

## OneCleveland's Success Makes It a Model for All Digital Communities

“Digital city initiatives continue to expand globally. The model OneCleveland developed offers a roadmap from which key leaders can learn. Developing a shared vision, creating an effective governance model, using a phased methodology, and defining clear, measurable deliverables that have stakeholder value are key success factors.”

Dr. Tracey Wilen-Daugenti, Cisco IBSG  
Higher Education Practice lead

Not long ago, “digital community” was little more than a good idea debated by futurists and think tanks. Procuring a building permit over a personal digital assistant (PDA) in a matter of minutes; e-mailing patient records to an emergency clinic before the ambulance arrives; and replacing traditional art classes with less expensive, multimedia-based instruction seemed wishful thinking. Not any more. Today, cities around the world are using broadband wired and wireless networks to transform the way citizens work, live, and play—simultaneously enhancing economic development and delivering greater return on tax dollars.

Cleveland is undergoing such a renaissance thanks to [OneCleveland](#), a nonprofit provider of ultra-broadband networking services to educational, cultural, research, healthcare, and government organizations in northeastern Ohio.

According to Lev Gonick, vice president of Case Western Reserve University, one of the original subscribers to OneCleveland, and president of the board of the organization, “OneCleveland’s model is producing as much as a 50 percent return on investment (ROI) on Internet connectivity through effective aggregation strategies and the buildout of a massive regional intranet or ‘campus’ infrastructure that stretches over several hundred square miles in northern Ohio. In addition to strong ROI, OneCleveland is delivering a compelling ‘return on community value’ by using its massive optical networking infrastructure to layer pervasive mobility services and address community priorities.”



Prepared by Cisco Systems, Inc.  
Internet Business Solutions Group

## PBS BROADCASTS LIVE NEWS TO RTA COMMUTERS

For example, when digital television station WVIZ/PBS ideastream opened its new facility in downtown Cleveland, it saved millions of dollars in startup costs by using OneCleveland to support its broadcast requirements, and by moving its digital programming content over OneCleveland's fiber-optic network, eliminating the need for a satellite dish farm. "A single uplink facility costs US\$750,000," explains Gonick. "Each dish costs thousands of dollars per minute to operate. WVIZ is the first PBS station in the country to broadcast over long-haul fiber instead of expensive satellite uplinks."

The savings are extended to other OneCleveland subscribers such as the Greater Cleveland Regional Transit Authority (RTA). Among other projects, OneCleveland, Cisco®, and ideastream are partnering with RTA to provide train and bus riders with real-time live network news each day over OneCleveland's mesh wireless network. "It would be cost prohibitive for RTA to provide this service on its own," continues Gonick. "The transit authority would have to basically re-create the PBS facility, which is just a few miles away. By sharing services, WVIZ will create a new revenue stream by generating programming sponsored by the Cleveland Convention and Visitors Bureau, which promotes the region's attractions. In return, the RTA saves hundreds of thousands of dollars each year on programming costs and increases its ridership by providing a compelling incentive for people to leave their cars at home, which reduces air pollution and allows them to enjoy their ride to work." The total value of this collaborative project is estimated at over \$15 million with as much as \$8 million in recurring annualized savings.

**"OUR OBJECTIVE IS TO PROMOTE ECONOMIC DEVELOPMENT, IMPROVE THE LIVES OF OUR CITIZENS, AND BRING GREATER PROSPERITY TO THE REGION. WE ARE ALREADY ACHIEVING THESE GOALS IN MANY KEY AREAS."**

**Scot Rourke, president, OneCleveland**

## COMMUNITY DATA STORAGE SAVES SUBSCRIBERS MILLIONS OF DOLLARS

Using the OneCleveland network—which runs on a [Cisco Service-Oriented Network Architecture \(SONA\)](#) framework, the single element that connects and enables all components of OneCleveland's technology infrastructure—public sector agencies and institutions are reducing their phone bills by \$300,000 a year and more. Gonick conservatively estimates that, annually, phone calls between government agencies, schools, and other organizations in northeastern Ohio run upwards of 15 million minutes. By routing those calls via voice over Internet protocol (VoIP), the price can be reduced from two cents per minute to nearly zero. In addition, personnel changes require phone changes that average \$100 per incident, representing over \$2.5 million each year across the region. These costs can be significantly reduced with VoIP's plug-and-play technology.

"OneCleveland partners are also collectively saving as much as \$3 million a year by taking advantage of our community data center and [storage area network \(SAN\)](#)," says Gonick. "Instead of building their own separate storage facilities, the 150 subscribers can securely protect their data by storing it in our next-generation disaster recovery data center, which we call our community computing initiative."

### FREE TAX PREPARATION FOR LOW-INCOME INDIVIDUALS

OneCleveland is also delivering free Internet and computing services to underserved citizens in the Cleveland area with thin-client technology. Using a distributive computing model, a main-frame server delivers a variety of applications to thousands of terminals at libraries, bus stations, churches, and other convenient locations. “Now even if you can’t afford a PC,” notes Rourke, “you can join the wired community and access workforce and learning programs, tax applications, the Internet, and much more. Because the monitor-keyboard setups are basically dumb terminals, users cannot enter the system, so there are literally no maintenance, security, or virus issues. One person administers the system, which keeps the overhead very low, but the benefits are extraordinary. It’s changing people’s lives. For instance, we partnered with the Cleveland Housing Network, libraries, and community development centers to establish a volunteer group of tax advisers who are using the tax application to prepare tax returns for low-income individuals. In the first four weeks, this program helped people receive \$1 million in tax refunds and identified \$40 million in tax credits. The service is free for the taxpayers and is a nominal cost for administrators.”

