



Table of Contents

03
Introduction

04

Shopping Mall App Success Factors

07

The Path To Success

09

Conclusion

Introduction

The retail landscape has never been more diverse, nor as competitive, as it is today. The growing ubiquity of e-commerce has presented a growing risk to brick-and-mortar retailers, many of whom are struggling to achieve meaningful digital transformation. Time constrained and tech-savvy consumers are in search of greater depth of product choice and availability, convenience, and the ability to self-educate.

This movement toward online retail, exacerbated by the global pandemic in 2020, puts both shopping malls and retail real estate investment trusts (REITs) under enormous pressure to find new ways to improve foot traffic and increase sales for their retail tenants.

As retail evolves, embracing a blended approach to retail is no longer optional. Shopping malls need to find a way to assist their retail partners in creating relevant, personalized and engaging shopping experiences that transcend brick and mortar. When shoppers do enter physical locations, they increasingly expect to walk into experiences, not just stores. Storefronts with creative window displays are no longer enough.

In order to be successful, shopping malls must look at the changing times as an opportunity to leverage technology to improve customer experience and engagement. In short, it is necessary to become a destination that delivers an immense and intuitive experience.

Shopping Mall App Success Factors



There is no shortage of research on consumer preferences and behaviors available today, particularly in the retail vertical. Studies show that despite the omnipresence of digital, consumers from all demographics still value a physical shopping experience - especially those that effectively bridge the physical and digital divide in retail.

To that end, many shopping mall owners and retailers have begun experimenting with mobile applications in an attempt to create an enhanced and more engaging shopping experience. Thus far, these early version apps have typically offered little more than static maps, store directories and non-contextual promotions. As a result, they have not been as successful as malls and REITs had hoped they would be.

When approached correctly, shopping mall apps have the power to enhance a shopper's path to purchase and positively affect incremental visits and spend at shopping mall properties.

In order for a shopping mall app to be effective, there are certain criteria and elements that must be present to deliver an exceptional experience. Keeping the user's intentions and expectations in mind at all times during the design process is key to building a useful and engaging app. At a base level, these apps must:

- 1. Be location-aware by integrating dynamic indoor maps
- 2. Play nicely with various disparate third-party data sources
- 3. Be easily manageable across a global portfolio of shopping mall properties
- 4. Be scalable to meet ever evolving business needs

When these elements and factors are combined, shopping malls and REITs can easily deliver accurate and relevant real-time information to consumers resulting in an immersive and engaging experience.

programs.

Regardless of the quantity and complexity of integrations, connecting disparate systems significantly improves a visitors experience and path to purchase.

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Location-Awareness

Location-awareness should be a primary concern when building a shopping mall app. A solid location infrastructure and digitally-addressable indoor maps are key foundational layers to the success of a shopping mall app. Indoor mapping and location technologies take complex spatial data and give it meaning for both consumers and administrators. By leveraging smart maps and positioning sensor technology, it's possible to implement many dynamic use cases, ranging from blue dot navigation to advanced visitor analytics.

One of the first reasons a shopper will access a shopping mall app is to locate stores and find their way to them. For shoppers, locationaware apps help to enhance their experience by highlighting where they are and guiding them to the stores and other points of interest they are searching for with turn-byturn navigation.

From the perspective of a shopping mall or REIT, incorporating location-awareness in the form of layer-based maps and indoor positioning helps to provide valuable insights, including visibility into a shopper's journey, dwell times, and other relevant business insights that help them make smarter, more informed decisions.

Integrating Disparate Data Sources

As consumers have become more digitally-savvy, it has become increasingly apparent that a map is not enough to sustain meaningful user engagement or retention. While the wider selection and abundance of product information available when shopping online is

undeniable, shoppers still crave an engaging in-store experience. They want the ability to touch, see, feel, try out and immediately walk away with a product - they want the tactile experiences and instant gratification which are lacking from the online shopping experience.

The ultimate goal should be to unite online shopping research with physical interaction to create a harmonized experience. A retailer's inability to create a shopping experience where online and offline intersect comes with a high price tag - their success. This is unfortunately where most retailers fall short in meeting the blended needs of consumers who increasingly expect highly engaging, personalized shopping experiences.

The ability to integrate your shopping mall app with current and future data sources is key to bridging the gap between digital and physical shopping experiences. This could include databases of retailers, parking systems, cinemas, and other third-party data streams such as retailer loyalty programs.

