

interact



White paper

Light your path toward the new retail era

Uniting connected lighting, software, and the IoT to seamlessly grow omnichannel experiences and increase workplace productivity

01.

Introduction

Retail lighting systems, previously limited to illuminating spaces, have evolved as a convenient enabler of Internet of Things (IoT) technologies so that retailers can enrich the retail customer experience, boost sales and profits, and strengthen employee and overall workplace productivity. Here, we discuss how Interact Retail wireless lighting systems with lighting sensors and remote management software can stabilize multidimensional change pains that arise during a crisis while also positioning retailers for impactful post-crisis growth and brand differentiation.

02.

Navigating the shifting sands of crisis-driven change

In the blink of an eye, retailers witnessed the disruptive power of a major socioeconomic crisis. Shopper behaviors changed from discovery and impulse to basic and bulk. Expectations for a positive brand and retail customer experience shifted to include a sense of comfort and well-being. New services and requirements, including buy online, pickup in store (BOPIS), buy online, pickup at curb (BOPAC), and enhanced cleaning protocols were layered onto already stressed store operations.

On the other hand, the silver lining of this crisis was that it invited the opportunity to rethink accepted norms in new, innovative ways.

This means new opportunities for retailers to:

- Increase sales
- Boost profits
- Increase loyalty
- Emphasize differentiation
- Streamline operations

Start on the path to opportunity

Now is the time to reconfigure retail strategies. With fresh infrastructure technologies like Interact Retail, savvy retailers can now react quickly to changes to entice new and loyal customers into the store, while also proactively leveraging opportunity in the future.

71%

of retail executives expect the COVID-19 crisis will be one of the biggest opportunities for growth¹



Companies that invested in innovation during a crisis outperformed their peers 10% during the crisis, and 30% in post-crisis years¹



03.

Look up to move forward

The Interact connected lighting software and systems for the IoT is a lighting innovation that goes far beyond illumination to drive distinctive value and success in grocery and big-box retail markets. This complete end-to-end connected solution consists of a wide range of wireless lighting products, including YellowDot certified luminaires and retrofits from Philips or YellowDot lighting partners, along with cloud-based Interact software. Interact Retail is also compatible with Signify's UV-C disinfection luminaires for air and surface sanitization.

The fixtures are embedded with visible light communications (VLC) technology and Bluetooth® beacons that form an indoor positioning system throughout the space. These lighting sensors communicate with cloud-based Interact software as well as other devices connected through the IoT, including those of our industry-leading partners such as Zebra, the world's largest manufacturer of mobile computers, barcode scanners, and shopper mobile devices.

Data transmission through Wi-Fi is stable, reliable, fast, and secure.

Interact software gathers two categories of information: shopper analytics via enabled mobile phones or handheld scanners, and fixture performance and health.



Fixture Analytics
Outages and other
maintenance needs



Shopper Analytics
Display zone visits within
a selected timeframe

Communication through the mobile devices or handheld scanners is enabled through the retailer's mobile app and two licensed Interact software development kits (SDKs). Location services must be enabled on a mobile device for indoor navigation to work.

The indoor positioning SDK provides hyper-accurate geocoordinates and orientation of mobile devices. The device's front camera view does this by tracking and identifying VLC sensors in the fixtures and measuring the Bluetooth signal strength (if present).

The map SDK offers advanced map rendering as well as dynamic routing, while enabling user manipulation in iOS and Android devices. This SDK enables the best possible alignment between the map and blue dot (representing the user). It uses an annotation application programming interface (API) to drop content on the map as the user moves, and a trigger API that allows for the addition of zones. The map SDK also includes two iOS- and Android-compatible sample apps:

- The YellowDot app is used for basic testing where Signify uses AutoCAD® or creates a map and distributes it via email to a selected audience. Once the map is imported into the app, capabilities include basic map viewing, blue dot, and select geofence triggers.
- The Whitelabel app is used for advanced shopper testing and may be fine-tuned to align with the retailer's brand and customized with capabilities such as an advanced digital map, look-up table for categories or points of interest, product searches with navigation, geofence triggers, and more.

