



UX | PRODUCT BUILD | QA | APPLICATION MODERNIZATION

Major Resort Complex

Luxury Hotel and Casino Resort

Our client, a major resort complex, in Las Vegas (USA), approached gravity9 to modernize their outdated Guest and Offer Management System. The existing architecture relied heavily on manual data entry and spreadsheets to operate, rendering it unfit for modern utilization and digital innovation.

As an application modernization specialist, gravity9, with experience in the gaming and resorts sector were ideally positioned to deliver a modern, agile,

streamlined system featuring a new centralized guest, promotional offer, and events management system.

Developed around .NET, React, SQL Server and Microsoft Azure, gravity9's new system leverages Azure AI Search for rapid searches of large data stores. The gravity9 solution has freed up resources, improved (both internal and external) user experience, and provided our client with a means to effectively maximize business potential.



Utilized Technology Stack

Cloud: Microsoft Azure

Database: SQL Server

Backend: .NET, Azure AI Search, Microservice Architecture

Frontend: React, Micro Frontends

Review of Challenges

Our client is a major resort complex in Las Vegas (USA) and one of the largest in the world, offering a 7,100-room

hotel, clubs, casino, shops, restaurants, convention space, museums, spas, and wedding chapel. They approached gravity9 for help, thanks to our reputation for delivering application modernization projects across the leisure and hospitality sector.

Their Guest and Offer Management System was created in the 1990's - outdated, labor intensive (requiring extensive manual input for even basic functions) - and was in urgent need of modernization. Many common processes relied on internal users inputting and manipulating data manually with spreadsheets, with repeated manual data accuracy assessments. Customer profiles were split across hotel/casino bookings and systems would create a new customer profile each time a customer visits the hotel, including returning customers! The result was a system that was resource heavy, inefficient, vulnerable to errors, and a cumbersome experience for staff and guests.

As our client offers a diverse range of entertainment and services, their aim

was to customize the guest experience through tailored promotional offerings suitable for the guest's level of value within the resort (both during the booking process, and on-site). The existing system struggled to do this (for example: if a guest changed promotional level, the information would need to be updated manually). This resulted in lengthy lead times for campaign deployment, inability to meet customer needs, a poor response to market dynamics and missed opportunities.

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Our Solution

Thorough requirement gathering workshops took place in Las Vegas: the UX discovery team conducted field research and implemented Domain Driven Design methodology to analyze the old system. The executive vice president, product owners, UX and development teams worked closely through collaborative design workshops to ensure rapid validation and cross-team cooperation.

UX design was responsible for collecting data, building prototype demonstrations, and scenario wireframes. Design oversaw UI delivery using a customized approach that connected front-end UI with development. This achieved rapid time to market, ensuring that what was promised to the client team was delivered.

The gravity9 development team included technical leaders, front and back-end developers, software testers conducting both manual and automated QA, and UX/UI designers. The system (VConnect) was built around .NET, React and Micro Frontends. SQL Server was used as a database and Microsoft Azure for cloud access. Microservices architecture was selected to aid rapid development and scalability. Azure AI Search was also implemented, proving an ideal information retrieval tool for guest information from large data pools.

Project focus changed during development, in line with shifting business priorities. However, thanks to gravity9's ability to scale development teams dynamically, expanding and

accelerating development to meet needs was not a problem. Work took place concurrently on two key areas of the new system (guest management, and event and offer management), and the first major release was delivered, on target, because of this flexibility. gravity9 remained involved post-launch to provide product and user support, as well as further maintenance and product updates.

Our Approach

gravity9 delivered an intuitive, streamlined, new Offer Management System (VConnect) boasting key features that solve the challenges above.

These included a modernized guest profile area in which booking teams have a single view of a guest's profile across both hotel and gaming bookings, and a guest look-up function using Azure AI Search with which to quickly search through, and manage, guest profiles effectively.

A promotional offer creation area allows the creation and management of both offers to be presented to guests, and events (for the many types of events they host and run). This one-stop-shop enables agile, bespoke pivoting to meet guest needs, exceed their experience expectations and maximize sales potential with the minimum possible resource overheads and time invested.

**WE'RE
BUILDING
BETTER
DIGITAL
PRODUCTS**

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A customisable,
responsive solution
that provides the
data we need, when
we need it

Subsequent Outcomes

VConnect empowers our client's teams with vital tools and data insights. It allows guest data to be leveraged effectively in order to anticipate and exceed needs, and for personalized offers to be made which enhance the guest experience. It also streamlines the management of events at the resort. Thanks to the gravity9 solution it is possible to automate dynamic, targeted campaigns which are tailored to guests.

Our client's team are able to work more effectively using less time and fewer resources, with reduced scope for errors or inaccuracy thanks to centralized data. The resort can offer an improved quality of service, increase revenue, and enhance their marketplace value with better and wider offerings.

Guests also enjoy an improved experience, with personalized offers and campaigns maximizing their enjoyment of the resort and their access to the widest possible breadth of services and events.

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