

SIGN RESEARCH FOUNDATION

EXECUTIVE SUMMARY

DIGITAL WAYFINDING TRENDS: LESSONS LEARNED FROM MUSEUM, HEALTHCARE AND TRANSIT EXPERIENCES



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Museum patrons, healthcare-facility patients and transit customers are demanding more than ever from the spaces they use. Museums that identify dusty relics with equally antiquated signs or plaques are guaranteed to lose visitors. Patients and their loved ones are under enough stress when they're using medical facilities; an outdated mishmash of illegible signs and directional placards will only amplify frustration. And, public-transit users often must often manage extremely tight schedules and navigate numerous stresses and distractions to meet their destinations.

On the surface, these divergent types of environments might suggest differing user experiences. They clearly serve different functions, but healthcare, museum and transit environments share numerous common elements:

1 YOU'RE NAVIGATING A LARGE, COMPLEX "MAZE." Museums and healthcare environments typically outgrow their initial footprint, expanding or acquiring additional buildings that create expansive, labyrinthine spaces. Multi-modal transit hubs must convey rail, bus, subway, and ground transportation information. Within these expansive facilities, there are numerous specific destinations – exam rooms, special exhibits or train platforms– that must be identified. This adds to the challenges of finding visual cues.

2 ALL OF THESE ENVIRONMENTS HOST A HIGH PERCENTAGE OF FIRST-TIME VISITORS. Studies in each market segment show have shown that approximately 50-70% of facility users are first-time visitors or access them once a year or less.

3 THE USERS OF THESE FACILITIES ARE PURPOSE-DRIVEN. This is especially true for healthcare-facility visitors, where improving wellness of the user or their loved ones is the reason for the visit. The visitor is likely to have prepared for their visit by accessing virtual maps and other available resources in advance. Healthcare entities compete for the best patient experience, museums want to boost visitor count and transit authorities seek to boost usage to grow public confidence and investment.

4 WAYFINDING POINTS THE WAY. However, its very definition has changed from the static solution provided by first-generation Environmental Graphic Design (EGD). Visitors are increasingly stressed, distracted, and bombarded by visual and auditory stimuli. New-generation wayfinding must be dynamic and engaging, and a variety of digital tools have evolved to meet these needs.

To demonstrate and document how evolving wayfinding technologies have enhanced the visitor experience, Leslie Wolke, with MapWell Studio (a company that works with architects and facility executives to deploy custom wayfinding solutions), worked with a five-member advisory team of EGD and user-experience professionals to evaluate medical, healthcare, and transit facilities that have incorporated a variety of innovative wayfinding solutions.

Wolke was quoted as saying, "We're in the early days of wayfinding technology, and today's experiments will inform tomorrow's ubiquitous tools."

Let's review these exciting, cutting-edge solutions, and how they could redefine signage and environmental branding!

MUSEUMS MOVE FORWARD TO THE PAST

Museums have long been revered cultural repositories of art or history, but many such institutions failed to keep pace with evolving technology. This may lead to the unfortunate perception of museums as quaint, outdated, and irrelevant beyond obligatory school field trips. Thankfully, museum executives have sensed the need to use such technologies as augmented reality (AR), interactive touchscreens, and kiosks to better engage visitors.

AT THE DETROIT INSTITUTE OF ART (DIA), a 19th-Century Beaux Arts behemoth with soaring, cathedral-like ceilings, museum officials sought to integrate its august settings with AR to invigorate the museum's environment. To do this, DIA lends visitors smartphones outfitted with Lumin, a custom-built program that employs Tango, Google's experimental AR platform. Lumin allows the visitor to bring seven artifacts from the museum's Middle East and African history galleries to life... Lumin first has the visitor focus the phone on one of the artifacts and then uploads a vibrant tableau of imagery that replicates the artifact's original placement and underscores its historical significance. To guide visitors, Lumin displays blue dots onscreen to link users from one artifact to the next. The most popular stop on Lumin's tour is DIA's gold-flecked, 2,000-year-old mummy sarcophagus. The app pans across the tomb with a CAT-scan view that creates an "Indiana Jones meets CSI" experience by revealing such features as the mummy's skull fracture, and allowing users to explore its mysterious clues. Post-visit, user feedback underscored the program's success: 77% of those surveyed said the app helped them navigate the space, and 90% said it improved their engagement with the displays.

THE CHICAGO ART MUSEUM, the second-largest art museum in the U.S., entertains two million annual visitors. In 2009, an expansion added 30% more square footage to the already gargantuan space, as well as adding a primary point of entry. To help visitors, particularly those with children, better navigate the museum. The Institute unveiled JourneyMaker, a series of interactive touchscreens embedded in wooden tables that invited its youngest patrons to curate their visit. Starting with a virtual, 12-sided "die", youngsters select their preferred museum amenities, and JourneyMaker provides a five-stop itinerary which is converted into a color printout to help kids find their way! To help mature patrons find their way, the Institute's interactive-media department developed an app (with help from Potion, a New York-based interactive design studio). The app provides an interactive map, a blue-dot wayfinding aid, and a "look it up" feature that allows users to input a code to download audio content. This feature increased dwell time from 14 to 18 minutes.

