Base2 Designs Augmented Reality App to Create an Interactive Facility

Summary

Jabil (NYSE: JBL) planned to expand its Jabil Green Point operations in Israel by opening an Optics Technology Innovation Center.

Jabil wanted to clearly illustrate its cutting-edge capabilities in this market - to create a design feature within the facility that would let visitors have an augmented reality experience, rather than just describe the company's expertise.

Challenges

• Using a still-in-development SDK

• Overcoming differing quality assurance standards

• International Communication

Results

The AR wall was completed on time and available to visitors when the new facility opened. It illustrated that the chicken-egg problem can be overcome: there isn't a market for AR hardware without an app being developed in tandem to facilitate its use.

Can you create an augmented reality experience application that delivers on its promise when the operating platform is still being developed? It's a classic chicken-egg conundrum, but Base2 recently proved that the answer is a resounding yes. Not only is it achievable, but it can be completed on a short timeframe to coincide with a major event.

Base2 has several core beliefs, but for this AR app, two were paramount: have the best interest of the client at heart, and understand the end customer in order to design an amazing product that exceeds expectations.

Because of the unknown variables involved with the operating platform, Base2 recognized that it was taking a leap of faith for upholding these beliefs. To protect the integrity of the client relationship and to ensure project success, the team leveraged its years of experience to create a risk mitigation plan at the outset. When setbacks occurred (and they did), there was always an alternative path to success in place.

JABIL

Jabil opens a new optics facility

Globally recognized for its advanced manufacturing and technology capabilities, Jabil (NYSE: JBL) planned to expand its Jabil Green Point operations in Israel by opening an Optics Technology Innovation Center. This 2000 sf facility would showcase the company's ability to meet the growing demand for optoelectronic systems, such as computational cameras, projection systems and combined solutions. These components are especially useful for devices serving mobile, virtual, augmented and extended reality experiences.

Jabil wanted to clearly illustrate its cutting-edge capabilities in this market. That's when Scott Sackville, Jabil's product marketing director for AR/VR, had an idea: what if he could create a design feature within the facility that would let visitors have an augmented reality experience, rather than just describe the company's expertise? Michelle Saro, chief marketing officer for Jabil Green Point, championed his vision of a lobby wall that would be coupled with Jabil hardware and an app to allow users to "see" the company's six global optics design centers through a virtual tour.

> *"what if he could create a design feature within the facility that would let visitors have an augmented reality experience, rather than just describe the company's expertise?"*

"It was a cool idea, but was the app practical on a short timeline?," Sackville wondered. He understood that Jabil didn't have an available team in-house to execute on the concept, and, with the facility opening in a mere five months, time was a critical factor. "I knew that if we were going to do this, we needed outside help," he said. He had successfully partnered with Base2 on past projects, so he turned to the company again for assistance.

Challenges

Base2's approach to any new project is, "What is your problem and how do we solve it?" In the Jabil AR wall scenario, there were three challenges:

Challenge 1: USING A STILL-IN-DEVELOPMENT SDK

The first problem that needed to be addressed was the underlying operating platform for the app. Any customer-facing product needs to deliver on its promise from the beginning, so it was tempting for the team to continue to use Unity for Mobile AR, a mature and proven platform for gaming and AR application development. However, Apple had just launched its ARKit for iOS that offered an opportunity to reach the platform's hundreds of millions of users and tap new features such as simultaneously shared user experiences – tantalizing benefits that Jabil's potential customers might be interested in.

The Jabil/Base2 team took a leap of faith and chose to use Apple's ARKit.

"When we began the project, the ARKit was available but was still in development," explained Neil Halpern, VP of technology for Base2. "This bleeding edge technology was bleeding every step of the way. It was a quickly changing environment; in fact, the technology took a big step forward mid-project. Base2 had to not only stay on top of changes with ARKit but had to help navigate how each upgrade affected the app and its development timeline."

Challenge 2: OVERCOMING DIFFERING QUALITY ASSURANCE STANDARDS

Jabil and Base2 have complementary quality assurance standards. But what happens when a third-party overseas vendor uses a more lackadaisical approach?

"We had an ongoing struggle with teams located in varying locations," Sackville noted. As an example, the design for the AR wall featured a global map pinpointing six Jabil optics facilities; visitors could

virtually visit each one via the augmented reality app. At one point, the wallpaper map showed Haifa in Africa instead of Israel. "We had to push hard to get the level of quality in the wallpaper design to match the level of quality we demanded in the app."

This attention to detail was just an extension of the high standards set by the Jabil/Base 2 design team, which continued to work hard to better the app's performance right until the opening of the facility. For instance, although Jabil has more than six facilities offering optics, the team decided to limit the number on the AR wall to increase the app's performance.

Challenge 3: INTERNATIONAL COMMUNICATION

abil Green Point's project team and Base2 are located in Seattle, while other designers and managers related to the new facility are in multiple locations.

"Any time you have a team that crosses continents, you must be sensitive to cultural differences, time zones and language barriers," Saro commented. Clear communication of the timeline, milestones and goals was an essential factor for the project's success. "We used multiple tools to ensure we met our deadlines, including Webex and conference calls at odd times (for some)," she said.

The AR wall was completed on time and was available to visitors when the new Haifa facility opened on May

Results

23, 2018. It delivered the cool factor Jabil wanted by giving users insight and inspiration as to what might be possible for future products. It also clearly illustrated that the chicken-egg problem can be successfully overcome: there really isn't a market for AR hardware without an app being developed in tandem to facilitate its use.

Sackville noted that Jabil measured the return-on-investment for this project with a different scale than cost and results. "The wall's goal wasn't about offering a virtual tour, it was more about showing possibilities. You'd need to look at the bigger picture to grasp its value," he said. "We got what we were after, and the wall delivered our marketing message of Jabil's optics capabilities in a new and memorable way."

"We failed frequently during our project and succeeded brilliantly, thanks to Base2," Saro said. She added that, at the end of the day, you want to work with a team that has excellent communication skills and the ability to pivot as needed in order to avoid the pitfalls that come with unknown variables.

"Base2 proved itself again to be a trusted partner," Saro added. "When it's an absolute experiment, you need people with the depth of knowledge across the board to give you a hope of success. Base2 delivered."