In practice, this can be as simple as expanding a traditional store directory to include advanced search criteria including product types, categories and deals. Alternatively, it could be as extensive as integrating with outdoor mapping technologies and parking services to guide people from their home to an available parking spot nearest the most efficient mall entrance, and right to their desired destination inside the mall. Shoppers can even be given the option to reserve a parking spot while on-route, providing a potential additional revenue source or loyalty benefit similar to that of the airline industry.

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Maintaining Accurate Indoor Maps

If there is one constant in shopping malls, it is change. As the current shopping mall model evolves, many malls are shifting focus away from their anchor tenants and leasing space to different types of businesses while retailers are in a near-constant state of flux. And as lease plans change and tenants move, architectural diagrams quickly become outdated. The ability to easily maintain accurate and up-to-date digital maps is a crucial requirement for creating a relevant and enjoyable indoor navigation experience, particularly when incorporating blue dot technology.

Our maps are constantly changing, therefore having a platform that allows us to link directly with our tenant API is a game changer."

- Patrick Wand, Senior IT Project Manager, Mall of America

Having a centralized system to manage maps across a global portfolio of properties is key to creating and maintaining a successful location aware shopping mall app. With a comprehensive content management system (CMS), shopping malls are able to become the digital landlord of their space. The importance of maintaining a single source of truth where map files are in the same format enterprisewide and are stored in a single system cannot be understated. With this kind of platform, administrators can quickly and easily modify, add data onto, and extract their maps.

Consider the complexities of managing maps for a retail real estate company with a portfolio of 100 malls, each with multiple stories. This would translate to more than 200 maps, not updates. When a tenant moves or lease plans change, updates to store locations can happen automatically. Changes can be applied selectively across geographically dispersed properties and distribution channels such as mobile, web, and kiosks.

Future-Proof Technology

As mobile devices become a more integral part of your competitive advantage, the ability to evolve your app in unison with advancements in technology will become critical to your success.

Mobile and location-aware technologies are continuously evolving. For a shopping mall app to be successful, it is imperative that it be built on a scalable platform capable of adapting to new technologies, distribution channels, and use cases. It should be built on an open architecture that accounts for the rapid evolution of IoT and indoor location technologies. With a scalable platform, shopping malls and REITs can rest assured that regardless of future technology shifts, their shopping mall apps can easily be extended to support future use cases and be compatible with custom functionality not native to the core platform through integrations.

An example of this is taking shape in the form of smart watches. As consumers come to increasingly depend on location-aware smart watches, there is an opportunity for shopping malls and REITs to create immersive spaces that leverage mobile technology with their own indoor intelligence infrastructure.

Over time, shopping malls will increasingly turn to innovative technologies to help them better understand consumer preferences and to ensure that their mobile applications aid in delivering a truly immersive experience.

The Path To Success

When it comes to building a location-aware shopping mall app, there are two types of solutions - turnkey point solutions and platforms.

Taking a cookie-cutter approach will likely disappoint shoppers and administrators alike by offering only shallow features and will prove difficult to scale over time. To create real value for both shoppers and shopping mall owners, it is best to leverage a platform that is open and agnostic, future-proofing your investment. An ideal platform solution gives your development team the ability to easily customize and evolve your shopping mall app, using a feature-rich platform that integrates with your existing core systems.

Here is an overview of the essential features your app should include:

Advanced Map Display and Interaction

App developers need the ability to include features like 360 degree map rotation, pan and zoom, multiple floor views, extended map views showing surrounding streets and cartography, customizable styling, and the ability to control who sees what from a single sistem with a single set of maps. These features deliver a more contextual and user-friendly experience for shoppers that aligns more closely with the ways they already interact with outdoor mapping apps.

Content Management

Having the ability to manage content and map data across multiple properties through a single application significantly reduces the support overhead associated with managing and deploying an app across multiple properties. For geographically dispersed locations, this makes it easier for administrators to localize map updates, promotions and communications by country, state, or city. With a powerful CMS, shopping malls and REITs can create tailored solutions while having centralized management of all associated data.

Turn-by-Turn Navigation

Give your shoppers the ability to see the location of stores, destinations and other points of interest on a digital map of your shopping center. This empowers people to see where they are, identify where they are going, and plan their route between stores and navigate to their destination using landmark based turn-by-turn directions. When integrated with indoor positioning technology, people can even locate their own position as a blue dot as they move within the shopping mall.