Museums and artistic institutions maintain a complicated mission. Their mission to enrich the public is challenging to define, but the need to maintain profitability is a top priority. Interactive wayfinding plays an impactful role in increasing visitors' enjoyment by enhancing ease of use, while providing additional and enriching content. Enabling institutions to better fulfill their artistic mission while bolstering traffic and revenue, provides a win-win solution for both the institutions and their patrons.

SUPPORTING WELLNESS

Those who use wayfinding in healthcare facilities, are doing so out of necessity. The users or their loved ones are seeking information or treatment for medical reasons, and likely don't want to devote more time or mental energy than necessary to reach their destinations. Wayfinding solutions CANNOT fail. For pediatric facilities such as Children's Healthcare of Atlanta, this important role is further amplified.

CHILDREN'S HEALTHCARE OF ATLANTA, which operates 27 facilities across Georgia, installed its Bluetooth-enabled wayfinding and app system in 2016. This system incorporates a series of battery-powered beacons that broadcast the location to the smartphones of users that have downloaded the app and enabled Bluetooth on their devices. Once the user enters the hospital, they can open the Children's app and access a highlighted path with step-by-step directions and a blue dot that mimics their path. The system's simplicity makes it effective. Directions appear in large type atop the screen, contrasts different sections with clearly defined color codes, and incorporates a zoom function that provides a good balance of detail and broader context.

NYU'S LANGONE HEALTH spans nine acres and up to 30 stories high along Manhattan's East Side. In 2008, facility officials launched a campus-transformation plan, which has gradually incorporated an upgraded wayfinding system that integrates digital displays and static directional elements. This system includes freestanding "digital pylons" which have become a focal point of the University's Science Building, which opened in 2018. Because of NYU's multicultural population, these "digital pylons" give directions to nearby destinations in five languages. Concerns about information overload that multilingual static signs would create, led to the creation of a sign/touchscreen hybrid that lets users interact with it to find their destination. To test the system, 24 non-English speakers were invited to find an onsite destination using all available wayfinding. The pylon became their go-to information source.

AWAY WE GO

Public-transit authorities nationwide are replacing static signs with digital displays that provide real-time updates at their designated platforms. Several forward-thinking transit agencies are further enhancing the user experience by expanding digital wayfinding across transportation modes and at earlier touchpoints.

For **CHICAGO'S ELEVATED-TRAIN SYSTEM**, commonly called the "L," the city's Transit Authority has installed upcoming-train updates outside L stations with real-time information and suggested alternates when delays occur.

NEW YORK'S METROPOLITAN TRANSIT AUTHORITY has enhanced its digital-signage program with a series of ceiling-mounted "Next Stop" signs on its Select Bus Service fleet. On the three displays installed within each bus, a sequence of stops, arrival times and transfer options to other transportation modes, assist the passenger on their journey as part of a single, seamless network. During peak-traffic hours, when trucks and other large vehicles are flanking the buses and obscuring sightlines, the displays provide essential information that assures riders they are on the correct route.

To assist travelers at Houston's George Bush Intercontinental and Hobby airports, the **HOUSTON AIRPORT AUTHORITY** installed a series of web-based interactive maps that provide real-time wait times for security checkpoints, as well as the number of available parking-garage spaces. Clicking on the map provides directions to any specified locations.

Public-transit authorities aren't the only entities trying to provide better passenger information. In 2016, **AMERICAN AIRLINES** launched a blue-dot wayfinding system as part of its app that allows users to find their way to specific gates and investigate surrounding amenities. The next year, the app provided a food-ordering function to the map that enabled delivery within select terminals. American Airlines has since added ARKit, an augmented-reality platform that guides visitors through terminals in a similar way to how the Lumin program guides Detroit Institute of Art patrons.

WAYFINDING PRIORITIES

1 2 3 4 5

Blend the physical and digital into a single cohesive wayfinding message.

Find ways to deliver helpful information and context along the user journey.

Lessen the cognitive load.

Offer low-risk solutions encourages customers to try new applications or products.

Right-size the technology to match the environment and visitors' needs.

For this full report, visit
www.signresearch.org/research/digitalwayfindingtrends/

DIGITAL WAYFINDING POINTS TO PONDER

In healthcare spaces, digital signage provides such benefits as more consistent staff training, reduced patient anxiety and perceived wait times, and better coordination of patient information and the intake process.

—From Spectrio.com blog, 21 Ways Digital Signage Benefits Healthcare

According to the American Academy of Arts and Sciences, the percentage of adults who have attended an art of history museum in the past year rose from 21 to 24% for the general population, and rose from 18 to 23% among those 18-23. Better wayfinding and interactive technology are credited for aiding that growth. As technology improves, more patron-engagement tools are likely to help boost attendance.

In speaking to retail customer experience.com, Chris Devlin, president of digital-signage provider Omnivex, noted key digital signage trends such as artificial intelligence automating real-time changes to content or data; omnichannel information delivered in unison through digital signage, smartphones, static signage and other displays, and provided personalized information or content through data gained through app and website registration information.

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