Sarasota Memorial Hospital
SMH Wayfinder App

Case Study

An analysis of deployment, roll-out, and patient adoption for indoor navigation systems in healthcare.

Background

When we think about navigating to a specific destination, GPS apps such as Google Maps and Waze, often come to mind. We have become reliant on end-to-end driving directions, yet until recently, blue dot navigation has been limited to the outdoors. Advances in the indoor location-based services industry have made it possible to provide real-time location tracking indoors, offering a platform for organizations to create highly personalized and end-to-end navigation experiences for patrons of malls, airports, workplaces, museums, and hospitals. In the healthcare industry, these systems are core to mobile engagement strategies for patient communities.

LogicJunction is a Cleveland-based solutions provider specializing in indoor navigation systems for the healthcare industry, servicing organizations such as the Cleveland Clinic, Brigham and Women’s Hospital, and Sarasota Memorial Hospital (SMH). SMH partnered with LogicJunction to deploy the first hybrid indoor positioning system in the United States. LogicJunction’s technology supplements Wi-Fi and Bluetooth signals with geomagnetic data collected through a process called fingerprinting, which reduces the amount of hardware required to provide accurate turn-by-turn directions.
This case study examines the challenges with patient and visitor navigation at Sarasota Memorial’s main campus, their approach to enhancing existing wayfinding strategies using the SMH Wayfinder mobile app, and the impact of the solution across operations, including adoption by their patient, visitor, and employee communities.

**Client Challenge**

Sarasota Memorial Hospital was built in 1925 and over the years has experienced more than 18 renovation and expansion initiatives. Expansion often makes traveling the campus complicated because of parking updates, new building additions, relocation of common entry points, and the connectivity of those areas within the campus footprint. One of the most recent renovations has been the 74,000-square-foot Rehabilitation Pavilion. The hospital is on its fourth generation of facility updates and will continue to adapt to the growing needs of its community. Changes in construction are one of the key reasons facilities such as SMH decide to implement indoor navigation systems.

With its current 1.8 million square foot campus and 10,000 daily visitors, the hospital felt it was the right time to leverage mobile solutions to further enhance the patient experience and reach a wider audience with interactive technology.

The criteria that were important to the Sarasota team when selecting a technology partner included:

- Technology didn’t require excessive hardware
- Interfaces could be understood by any user demographic
- Multiple delivery platforms to support patient and visitor use cases
- Integration capabilities via health records, appointments, and billing systems
- Flexible service and support models to support the needs of their team

**Approach**

Digital innovation is tied to long-term strategies to improve care, according to 85 percent of healthcare providers.[1]

Sarasota Memorial Hospital’s focus on technology-based navigation solutions began with a search for interactive digital display units, commonly referred to as kiosks. LogicJunction was selected as a partner because its platform provided the ability to create branded indoor maps and a virtual concierge who could interact with visitors upon arrival. It was important to the SMH team that LogicJunction could provide unlimited support to assist with updates, in addition to offering an administrative console that could be used to maintain system data. In 2011, three kiosks were installed in the hospital, which provided directions that could be viewed onscreen, printed on demand, or emailed.

[1] connect.healthforum.com
The most successful healthcare organizations are following consumer trends and using experience-based systems to improve engagement, outcomes, and organizational performance. As a result, many hospitals have focused on their mobile strategy to differentiate themselves in a highly competitive market.

Sarasota Memorial Hospital first introduced their flagship hospital app in 2015 and continued to develop mobile experiences personalized for various patient populations, including SMH Baby for moms-to-be, SMH Urgent Care for critical appointment scheduling, and SMH Bariatric Surgery for program participants to learn more about their bariatric journey.

LogicJunction’s indoor navigation app closely aligned with Sarasota’s mobile-first strategy. Sarasota Memorial had experimented with hardware-based systems earlier and the long-term maintenance costs were a roadblock to deployment. LogicJunction’s innovative technology reduced the need for these costs, requiring fewer than 250 Bluetooth beacons to provide the same level of accuracy as a hardware-based system, typically requiring at least 2,000 beacons.

The mobile app, SMH Wayfinder, was officially launched in May 2017, after a six-month-long implementation process.

Impact
While many organizations choose to implement indoor navigation technology for varying reasons, the impact on patients, employees, and the overall experience at the hospital remain advantageous.

