

## Real Estate Developer Sets New Standard for Shopping Experience

**Ballantyne Village’s connected real estate solution creates an unforgettable experience for visitors and tenants.**

### EXECUTIVE SUMMARY

#### BALLANTYNE VILLAGE

- Commercial Real Estate
- Charlotte, North Carolina, United States
- 100-499

#### BUSINESS CHALLENGE

- Create a premier experience for retail and office tenants, visitors, and residents to differentiate the property from other mixed-use developments
- Build and operate the property efficiently
- Maximize profitability and value for retail tenants

#### NETWORK SOLUTION

- Deployed a new network to support delivery of voice, data, wireless, and video services
- Connected third-party services and applications to network foundation

#### BUSINESS RESULTS

- Gained high tenant absorption more quickly than anticipated
- Saved significant capital costs and operational costs
- Created an image of the place that everyone wants to be

### BUSINESS CHALLENGE

Ballantyne Village offers upscale retail shops, restaurants, an independent movie theater, and luxury condominiums in an 800,000-square foot development in Charlotte, North Carolina. When completed, the development will also feature a hotel and office spaces. From the beginning of the project, it was the goal of Robert B. Bruner, Developer, Ballantyne Village, to create a unique and memorable visitor experience that also delivered high value to tenants and residents. And unlike typical shopping centers, Ballantyne Village is designed to be a place where people live and have easy access to everything that they need—from fresh bread at the bakery, to the latest movies, to a daily workout at the YMCA.



“We knew that we wanted to use technology to differentiate the property from other mixed-use developments,” says Bruner. “At the same time, we had to show a return on our investment. With fiber-optic cable adjacent to the property, we had an opportunity to add tremendous value to our tenants by providing their telephone, data, security, music, and Internet access services.”

One important part of managing the visitor experience is controlling ambient features of the property. From controlling heating, cooling, humidity, and lights on the fountains, to monitoring restroom supplies, providing digital signage, and offering interactive directions—Bruner and his team wanted to use technology for operating the Village as efficiently, and invisibly, as possible.

To achieve its vision and a profitable return, Bruner and his team worked with Intelligent Buildings™, a Cisco Systems® partner that uses Cisco® technology to deliver information throughout commercial real estate developments. Intelligent Buildings’ Fourth Utility® infrastructure offering delivers high tenant value, creates new revenue streams, and increases operational efficiency.

### NETWORK SOLUTION

Intelligent Buildings recommended a networking solution based on the innovative Cisco Connected Real Estate (CCRE) framework. Designed for customers in the construction, real estate, and property services industries, CCRE uses the power of the network to deploy building intelligence, deliver collaboration and mobility services, and allow building owners and operators to develop new services, revenue streams, and business models.

Working with Bruner's team, Intelligent Buildings designed the network infrastructure using the Cisco Service-Oriented Network Architecture framework. The result is a powerful networking platform that enables Ballantyne Village to deliver a wide range of services, including voice, wireless, security, and video services, which in turn support many innovative applications.

The network connects all retail tenants, outdoor spaces, and Ballantyne Village management offices. As the development expands to include luxury condominiums, premier office space, and a hotel, all locations will be connected over the same network. The property's fiber-optic connections terminate in a main data center, which also functions as a management and operations hub. Cisco switching equipment forms the network backbone and distribution layer, enabling Ballantyne Village to create numerous virtual LANs (VLANs). Each tenant operates on a secure, separate VLAN, and voice traffic is carried on a separate VLAN as well.

Cisco Unified Wireless solutions are deployed using more than 100 Cisco Aironet Wireless Access points, providing coverage everywhere on the property. Ballantyne Village employees and tenants use Cisco Unified IP Phones to make and receive calls wirelessly throughout the property. Cisco Virtual Private Network (VPN) Concentrators enable tenants and Ballantyne Village staff to connect to the network remotely.

Cisco partners Stalwart Systems and the Signature Group worked with Intelligent Buildings to deploy Cisco Unified Communications solutions, which provide IP calling features and unified voice mail and e-mail. Connections to the public telephone network and the Internet are enabled using Cisco 2800 Series Routers.

**“Having the Cisco Connected Real Estate solution has changed the way that we think about developing our properties. Being able to package services for tenants and using the technology to create a unique experience set us apart. The positive feedback from tenants and visitors has been overwhelming.”**

— Robert B. Bruner, Developer, Ballantyne Village

The entire network deployment features redundant systems to help ensure high service availability and performance. Today Ballantyne Village uses approximately 6 Mbps of fiber-optic bandwidth; it can scale to a full gigabit of capacity as condominiums, offices, and the hotel are added to the network.

## **BUSINESS RESULTS**

“Having the Cisco Connected Real Estate solution has changed the way that we think about developing our properties,” says Bruner. “Previously we had not considered the business implications of running music or security or information systems over our network. Being able to package services for tenants and using the technology to create a unique experience set us apart. The positive feedback from tenants and visitors has been overwhelming.”

### **Creating a Distinctive Experience**

Digital signage and more than 30 large plasma screens create the “face” of Ballantyne Village. Visitors obtain ticket prices from the movie theater's digital price list. Videos present appetizing food and drink promotions and run movie previews. Visitors can touch interactive digital screens to find out movie times, see a list of Village events, or locate a retail store. Tenants can change information on their screens themselves by logging onto a secure Web page.

