kiosk, TV, Web, & Mobile).

Our automated IoT connectivity architecture provided real-time information to the customer at all point-of-sale (POS) systems, including excursion availability, pricing, payment options, etc. This eliminated paper tickets and printed receipts, enabling our client to make every customer interaction personal, efficient, accurate, and secure.

Finally, to expedite the deployment, we engineered a communication interface layer to mesh the technologies, opening communication channels between the legacy software and the RFID technology, and deployed the solution in 3 months.

HOW ZUCI SYSTEMS HELPED?



Our business analysts collected the requirement by conducting an onshore 4-day workshop with the stakeholders.



Prepared a general functional specification (GFS) document describing the design and architecture to implement the project objectives.



After the details of the software architecture were identified during the first phase, we finalized to code the server using the Spring Boot Framework - a stable platform that could be deployed in an intranet, extranet, or the internet.



Understanding business requirements, our digital engineers, selected RFID (Radio Frequency Identification) card functionality to help tourists with easy sign-in access and booking.

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HOW ZUCI SYSTEMS HELPED?



Installed RFID middleware to connect with RFID readers and antennas to read tags. The middleware is the core of the POS system, which allows different parties to interact with each other.



Used multiple sensor inputs, including fixed scanners, mobile scanners, RFID antennas, bluetooth, and Wi-Fi media to connect with different systems.



Connected different channels to the internet via an RFID reader and tags to broadcast marketing information by using IoT technology.



Deployed and tested the solution on the client's staging environment and handed over the application guidelines.



Post acceptance of stakeholders, our team moved to production, followed by ongoing support with workshops and Q&A sessions.

BUSINESS OUTCOME

World-class user experience across devices

2X

increase in bookings

10X

faster booking processes

59%

increase in NPS
(Net Promoter Score)

93%

reduction in employee effort
(equivalent to 200 FTEs)

ROI realized in **3 months**

TECH STACK





WE PUT THE INTERNET IN EVERYTHING.

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