

From Abandoned Building to Thriving Metroburb, Bell Works New Jersey Comes Back to Life

Customer: Bell Works New Jersey

Bell Works

Market: Hospitality Location: New Jersey, USA Technology partners Engineered Energy Solutions and Allied Telesis energize the 2 million square foot space with vital networking



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Dan Luna

Vice President of Engineering, Engineered Energy Solutions

For 40+ years, the Bell Labs Holmdel Complex in Holmdel Township, New Jersey, functioned as a world-renowned research and development facility for the Bell System and later Bell Labs. In 2007, the building was vacated and put up for sale. The iconic edifice sat empty for several years while the township sought redevelopment opportunities. In 2012, opportunity came knocking through the vision of Somerset Development.

Since then, the 2 million square foot building has been masterfully transformed into a publicly accessible destination for shops, restaurants, healthcare, community services, and more. Known as Bell Works New Jersey, the reimagined campus is called a "metroburb"—meaning a little metropolis in the heart of suburbia, with everything you would see in an urban core, all under one roof.

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- The redeveloped Bell Labs Holmdel complex needs enterprise networking throughout the massive facility
- VLANs must be built-in to support private networks for tenants as well as various building services
- The converged network must support a variety of services, including a building management system, access control, video surveillance, streaming music, and LED lighting



- Robust, highly secure family of Allied Telesis core and edge switches throughout the building
- VLANs for different services and tenants



- The network supports all manner of uses, including business, retail, hospitality, and entertainment, plus operational functions to run the building
- Pre-built network access is a selling point for prospective tenants

The building's total available office footprint has been subdivided into various types of office spaces, most of which are ready for immediate occupancy by a wide range of businesses. Everything they need to set up shop is available to them, including network connectivity and internet access.

Bringing the building back to life with efficiency in mind

In the mid 1980s, Bell Labs engaged the industrial automation specialists at Engineered Energy Solutions (EES) to install and operate HVAC and building control systems throughout the facility. Once the building was vacated, EES continued to provide skeleton operations for environmental control of the building.

Bruce Marson, President and Chief Executive Officer at EES, says, "Even though the building was basically empty, our equipment was still there and we had to keep a consistent environment to prevent mold, keep the pipes from freezing, and the like. Three people provided the essential care of this immense empty building."

When Somerset Development bought the building, the developers wanted to get all the building management controls working again. "We got a phone call from Somerset to come in and make the building operational again under their grand new design plans," says Marson. "This is an enormous space, and they wanted building management controls throughout the facility. In order to propagate the building with our controls, we needed a network put in place to handle all the subsystems and bring them back to a centralized location for management."

The building still had a fiber optic network from the old Bell Labs operations. EES would use the fiber network as the communication backbone and overlay it with a high-performance network that could support a variety of needs, from the building controls to security systems, office virtual local area networks (VLANs), and more.

"Our biggest need, really, was to install an efficient building management system," says Joel Shandelman, Chief Technology Officer/Chief Energy Officer and Management Consultant at Bell Works. "I saw the energy bills from 2006 when Lucent Technologies occupied the building. The July and August bills were each half a million dollars a month. To make a building like this more energyefficient, we have to have a building management system (BMS) that can communicate to all those HVAC devices and tell them what to do at the appropriate times. And if they aren't doing something correctly, it must be communicated back over the network so they can be properly adjusted by the BMS."

EES chooses Allied Telesis as the network to run the building

Shandelman asked EES to recommend the network to run the building controls and other aspects of the facility. "EES was involved with this building long before Somerset took it over, and they know it through and through, which was a big advantage to us," says Shandelman. "They are accustomed to managing large industrial projects that have to be very durable and reliable. We trusted their judgment on the network to run Bell Works."

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Marson's engineering team considered Cisco and HPE but chose Allied Telesis instead. "Allied Telesis has similar capabilities to the other guys, but they are much more cost-effective," says Marson. EES and Allied Telesis formed a close partnership to support their mutual customer, beginning with the technical design of the network.

Dan Luna, P.E., is Vice President of Engineering at EES and a network engineer. "Somerset wanted a lot of functions to run on this one network. Our design set things up with a network core and multiple VLANs for security purposes—one VLAN for building security and access control, one for surveillance cameras, one for the building management system, one for LED lighting, one for streaming music, and so on. Everything can be accommodated on one converged network. This makes management easier and helps keep costs down."

The only disparate function is the Wi-Fi throughout the facility because Allied Telesis didn't have a suitable wireless networking solution at that time. Even so, the wireless network operates as a private VLAN using the Allied Telesis switches as their fabric. Shandelman says that when the Wi-Fi infrastructure needs to be replaced in a few years, he will likely go with Allied Telesis wireless to further converge and simplify management of all aspects of the network.

A partnership based on mutual respect

"The Allied Telesis network has been extremely reliable over the years," says Luna. One factor in that reliability is the highly skilled team of people who maintain and support the network. Luna has been trained and certified on the Allied Telesis equipment and he oversees its daily operations. His counterpart at Allied Telesis, David Hornstein, provides dedicated systems engineering support as needed. "The other networking vendors give you whoever is available," says Luna. "With Allied Telesis, I talk to the same person every time I call them. I can't overstate the importance of that stability in a partnership."

"Dan Luna is extremely knowledgeable. He was very quick to pick up our technology," says Hornstein. "He's very autonomous and doesn't need a lot of help. Overall, EES is a very knowledgeable partner. Any manufacturer would be absolutely proud to be associated with them."

Their work together led EES to recommend Allied Telesis for a second major project undertaken by Somerset Development Company—Bell Works Chicagoland. Somerset needed a networking company to run every aspect of a second metroburb built in the former Ameritech Center in Hoffman Estates just outside Chicago. Allied Telesis was awarded the business based on a successful proof of concept of a converged wired/wireless network.

Looking Toward the Future at Bell Works New Jersey

Bell Works New Jersey has been in operation for about a decade. The network has met all expectations and has been extremely reliable. And now, Somerset is contemplating the addition of even more advanced technology, based on what has been learned at the Bell Works Chicagoland facility. "Allied Telesis has some very high-quality network management tools and software that is cloud-based. They're

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quite sophisticated and we're intending to use those as well," says Shandelman.

Among these tools are the Autonomous Management Framework[™] (AMF) and Vista Manager[™] EX software. AMF is an embedded technology native to Allied Telesis that automates everyday network administration tasks such as device configuration and network management. Vista Manager EX is a single pane-of-glass monitoring and management platform that provides total control of wired and wireless devices. Together these management tools – already in use at Bell Works Chicagoland – can create additional efficiencies for Bell Works New Jersey.

"We feel we have the right technology and the right partners in EES and Allied Telesis," says Shandelman. "They are big contributors to our success."

About Allied Telesis

For over 30 years, Allied Telesis has been delivering reliable, intelligent connectivity for everything from enterprise organizations to complex, critical infrastructure projects around the globe.

In a world moving toward Smart Cities and the Internet of Things, networks must evolve rapidly to meet new challenges. Allied Telesis smart technologies, such as Allied Telesis Autonomous Management Framework[™] (AMF) and Enterprise SDN, ensure that network evolution can keep pace, and deliver efficient and secure solutions for people, organizations, and "things"—both now and into the future.

Allied Telesis is recognized for innovating the way in which services and applications are delivered and managed, resulting in increased value and lower operating costs.

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