intu engages shoppers with free, high-quality Wi-Fi access and new apps delivered through Cisco Connected Mobile Experiences (CMX).

Challenge
With 400 million customer visits, including over 30 million unique customers every year, intu is one of the biggest names in retail in the United Kingdom. Of intu’s 20 shopping centers, 12 are regarded among the top 25 shopping centers in the region. Part of intu’s success can be attributed to its innovative and forward-thinking approach to technology. While online sales could be seen as a threat, intu has embraced digital with the area’s first multichannel transactional shopping center, intu.co.uk.

“Going to an intu shopping centre is about more than just shopping,” says Gian Fulgoni, Chief Information and Systems Officer at intu. “It’s a social activity, and we want our customers to stay with us to dine and be entertained. Shoppers want to stay connected while they’re here, which makes mobile access the key.”

Some shopping centers in the United Kingdom offer wireless access for shoppers, but the network is commonly owned and operated by third-party telecommunications providers. Although working with a telecommunications partner requires far less investment, intu decided to take ownership of the infrastructure.

“By owning the data, we have the freedom to apply it how we choose, whether we’re analyzing data to create new digital services or leveraging customer information to deliver personalized shopping experiences,” says Fulgoni. intu also recognized another business benefit of owning the infrastructure: the opportunity to add new technologies, including corporate networks, security features such as CCTV, and building management features like parking management, without additional investment.
“Since implementing free Wi-Fi with the Cisco wireless network, we have grown our customer database more than 100 percent with more than 1 million unique registrations. This dramatically increases our ability to gather intelligence about what drives our customers.”

— Gian Fulgoni
Chief Information and Systems Officer
intu

After considering several options, intu decided to work with Cisco® partner Block Solutions to install Cisco networking solutions across all of its shopping centers. “Many companies had wireless solutions, but only Block and Cisco understood our vision for a truly converged solution that would help us expand our reach to customers across channels,” says Fulgoni.

Solution

Block Solutions and intu established a fast-paced installation schedule, using multiple teams to deploy one shopping center per month over the course of a year (See Figure 1). Standardizing all systems on Cisco solutions helped speed up deployment and reduce costs. intu was able to reuse designs and work with known systems. “Working with a Cisco standard helps us look ahead to the future and achieve significant return on our investment,” says Fulgoni. “We can simplify design and scale infrastructure quickly to meet needs without adding the disruption of multiple networks.”

A total of 2,500 Cisco Aironet® 3602 Access Points were installed at the shopping centers, offering full wireless coverage for shoppers, retailers, and staff. As the industry’s first 4 x 4 multiple-input multiple-output (MIMO), 3-spatial-stream access point, the Aironet 3602s help achieve faster performance for smartphones and tablets. The advanced, modular design also simplifies upgrades to meet technology and demand needs. Already, intu is considering upgrading access points with 802.11ac radio modules in high-demand areas like food courts to optimize performance.

The Cisco 5508 Wireless Controllers deliver flexible licensing and reliable performance, while Cisco Catalyst® 3750-X Series Switches bring exceptional security and availability that meet the demands of the network. Cisco ASA 5525-X Adaptive Security Appliances give intu the security it needs to protect data for shoppers and building management.

Block Solutions focuses on managing the system, freeing intu’s ICT team to work on new projects to enhance the customer journey. Cisco Prime™ Infrastructure helps Block Solutions manage the infrastructure efficiently by providing a unified look into wired and wireless networks. Cisco Prime even integrates with two key components of intu’s wireless solution: Cisco Identity Services Engine (ISE), which automates onboarding and management of devices in the wireless network, and Cisco Mobility Services Engine (MSE), which delivers location-based services.

The Cisco Connected Mobile Experiences (CMX) solution combines wireless networks with location intelligence from Cisco MSE to deliver enhanced, personalized experiences for shoppers. Cisco CMX streamlines customer device onboarding with a simple opt-in service to access added content. Since the standard Cisco networks are connected, registered devices are automatically recognized at all intu shopping centers, further encouraging Wi-Fi usage with the convenience of not having to log in again.