“We log onto a Web page from anywhere and control 550 lights on the property,” says Bruner. “We light the property's architectural features, program light shows, and change lighting on the fountains or signage right from our laptops. Visitors clearly feel the difference between Ballantyne Village's presentation and every other shopping center in Charlotte.”

## Helping Ensure Efficient Operations

The two most common causes of complaints in commercial real estate developments are temperature and bathrooms. While neither directly generates revenue, both are integral to the visitor's experience. Being able to monitor and precisely control these two features translates into increased revenue per square foot and lower operating costs. In addition to controlling temperatures, the Village plans to install carbon dioxide (CO<sub>2</sub>) monitoring sensors, which will deliver CO<sub>2</sub> data over the network. Using CO<sub>2</sub> data, managers can count the number of people in a room and control air refreshment precisely, saving considerable amounts of energy.

In restrooms, the automatic toilets and toilet paper, paper towel, and soap dispensers all communicate information such as, "I'm out of paper," or "the toilet is clogged" over e-mail. Facilities managers can attend to the problem immediately, which helps maintain a high-quality experience.

### PRODUCT LIST

#### Routing and Switching

- Cisco Catalyst 6500 and 3750 Series Switches
- Cisco 2800 Series Integrated Services Routers

#### Security and VPN

- Cisco Catalyst 6500 Firewall Services Module
- Cisco PIX<sup>®</sup> Security Appliances
- Cisco VPN Concentrators

#### Voice and IP Communications

- Cisco Unified IP Phones 7970 and 7920
- Cisco Unified CallManager
- Cisco Unity Unified Messaging.

#### Wireless

- Cisco Aironet 1200 Wireless Access points

#### Content Delivery

- Cisco BBSM Hotspot Server

## Delivering Value to Tenants

Space at Ballantyne Village is being absorbed by tenants at a much higher rate than usual, which Bruner attributes to the high-quality experience. Tenants can select the telecommunication services that they want from a list of offerings at lease signing. They no longer need to coordinate multiple third-party vendors, manage complex technology installations, or lose valuable time-to-revenue—and they receive more capabilities than they would be able to otherwise afford.

## Providing Enhanced Security

Security monitoring is performed using IP cameras, and managers can log onto the network and monitor any camera on the property. Most tenants also use IP-based security systems, which trigger alarms that are sent to local police. If a security event occurs, staff can use their Cisco 7970 IP Phones to immediately publish frames from security video onto the large screens, helping police apprehend suspects quickly.

## Forming Beneficial Partnerships

Ballantyne Village has formed beneficial partnerships with several companies. Each tenant space includes a meter that enables the property manager to bill for utilities. Typically, these meters are installed on a separate network, which is maintained by the meter company. At Ballantyne Village, the meter company simply connected meters to the network, eliminating the need for a separate infrastructure and a significant capital expense.

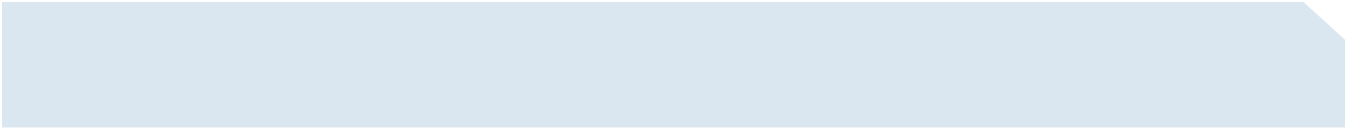
"At the beginning of the project, we had not thought about delivering music," says Bruner. "When we realized that Muzak wanted to sell its service to every tenant, we said that we would deliver it over CCRE. They were delighted." By delivering Muzak over the network, Muzak only had to install one satellite dish and one music server. When a tenant wants to subscribe, it is as easy as typing a few keystrokes.

## Creating New Revenue Streams

The network also provides a new revenue source per square foot for Ballantyne Village. For example, if a luxury car company wants to promote a new model, it can park a car in the Village Center and promote it on all of the digital screens, generating advertising revenue. Other products and services can be advertised as well.

## NEXT STEPS

The Village will begin to educate tenants about the possibilities that the network offers for their businesses. Retailers will be able to show inventory from multiple stores at the Ballantyne Village location—over the network. Customers can invite friends' or spouses' opinions about an item by having them log onto a Web page to view it.



“We want to encourage these kinds of new business opportunities for our tenants because that assistance further distinguishes Ballantyne Village as the high-end place to be,” says Bruner. “Treating information as a utility completely changed how we think about projects. Ballantyne Village will be able to do things that no other development can do.”

#### **FOR MORE INFORMATION**

- To find out more about Cisco Solutions and Services, visit: <http://www.cisco.com>
- To find out more about Cisco Service-Oriented Network Architecture, visit: <http://www.cisco.com/go/sona>
- To find out more about Cisco Unified Communications, visit: <http://www.cisco.com/go/voice>
- To find out more about Cisco Wireless Solutions, visit: <http://www.cisco.com/go/wireless>
- To find out more about Ballantyne Village visit: <http://www.ballantynevillage.com>
- To find out more about Intelligent Buildings visit: <http://www.intelligentbuildings.com>

This customer story is based on information provided by Ballantyne Village and describes how that particular organization benefits from the deployment of Cisco products. Many factors may have contributed to the results and benefits described; Cisco does not guarantee comparable results elsewhere.

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