The patient experience is defined as the sum of all interactions, shaped by an organization’s culture, that influence patient perceptions across the continuum of care, according to The Beryl Institute.\(^2\)

Sarasota Memorial said that many of its patients were appreciative of the availability of the app, particularly because it was free and because it provided ease of mind.
APP PROMOTION TO APP DOWNLOADS
The SMH Wayfinder app was downloaded by nearly 5,000 users across iOS and Android devices through 2018. The chart below illustrates the increase in app downloads when the app was supported by digital marketing and social media campaigns.

- The number of app downloads in May was more than twice as high as June, illustrating a strong correlation between promotional launch activities and app downloads.
- App downloads post launch increased when the app was promoted on social media, as shown by the months represented with blue bars.

![App Downloads Chart]

EMPLOYEE OUTCOMES
In addition to patient experience, indoor navigation systems help with employee navigation. SMH didn’t set out to implement indoor navigation for employee utilization, but it became apparent to leadership in the months following the launch that employees were using the system more frequently than patients. Indoor navigation is particularly helpful to employees when departments change or to new employees during their onboarding.

The topic of navigating the hospital frequently came up during new employee onboarding. Because SMH is large and difficult to navigate, new employees always seemed stressed about how they would get around.

75% of the questions related to wayfinding decreased, once the app was launched, according to Peter Taylor, the Vice President of Strategy at SMH.
PATIENT TRAFFIC
The use of indoor navigation technology has provided Sarasota Memorial Hospital with location-based analytics about navigation patterns across their campus. Understanding the data behind patient, visitor, and employee journeys provides a basis to make recommendations that can improve operations and enhance experience.

EXPERIENCES IMPACTED
From launch until the end of 2018, there have been nearly 5,000 app downloads across both iOS and Android devices. More than 3,000 sets of directions have been provided to users, helping them arrive at their destination at Sarasota Memorial Hospital. For every set of directions given, there’s been a sigh of relief by an anxious hospital visitor. There’s a new grandmother who can easily find her new grandchild, a distressed wife who can find the chapel before her husband’s surgery, a worried father who can easily find the emergency room, and a comforting friend finding the gift shop for a card.

The return on investment for digital wayfinding is often thought of only in quantifiable data, which though important, doesn’t necessarily show the full impact of the technology on end users. The impact of the technology is defined by the interactions that shape the experience a visitor takes away.

“We’re always looking for ways to make the experience for our patients better and better each and every day,” said CEO David Verinder. “We don’t ever think we’re at the end, we’re always on a journey to find new ways to improve.”
The Future

The recent addition of the SMH Wayfinder app expanded Sarasota Memorial's footprint beyond the core mobile features of finding locations, doctors, and information about the health system, using advanced indoor location services to provide custom navigation and deliver personalized content to their patient and employee communities.

Using LogicJunction's indoor navigation technology has helped to prove the success of a mobile blue dot app not only at SMH, but at hospitals and large facilities across the world. Wayfinding is an integral part of everyday life and technology will only continue to develop in order to cater to these wayfinding needs. Apps such as SMH Wayfinder stem from a focus on improving the patient experience, which is what both Sarasota Memorial Hospital and LogicJunction aim to achieve.

As for the future, Sarasota's mobile first strategy will continue to be a focal point. The core technology of SMH Wayfinder lends itself to greater opportunities to enhance their services and streamline the patient journey. On the roadmap to explore with LogicJunction are enhanced voice capabilities to service the hearing impaired, as well as integration with electronic communication portals for appointments and billing. Internally, the hospital hopes to add capabilities to track high cost hospital assets. Sarasota Memorial Hospital has been a leader in innovation in the healthcare space and partnering with LogicJunction has demonstrated their commitment to future innovation.
LogicJunction’s indoor location system improves everyday experiences by providing easy-to-follow directions, location-based notifications, and relevant information such as appointments, events, and personalized messaging across large organizations.

The data captured through the system enables leadership to improve operations and employee satisfaction through advanced analytics and business intelligence.

Our core features and capabilities are delivered via responsive websites, digital displays, and native iOS and Android mobile apps and SDKs. Our blue-dot is powered by a proprietary blend of Wi-Fi, BLE beacon, and geomagnetic data delivering an IPS system that requires approximately 85% less hardware than the typical hardware-based indoor location solutions.

For more information, visit our website. logicjunction.com