Protecting data and privacy

Interact Retail's indoor positioning system does not request or store user-related data such as name, IP address or OS-generated identifications, or any other traceable items. Instead, the system logs a trace of the

mobile device locations and all error messages using a random phone/app identifier. Signify maintains this data in the region in which it has been generated.

In addition to communicating functional information about the wireless lighting system's health through remote management, Interact Retail arms retailers with powerful location-based services to pull through global or regional crises and move forward stronger than ever before.

Interact Retail moves your retail business forward by:

- Guiding retail customer experiences
- Accommodating and shaping shopper behaviors
- Increasing workplace productivity and efficiency in store operations

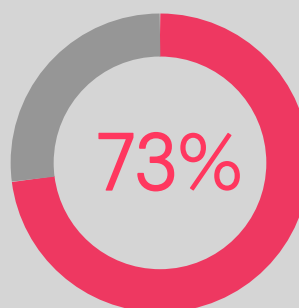
04. Guide shopper experiences in a new direction

Grocery and big-box retail locations are steadfast community hubs and an integral part of any citizen's routine. In times of relative societal calm, shoppers may crave brick-and-mortar retail customer experiences that evoke inspiration and adventure as they browse the aisles. An immersive environment that makes customers feel special is a strong connector to brand loyalty.

But in a global or regional crisis, those special feelings can give way to anxieties that overshadow the immersive retail environment.

In the latest crisis, grocery delivery and online shopping rapidly increased, and shopper visit frequency decreased. Those who did shop in-store tended to shop faster rather than browsing.

3.5x/2.5x
increase in grocery delivery
and online shopping,
respectively²



of people
making fewer
in-store trips
since COVID²

05. Gain ground in shopper experiences

Even the immersive environment itself was impacted. Wanting to feel special and inspired has evolved into seeking trust and confidence that retailers are protecting the well-being of shoppers while keeping basics well stocked on the shelves. Browsing is now replaced with focused autonomy as shoppers are on a mission to find products with little to no human contact.



Trip to the supermarket BEFORE Covid19. We see that the client moves by making frequent trips and stops.



Drive to supermarket AFTER Covid19. Customers travel longer distances but no longer make long stops or return trips. The search for efficiency is obvious.

49% increase in in-store shopping efficiency³

To supplement the in-store experience, many retailers and shoppers have turned their focus to online experiences. Retail services such as BOPIS and BOPAC have surged and support the in-store experience in small part, but the true challenge lies in creating a cohesive omnichannel experience. An experience that creates and strengthens loyalty now, in times of need, to reap enthusiastic brand advocates with ever-full basket sizes as calm returns.

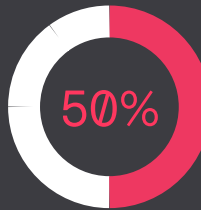
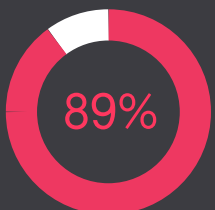
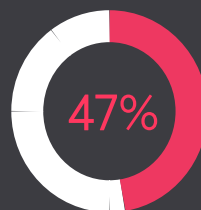
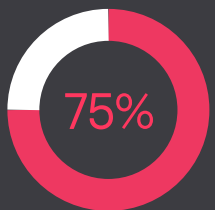
So, how can Interact Retail help to elevate and bridge in-store and online shopper experiences? By creating a unique experience that satisfies the shifting needs of shoppers while differentiating your retail brand.

Today, technology is integral to experiences in every corner of life, from remote learning to meetings and even family reunions. Shopping is no exception. In fact, the vast majority of shoppers today use a smartphone while shopping, likely to help them move efficiently through a retail location. Even prior to the latest crisis, people had increased technology expectations from the modern shopping journey that retailers were not meeting.

The mobile or smartphone app is integral to aligning shopper expectations with retailer innovations as well as the in-store and online experience. And the mobile app is just as integral to a retail strategy including Interact Retail's immersive Indoor Navigation capabilities.

