IoT App Development for Smart



Pools

A Case Study on

Hayward's Revolutionary OmniLogic App

VERV

Hayward Pool Products

The United States' most recognized and trusted brand of pool equipment **JOT Solutions** Software Engineering, Mobile App Development, Product Design Image: Text stateProject Timeline9 months



Results

4.6-star rating in Google Play and App Store 93% of Omnienabled devices connected Easy equipment control

Improved customer feedback



Introduction

For nearly a century, Hayward® has been working to make their customers' pool experiences worry-and-hassle-free. The company engineers a complete line of technologically advanced pumps, filters, heaters, heat pumps, automatic pool cleaners, lighting, controls, and salt chlorine generators - designed to work together efficiently and require little maintenance. Because of its focus on building exceptional products, Hayward built one of the largest global installed bases and became the industry's most recognized and trusted brand in the United States.

With a long history of innovation, Hayward likes to lead from the front. It creates pool products with a lot of features and flexibility. Pool owners love the ability to customize, configure, and monitor their pool sites from tablets and phones. The product team at Hayward wanted to make it easier for less experienced owners to precisely control their pool environments, so they engaged Very to make this possible, with stunning results.



The Hayward Omnilogic App

The Need: Improved UX & Faster Time to Market

When Hayward approached Very for this IoT project, roughly 80% of users were on iOS, and the remaining 20% were using Android. The apps contained all the necessary functionality, but inexperienced users found the apps challenging to navigate. Low ratings revealed the latent customer frustration this challenge created. If left unchecked, this could do damage to the brand, making customers and installers less

likely to buy or recommend Hayward products in the future.







Meanwhile, supporting multiple apps required Hayward to maintain multiple codebases. That meant increased technical complexity, divergent feature sets, and increased development costs.

Hayward cares deeply about its customers' needs. The Hayward product team regularly seeks feedback from customers and installers, so they knew that investing in user experience would increase customer engagement with the Hayward brand. To improve the customer experience, Hayward took an analytical look into how its customers especially new and inexperienced pool owners - used the applications. The results galvanized Hayward's internal decision to redesign the OmniLogic app.



To improve the customer experience, Hayward needed a new application that:

Provided an intuitive experience for new pool owners

Enabled fast access to the most used features

Presented more information with fewer taps

Created a flexible foundation for future improvements

Looked well-designed and felt "calming" to use

The Process: Design and Build the Future of Smart Pool Control

Hayward faced a difficult challenge that required multidisciplinary teams with deep expertise in user experience design, application development, and Hayward's specific API implementation. They needed a way to assemble this team of internal and external experts to increase customer engagement and establish the groundwork for increased future revenue.

The Process

TEAM OF MULTI-INCREASED CUSTOMERDISCIPLINARYENGAGEMENT & INCREASEDINTERNAL EXPERTSFUTURE REVENUE

The Very model places senior engineers and designers on projects from the beginning. We find this leads to deeper trust, better scoping, and faster problem-solving. By engaging senior talent from the start, Very and Hayward developed lots of mutual empathy and understanding early in the process. Because of this foundation, problemsolving became a team event rather than a competition.



I'm most proud of our **communication.** There was a lot of empathy and trust in both directions. We strive for an 'everyone is part of the same team' type of mentality."



Benjamin Wald Founder, Very

Very's senior designers reviewed the initial research results to improve the design and usability of the OmniLogic app.

The User Experience (UX) audit found room for improvement:



Establish a Foundational Design Language

The Very design team faced a serious challenge. Because of the amount of customization that Hayward offers, pool configurations can vary widely between installations. Setups can range from only a couple of devices to dozens across multiple sites. Few applications need to pack in this much information and control. Very's goal was to make the application no more complex than it needs to be.



Starting with the limited wireframes and static designs from the UX audit, Very Senior Product Designers, Scott Veltkamp and Debbie Diaz, built a foundational design library for Hayward's apps. The designers refreshed the navigation to make it simple to set up, understand, and use.