Within each shopping center, the Wi-Fi network was planned to provide enough access point density to calculate device location. The Cisco MSE aggregates this location information into a single big data source. Cisco CMX Analytics provides insight into the aggregate location data to see shopping patterns and trends over time. These metrics serve as actionable data for intu to better understand customer behavior and optimize operations to improve customer service.

Using the mobility services API, intu can use this anonymized aggregate data and integrate location-based services such as mapping, directions, or advertisements into the company’s mobile app to enhance the shopping experience for all shoppers.
For example, a device density heat map over time shows where people gather in the shopping centers. The operations team can use this information to determine if more personnel should be staffed in those locations.

Block Solutions currently runs Cisco CMX and Cisco management solutions on Cisco UCS C240 M3 Rack Servers in two data centers. Block Solutions is looking to virtualize the servers with CMX licenses to facilitate more advanced mapping and location-based features.

Results
“Since implementing free Wi-Fi with the Cisco wireless network, we have grown our customer database more than 100 percent with more than 1 million unique registrations and over 50 percent opt-in rate for information and promotions,” says Fulgoni. “This dramatically increases our ability to gather intelligence about what drives our customers.”

The free Wi-Fi is designed to encourage shoppers to spend more time in their local shopping center. Shoppers can ask friends for their opinions over social media while keeping children entertained with a streaming video.

“We believe that multichannel customers can be some of our most valuable customers,” says Trevor Pereira, Commercial and Digital Director at intu. “By using the Cisco wireless network to deliver free access, we’re embracing a multichannel approach to deliver the experience our customers want.” intu supports shoppers’ changing shopping habits and allows them to shop when they want and how they want, whether it’s online, in store, or both.

Cisco CMX helps intu gather data about traffic and dwell time from the shopping centers and analyze it. “Cisco CMX helps us understand how people move around centers and what draws their interest,” says Pereira. “We can view an anonymous heat map of where people have been to discover where people gather and common paths they take through the shopping center.”
In addition to determining traffic and flow, this footfall analysis helps intu learn the success of events. An event held to celebrate Chinese New Year, for example, increased footfall and dwelling in areas around the event by 33 percent compared with the previous weekend. Using the footfall analysis, intu also hopes to build cases for prospective tenants to demonstrate the popularity of prime locations.

intu is planning to include more features that offer more personalized and relevant interactions. For example, a wayfinding solution application directs shoppers from their current location to where they want to go. The wayfinding solution can even be personalized, such as by highlighting an accessible path for shoppers with wheelchairs.

Customers can currently search for deals on intu shopping center apps, but intu hopes use CMX to also implement location-based advertisements. When a shopper is being directed to a new location, the wayfinding solution will highlight interesting deals along the way. Digital advertisements can also be pushed to the app. This means retailers can offer shoppers a coupon as they pass by the store or a free drink as they enter the food court.

The Cisco network not only brings digital mobility for shoppers, but also for management and staff. Rather than staying at a central desk, customer service staff and marketing staff can stay connected while moving around the shopping center. “Anyone can implement technology into their business, but the difference comes from how you use it,” says Fulgoni. “Working with Cisco networks, we’ve gained a scalable and powerful backbone that we’re using to gain a holistic view of our shopping centers and build new virtual features that put our customers at the heart of business.”

**Next Steps**

intu is currently working with Block to install Cisco networks into its final four shopping centers. The company is also considering other potential applications, like installing temporary digital advertisement spaces on storefronts that are undergoing refurbishment. With the Cisco infrastructure in place, intu is transforming the retail experience to meet consumers’ next-generation shopping needs.

**For More Information**

To find out more about Cisco Connected Mobile Experiences (CMX), please visit: [www.cisco.com/go/cmx](http://www.cisco.com/go/cmx).
To find out more about Cisco Mobility Services Engine (MSE), please visit: [www.cisco.com/go/mse](http://www.cisco.com/go/mse).
To find out more about Cisco Prime Infrastructure, please visit: [www.cisco.com/go/prime](http://www.cisco.com/go/prime).