First-time-right Indoor Navigation

As they enter the store, Interact Retail enables a "first-time-right" personalized digital in-store shopping experience for shoppers using the retailer's app on their mobile phone or a handheld scanner. An interactive map in the app (integrated with the indoor positioning SDK and the map SDK) and the indoor positioning system, constructed by the YellowDot luminaires, communicate with each other. Together, they pinpoint exactly where the shopper is, in real time, as they move through the space if they have opted in for location services.



The app acts as a personal assistant that guides shoppers efficiently through the retail space as they collect items on their list. Retailers have the option to manage routes through direction and access rules.

In addition to saving time, this autonomy may also strengthen a shopper's feeling of control over their well-being as they do not have to ask staff for product locations. To make them feel even more comfortable during their visit, the app can direct them to areas of interest such as hygiene stations.

[See page 9 to learn how indoor navigation can shape shopper behaviors.](#)

Outdoor lighting

Even before shoppers set foot inside the door, Interact Retail can set the stage for an impactful end-to-end experience.

Façade lighting makes a strong first impression, even after one short glance. This is your opportunity to set the tone for a welcoming environment.

Parking lot and drive-thru areas are illuminated to provide visibility, comfort, and peace of mind for people as they move about and leave their vehicles unattended.

All outdoor landscape and decorative lighting may be managed and controlled through Interact management software. In the context of the shopper experience, control includes developing light scenes to suit special events, seasons, and promotional activities. And, with a wide range of static, dynamic, and color-changing LED luminaires from Philips, you can craft distinctive appeal that is reflective of your brand identity.

Indoor lighting

Beyond the exciting opportunities provided through the indoor positioning system, Interact Retail fixtures offer world-class quality illumination. Add layers of light to enrich the journey through the store, including highlighting areas of interest. Flexible lighting scenarios add to a vibrant atmosphere. Fresh food LED lighting recipes are fine-tuned to present fresh goods at their very best and preserve freshness. Customized 3D printed luminaires uniquely set your brand apart from the competition. UV-C lamps sanitize the air and surfaces so that everyone in the store can feel comfortable.

[See page 12 to learn how indoor lighting can streamline store operations.](#)



Quality/freshness and cleanliness are among the highest criteria in supermarket core experience factors⁸

06.

Go the distance to accommodate and shape shopper behavior

A crisis can usher in new habits and change old ones, but the impacted behavior change does not always follow the same pattern. For example, whereas shoppers reined in spending by purchasing smaller items or packs during the 2008-2009 recession, they tended to make fewer shopping trips with larger baskets during the COVID-19 pandemic⁹.

Many of today's shopper behaviors revolve around efficiency, convenience, and well-being.

Online grocery sales are surging as people cut back on out-of-house activities. Fulfillment options such as home delivery, BOPIS, and BOPAC offer socially distanced, time-saving conveniences to ease stressed lives. Low in-store traffic flow, ample space, and off-peak hours help shoppers to avoid close proximity with others.³

In the store, shoppers are covering more ground in the same time compared to prior years. Interestingly, although they are shopping faster, the number of stops per minute has increased 17% compared to pre-pandemic figures.¹¹

80%

of shoppers are actively looking for grocery deals¹²

~59%

of consumers choose to shop at stores more frequently due to their promotions¹²

Moving from value to loyalty to differentiation

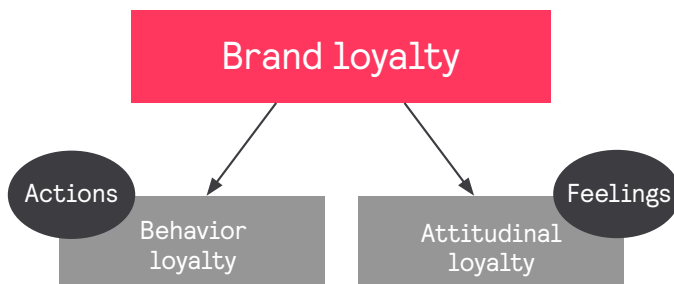
Value is a strong behavior motivator even though it is subject to individual interpretation. According to the Retail Feedback Group's Fall 2020 U.S. Online & In-Store Grocery Shopping Study, "value for money" is second only to "variety/selection" in growth over the short-term among surveyed grocery customer satisfaction core experience factors.⁸ This sentiment is reiterated in a recent Inmar Intelligence market intelligence survey that connects the dots from value to loyalty.¹²