Messaging Technologies

Contextual messaging is a great tool that helps you deliver the right message to the right person at the right time. Hyper-relevant messaging keeps shoppers engaged in an app by providing useful information about shopping center events and retail promotions. When using an indoor intelligence platform that supports integrations with external systems, shopping centers can integrate with loyalty and rewards programs, gaining access to more detailed shopper profiles, which

7

helps deliver a more relevant, engaging and delightful shopping experience for visitors. This, combined with location-aware technologies, means the most relevant communications can be delivered to shoppers based on their location, preferences, and other business rules.

Personalized Maps

Consumers now expect hyper-personalized personalization goes experiences. True bevond delivering customized content, products and promotions based on shopper's preferences and behaviors. Shopping malls and REITs can also personalize their map views and cater to different users by serving customized visualizations of their space based on a user's profile - all while only having to manage a single map instance. Parts of a map can be restricted, and multiple wayfinding paths can be presented based on the type of user.

Shoppers can be served a basic map showing stores, amenities, parking lots, and other relevant areas, while retailers might be able to see everything available to shoppers plus additional areas such as loading docks and other more detailed information, and mall owners can see all map elements including HVAC and lighting systems. Technology advancements help put shopping mall owners in charge of their space and how it is presented to different shopping mall app users.

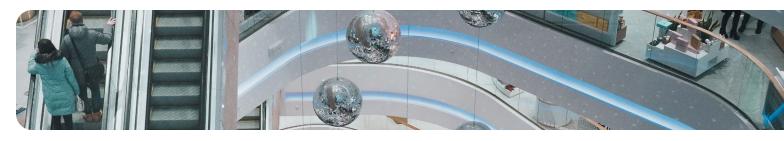
Advanced Insights and Location Analytics

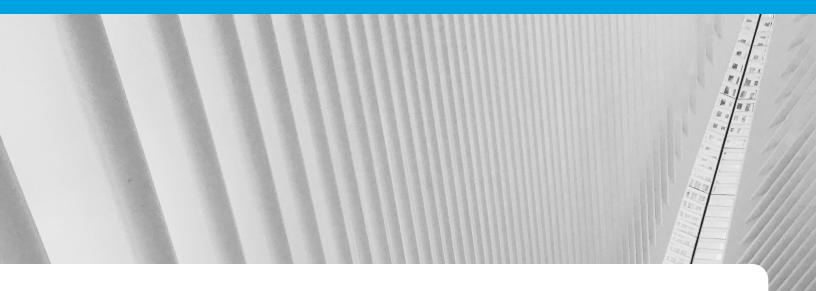
Mobile apps aren't just powerful tools for improving shopper engagement. They provide unparalleled insight into shopper behavior. While shopper traffic has been cited as one of the key influencers in mall performance, there is little real data available on mall foot traffic. The combination of location-aware sensor technology and mobile apps can help to collect valuable intelligence on traffic patterns in shopping malls and provide relevant insights about shoppers.

With access to business intelligence data including loyalty metrics, visitor journey dendrograms, dwell time analysis, and other visitor analytics, shopping malls and REITs can further enhance the shopper experience, motivate spending, maximize traffic flows and optimize space utilization.

Smart Search

Advanced search features provide shoppers with the ability to find what they need in fewer steps. Features like intelligent search by keyword, predictive search based on user history, and suggestion functions all remove points of friction from the shopping experience and mitigate frustration from shoppers who know what they are looking for.





Conclusion

Shopping malls have been the epicenter of shopping activity since the 1950s, and they will continue to play a pivotal role for consumers, retailers and investors.

Instead of being treated as a threat, online shopping should be embraced as a way to achieve a truly unified cross-channel shopping experience. Creative property owners will harness the power of location-awareness and the Internet of Things to evolve mobile shopping apps beyond store directories by integrating core systems to create a more holistic, harmonized retail experience that begins at home and covers a customer's entire journey.

Indoor intelligence and smart indoor experiences will become even more important in the years to come as the shopping mall model shifts and these spaces become more diverse in their range of tenants. In this decade, experiences will evolve into a new role as the key traffic and revenue driver for shopping malls.

To learn more about how you can leverage indoor intelligence and location-aware technology to quickly deploy customizable mobile applications that engage and delight shoppers throughout their complete shopping experience, contact Inpixon today.



Let's talk about your goals.

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