They reduced the number of taps between screens and surfaced the essential elements to minimize confusion and create an intuitive customer experience.

The Very designers reworked the core components to scale from a single pump up to an

elaborate installation with lights, heaters, and multiple fountains. Under their guidance, Very designed the application to handle a large variety of practical, real-world uses.



Very took that rough user interface guidance and turned it into an app that made sense."





Sr. Global Product Manager, Hayward

Based on this foundational design work, the team developed a product roadmap to implement the changes in an entirely new codebase.



Build a Unified Codebase with React Native

Very's technical audit of the Omni Platform and codebases identified another opportunity: Hayward could migrate the three separate codebases for iPhone, iPad, and Android into a single shared codebase using React Native. The development team chose React Native because its cross-platform capabilities would make managing and updating the apps easier for Hayward on an ongoing basis. The Very development team centralized the business rules in a single code base and distributed the user interface (UI) with minor adjustments for Android and Apple platforms.

A unified codebase enabled Hayward to:

Reduce development spend across all applications





experience consistency across platforms

Shorten time to market for the initial app and future improvements



Improved API Polling for Updates in Near Real-Time

The React Native application connects to Hayward's Main System Processor (MSP) devices, which control pools and pool equipment using a legacy XML-based API. When adjusting settings on their pool sites, users want to see the updated data as quickly as possible. Based on this feedback, faster updates were prioritized as part of the implementation.

The team implemented a clever solution to update the information quickly. The OmniLogic application initially downloads a larger file that contains all of the site's settings to display a pool site's status. Then, the app regularly polls the API for updates by requesting telemetry data every few seconds for things like temperature and equipment statuses. This regular polling allows the OmniLogic app to display any system status changes in near real-time.

What Very Built: Revolutionary IoT App for Smart Pool Care

Hayward partnered with Very to design, build, and launch a completely redesigned version of their Hayward OmniLogic app that connects all Hayward equipment on the pool pad, including pumps, heaters, lighting, and various other sensors.

The Results

A Better Customer Relationship

As of writing, the Hayward OmniLogic app has seen an incredible increase in adoption. The OmniLogic is also one of the top-rated pool apps with a 4.6-star rating in both the App Store and the Google Play store. Very delivered this application – re-engineered from scratch – in just 9 months.

The OmniLogic has seen an incredible increase in adoption, with 93% of Omni-compatible products connected to the app.

To say that Hayward is pleased with the results would be an understatement. Hayward appreciated our detailed project management that clearly defined the work and kept

everyone on track and working together. Hayward's leadership expects demand for "smart" features to rise with the increase in smart home systems (expected to grow by 56.8% over the next 2 years), and they already see dividends from the feedback of users of the apps.



Better Feedback for a Better Product

The redesigned OmniLogic application makes it easy for pool owners to set up, monitor, and control their pool systems from anywhere. But it also enables another competitive advantage – a better relationship between Hayward and the owners of its pool systems. Since the app's release, support tickets have gone up, and Hayward sees this as a good thing. Before, frustrated customers would leave a bad review or "just deal" with issues. Now, because of the new app, users who need more help are redirected to support teams who can resolve the issue in a way that builds customer loyalty and provides valuable

feedback to the product development teams.

That feedback helps define the next generation of improvements – not just for the app but for the future of the Hayward product line. Hayward expects to build on the foundation they established with Very to implement various new user-focused enhancements in the future. Each of these features expands Hayward's relationship with its customers and improves the trust built through every customer engagement with the Omni platform.



Project Contributors

Rebecca Sykes: Senior Program Manager **Scott Veltkamp:** Lead Product Designer **Debbie Diaz:** Senior Product Designer Jacob Arellano: Senior Software Engineer **Gaspar Tovar:** Senior Software Engineer **Cash Compton:** Senior Software Engineer

VERY