Online grocery sales are expected to reach over USD\$250 billion –21.5% of total U.S. grocery sales—by 2025.¹⁰

In grocery and big-box retail markets, shopper loyalty can fall into two broad categories. Behavioral loyalists are repeat customers. This type of loyalty is transactional and could stem from habit or store proximity. Attitudinal loyalists are also repeat customers, but they emotionally align with the brand to which they are loyal. This positive connection goes beyond actions such that an attitudinal loyalist is a brand evangelist.

Both loyalty types are critically important to those looking to differentiate themselves within the highly competitive grocery and big-box retail market.



07.

Gain ground in shopper behaviors

So, how can Interact Retail help to accommodate shifting behaviors to boost the perception of value that leads to loyalty? And how can Interact Retail influence new behaviors to increase basket sizes?

By focusing shopper attention on value-based initiatives such as proximity marketing, loyalty incentives, couponing, and convenient product finding.

Customers are actively seeking value, and much of that is in the form of deals that make them feel that they are getting more, or paying less, for a product.

While store circulars and paper coupons are still in use, shoppers are increasingly reliant on technologies like smartphones to reap value. These technologies are already influencing shopper behaviors, even across generational divides.



60%

of U.S. respondents agree that coupons lead them to try new products¹³

81%

of U.S. respondents purchase items based on in-store discounts¹³

44%

increase in use of smartphones to save on shopping trips¹³

Activity	All Consumers	Gen Z	Millennials	Gen X	Baby Boomers
Switch brands based on discount notifications received on a mobile devices while in-store	49%	67%	73%	47%	29%
Search for discounts on a mobile device while in-store	49%	68%	76%	53%	25%
Make a purchase based on a mobile notification in-store	43%	59%	71%	42%	19%

Generational differences among U.S. respondents who always, very often, or sometimes partake in each listed activity.¹³

Just as a retailer's smartphone-based app and Interact Retail can be used to navigate around the retail location, it can help shoppers to make value-driven decisions or discover a new product that they deem valuable.

Value-driven Indoor Navigation

Interact Retail contributes value for shoppers as well as retailers. As stated earlier, Interact Retail's interactive map and indoor positioning system work together to construct a personal assistant within the retailer's enabled app, but they also provide valuable information for retailers to leverage.

Indoor Navigation for shopper value

Interact Retail facilitates the behavioral shift from browsing to focusing when shoppers use the retailer's enabled app on their mobile phone or handheld scanner. Shoppers create a shopping list in the retailer's app.

Interact Retail then uses this information to develop the most efficient route through the store. In real time, it guides shoppers as they expediently gather the items and prevents "lost sales" due to shoppers not being able to find a desired item.

Behaviors are also changing as customers take advantage of conveniences such as BOPIS and BOPAC fulfillment services. Here, too, Interact Retail can support this convenience so that customers can be delighted with the value that they receive from the retailer.

[See page 12 to learn how indoor navigation can streamline store operations.](#)

Indoor Navigation for retailer value

A significant benefit of Interact Retail is that it helps retailers to influence shopper behaviors. This influence supports increased basket sizes, longer dwell times, and competitive differentiation.

For instance, while Interact Retail's Indoor Navigation provides dynamic wayfinding, it also enables proximity marketing and promotion efforts through the shopper's mobile phone in real time, such as:

- Special offers
- Coupons
- Recipe suggestions
- Product sales
- Loyalty incentives

Winning retailers are moving beyond surveys as a mechanism for customer input and toward near-real-time tracking of consumer trends and behavior shifts¹⁴



An exciting aspect about this capability is that as shoppers move through the store, valuable data about their behavior is captured and aggregated in the Interact Retail web-based analytics dashboard. Using this numeric and heat map data, retailers glean insights that can be translated into actions that optimize store layouts, boost promotion and marketing activities, and streamline operations.

Analytics from the Interact Retail dashboard may also be used to support employee activities and improve operational efficiencies.

[See page 12 to learn how indoor navigation can streamline store operations.](#)



Density

Measures total visitors and total seconds spent in a 30x30 cm area.

Footfall

Displays zone visits within a selected timeframe.

Dwell time

Calculates the average seconds spent in a zone, per visit, within a selected time frame.

08.

Achieve new strides in streamlined, efficient store operations

Crisis-driven change is not limited to top-line results and brand strategy. A crisis can significantly stress profit margins that are already razor thin.

The expense and time necessary to implement and maintain disinfection technologies, hygiene stations, physical barriers, and enhanced cleaning protocols eat into operating costs and resource time.

Social distancing measures reduce capacity limits for shopper entry and may also hinder employee scheduling. On top of this, the need for more floor space to accommodate social distancing also impacts profits and sales, with fewer displays than seen in past years, especially in perimeter and in-aisle areas.¹⁵ This puts added pressure on lesser impacted areas to compensate and drive productive sales for the retailer.

This added pressure may be paying off on the remaining display areas as sales from display-only merchandising have increased compared to a year ago. When coupled with the previously stated finding that the number of stops per minute has increased 17% compared to pre-pandemic figures (see "Go the distance to accommodate and shape shopper behavior" on page 7), display-only activities should be a key focus area.

Even the boom in online ordering—intended to attract new and current shoppers as a convenience—has put a drain on profits. Many retailers were caught off guard by the rapid migration to online ordering, and their infrastructures struggled to scale up to the needed levels. Profits were further impacted by adaptations and resources necessary for order picking and alternate fulfillment services such as home delivery, BOPIS, and BOPAC.

~5% fewer displays on average versus a year ago (2019 compared to 2020)¹⁵



Experts say shoppers are buying more groceries online, which is great for convenience, but terrible for margins¹⁷



U.S. online grocery sales rose from USD\$1.2B in August 2019 to USD\$7.2B in June 2020¹⁶



23%

of shoppers returned products because they received the wrong item¹⁸

Supercharge success with Interact Retail

09. Gain ground in store operations and efficiencies

So, how can Interact Retail help to protect profit margins and reduce or streamline a multitude of diverse operating expenses? By putting optimization and efficiency at the heart of single-site or multisite retail operations—today and in the future.

Scalable Interact Retail solutions go far beyond illumination and into the IoT to benefit every part of the retail organization.

Improve employee productivity

Employees are invaluable to retailers. In a crisis, employees may spend more time on cleaning protocols, restocking shelves, and changing floor layouts. These tasks, combined with responding to the sustained high demand of online ordering, have stretched employee workloads to their limits.

Stress, poor workflow layouts, and a host of other factors contribute to human error. We are only human, after all. Yet these errors can be costly to retailers through lost sales and profits, and indirectly costly through unsatisfactory experiences that drive shoppers to the competition.

Employees are also expensive, often consuming much of a retail operating budget. Additional hires are a big hit to tight budgets and more experienced employees who train new hires are diverted from their normal tasks. Since labor costs tend to scale poorly, retailers need an alternative method to improve existing employee and overall workplace productivity.

Interact Retail empowers employees to transform their workflow approaches to boost efficiencies and protect profits by enabling them to:

- Improve speed and accuracy
- Minimize wasted time and downtime
- Make informed decisions

Interact Retail's Indoor Navigation is integrated into a retailer's app or handheld scanner and features a simple, intuitive interface. This helps to reduce training times so that new employees can quickly contribute to workplace productivity and experienced employees can focus on the task at hand.

Just as Interact Retail's Indoor Navigation provides efficient wayfinding for shoppers, it can be used to guide employee movements to precise locations in real time. When picking orders intended for delivery, BOPIS, or BOPAC, Indoor Navigation creates the most efficient route through a retail store, dark store, or warehouse to reduce travel distance and time. Not only does this reduce order picking time to allow for an increase in order picking cycles, it also significantly diminishes the frequency of picking errors that lead to returns or unhappy order recipients.

The indoor positioning system can also guide location expediency when restocking shelves to aid order picking efforts. And if customers do request live assistance in the store, Indoor Navigation helps employees and shoppers to connect quickly.

Data such as footfall, dwell time, and density—collected from the luminaires and sent to Interact Retail's web-based analytics dashboard—can help to maximize space usage. Insights gleaned from the data can help when changing store layouts, planning promotional display and product locations, scheduling activities like upkeep and cleaning, or improving social distancing measures.

Beyond Indoor Navigation, high-quality illumination from Interact Retail's wirelessly connected luminaires keeps employees energized throughout the day, following circadian rhythms, and helps to prevent accidents related to poor visibility.



LED light can increase
Vitamin C levels in tomatoes²¹



LED light can extend meat
shelf life by 20%²²

Streamline and reduce overhead costs

An extraordinary amount of energy is required to power retail buildings, and this adds up. Even when drilled down to a local level, every penny counts when it comes to retail overhead. It is not easy to find savings opportunities in fixed costs such as energy consumption.

Interact Retail enables new cost-cutting measures and, at the same time, supports agile, insightful decision-making by empowering retailers to:

- Reduce energy consumption 25-30% in “front of house” areas and 63-66% in “back of house” areas
- Extend fresh food shelf life
- Consolidate lighting maintenance and management efforts
- Make informed decisions

High-quality Philips LED luminaires and retrofits consume much less energy than traditional fluorescent and halogen fixtures, but the savings do not stop there. User-defined automated dimming schedules, daylight- and occupancy-sensing capabilities, and zone creation all allow retailers to put light where it is needed, when it is needed. This maximizes energy savings and strengthens sustainability without compromising other operational efforts or retail customer experiences.

All lighting system scheduling is performed through Interact Retail’s Lighting Management HQ dashboard.

The cloud-based system manages, monitors, and controls all Interact Retail’s wireless lighting fixtures across all areas of the retail store, or across the multisite retail enterprise. This includes general illumination, refrigeration and display lighting, and soft pastel up-lighting, as well as outdoor lighting in parking lots and on store façades.

With consolidated remote control, including alerts and a single intuitive dashboard, retailers can easily compare data to locate areas of additional savings, such as reductions in maintenance or cleaning contracts, and implement best practices across multiple sites to reduce redundant labor efforts.

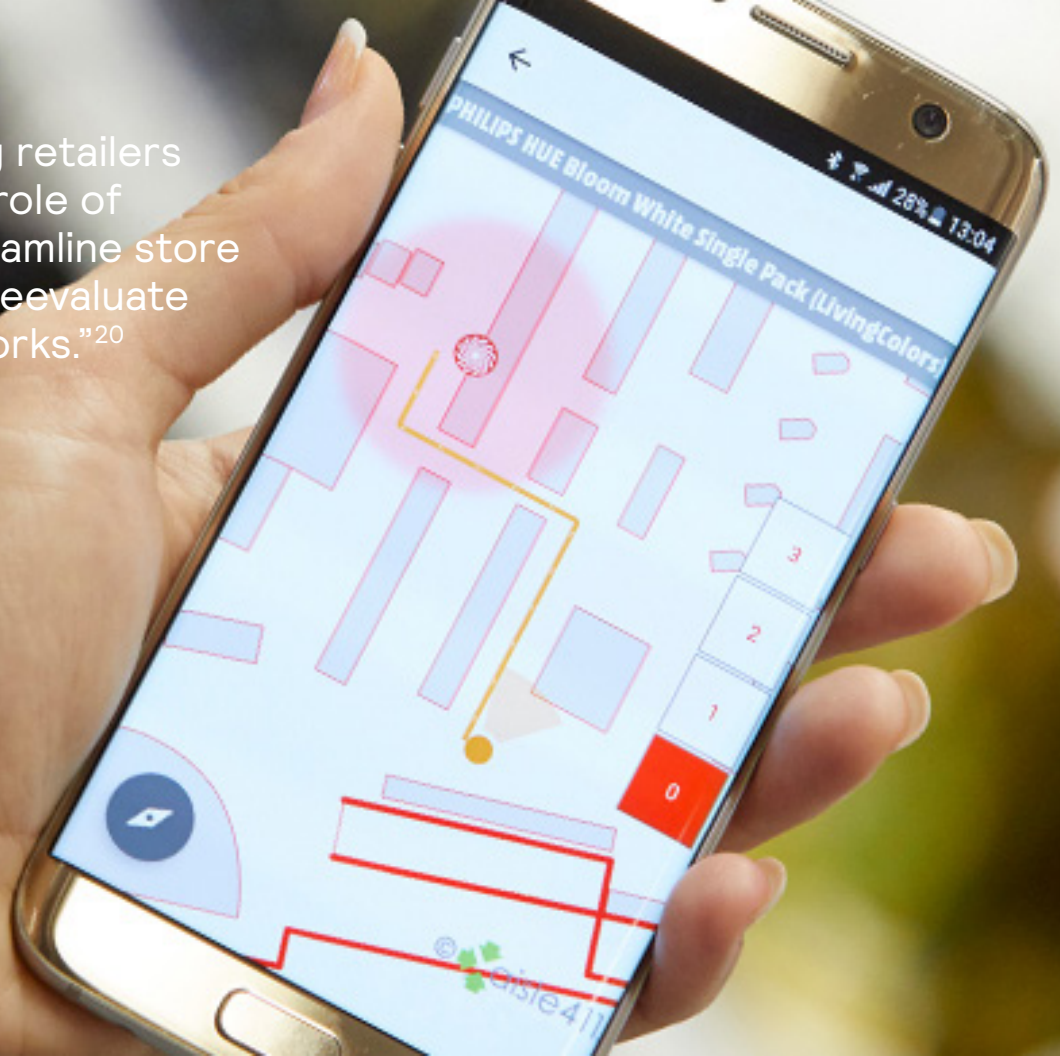
The sensor-embedded fixtures securely send real-time information on their health to the Lighting Management HQ dashboard so that remote management of assets becomes proactive rather than reactive, unplanned asset downtimes are reduced, and labor costs are more efficiently controlled. In-depth real-time and historical performance data and remote diagnostics can be leveraged to bring significant value and cost savings to retail facilities.

Interact Retail can also ensure that fresh foods are illuminated in the most appropriate manner. In addition to a more appealing presentation to shoppers, specific light recipes can help to preserve fresh produce and limit discoloration to extend the selling period and further strengthen profits.

~USD\$20bn
of energy consumed by U.S.
retail buildings each year¹⁹

“ [Retailers] will need to relentlessly simplify store operations and rebalance the allocation of store costs to support the increasing volume of in-store omnichannel activities.”²⁰

“Forward-thinking retailers will redefine the role of their stores, streamline store operations, and reevaluate their store networks.”²⁰



10. Take the first step to forge ahead

Crisis ushers in rapid change. In the retail world, changing customer expectations and behaviors call for increased autonomy and a greater connection between the offline and online worlds. A crisis also represents an opportunity for growth. Once the crisis subsides, stores simply will not achieve success by reverting to pre-crisis ways of working.

Leveraging IoT-based technologies such as Interact Retail are key to supporting customers, sales, and profits today while developing the path forward to a bright and successful tomorrow. Interact Retail wireless lighting and software reaches across every corner of retail operations as a scalable, sustainable, and future-ready solution to guide success. Enhanced in-store experiences and data for in-depth retail analytics propel customer loyalties and sales.

Operational efficiencies become agile and strengthened in an omnichannel environment.

Embark on your journey today with Interact Retail to experience the variety of benefits it offers:

- Attract shoppers
- Strengthen the omnichannel approach
- Increase customer loyalty
- Empower staff efficiency
- Leverage real-time analytics
- Support profits and sustainability

Source data

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