**“ONECLEVELAND PARTNERS ARE ALSO COLLECTIVELY SAVING \$3 MILLION A YEAR BY TAKING ADVANTAGE OF OUR SERVICE LINES, INCLUDING WIRED, WIRELESS, AND COMMUNITY COMPUTING AND DATA STORAGE. INSTEAD OF BUILDING THEIR OWN SEPARATE FACILITIES, THE 150 SUBSCRIBERS CAN SECURELY PROTECT THEIR DATA AND BE PREPARED FOR DISASTER RECOVERY SITUATIONS BY STORING IT IN OUR NEXT-GENERATION DATA CENTER.”**

**Lev Gonick, vice president of Case Western Reserve University and president of the board of OneCleveland**

### HOSPITALS CONNECT TO IMPROVE CARE AND EDUCATION

Seventeen healthcare systems serving 80 percent of Cleveland’s population joined to create the Regional Healthcare Interoperability Organization (RHIO). Using OneCleveland, RHIO’s digital platform will allow its members to make each system’s medical records available online to speed delivery of care, improve care while lowering costs, provide e-prescriptions, and more. “The benefits to healthcare providers and patients are limitless,” notes Gonick. “Doctors can instantly access patients’ records no matter which facility they use, increasing their productivity and response time exponentially. Anywhere, anytime access will revolutionize emergency care and save more lives. Most important, shared bio-banks of tissues and other genetic materials are now driving a revolution in healthcare research in support of a new approach to individualized patient care.” Conservative estimates of the healthcare savings OneCleveland helps generate in northeastern Ohio are discussed in terms of hundreds of millions of dollars each year.

When the Cleveland school district dropped health education classes for financial reasons, the world-renowned Cleveland Clinic stepped in and, via OneCleveland connectivity, provided multi-media-enriched courses to every school. “The new courses are interactive and unbelievable,” states Rourke. “Students receive real-time lectures, one-on-one mentoring, and can watch taped open-heart surgeries. Afterward, they can ask the surgeons questions about the procedure. Kids watch this and think science and medicine are ‘cool’ subjects and want to learn more.”

## **DOD REVERSES CLOSURE DECISION**

When the U.S. Department of Defense (DOD) put its financial services office in Cleveland on the closure list, which meant the loss of 1,200 high-paying jobs, OneCleveland joined the appeal process and helped keep the office open. “We made the case,” explains Gonick, “that our fiber-optic infrastructure and community data center could support the growing needs of the DOD’s financial services group. While not the deciding factor, this argument was instrumental in convincing the DOD to keep the office open. In fact, they added 350 new jobs at an average salary of \$60,000 per year—or \$21 million in annual salaries.”

## **WIRELESS NETWORK ENHANCES SECURITY AND MOBILITY**

As the OneCleveland mesh wireless network spreads throughout the region, subscribers are discovering myriad ways to use the technology to improve public safety, offer innovative services, and lower costs. “RTA is prototyping a security system for its trains based on our Wi-Fi network,” explains Rourke. “They are purchasing inexpensive Web cameras and mounting them in cars and stations. Because this approach costs significantly less than installing a wired system, RTA can place more cameras and dramatically improve security throughout the train system. In addition, the Social Services Department is spearheading a unique and highly innovative use of our wireless network. As social workers go about their normal business in the poorer neighborhoods, they use handheld wireless devices to report broken sidewalks, burned-out streetlights, abandoned cars, and other problems. The problems are quickly fixed, improving the quality of life in these neighborhoods and showing people that their government cares and is responsive to their needs.”

## **BEST PRACTICES: HOW TO DUPLICATE ONECLEVELAND**

While every community is different, OneCleveland’s business model is based on a set of best practices that other metropolitan areas can and are duplicating. “There are three main ingredients required to create a digital community,” says Gonick. “One, get a clear commitment from the founding stakeholders to provide the time and resources necessary to succeed. Two, bring in experts such as the [Cisco Internet Business Solutions Group \(IBSG\)](#) early in the process when you are developing an overall technology architecture. IBSG has business expertise, best-practices knowledge, and proven methodologies and governance models that apply to the public sector. And three, research the needs of all the stakeholders involved, from mayors to CEOs and students, and provide solutions. Listen carefully to what they tell you, develop value propositions for each one, and show a quantifiable return on their investment, whether it’s an investment of time, dollars, or vision. That’s the only way to keep everyone interested, the project moving forward, and to increase the opportunities that drive dollars off the table through collaboration and aggregation strategies.”

## **PRIVATE BUSINESS PARTNERS**

Finally, a key component of every digital community is the private-sector technology businesses that help deliver the services. “Our technology platform has attracted businesses from Israel, Europe, India, and other parts of the U.S., which helps to develop our economy and provide jobs,” says Rourke. “In addition, these businesses have created new services that expand our reach beyond Cleveland to improve the regional economy. This approach is successful because

the vendors are part of the solution, and their participation is mutually beneficial. For example, one initial obstacle to signing up new subscribers was figuring out how to connect their information silos to each other and OneCleveland. The answer was Cisco SONA because it supports multiple networks over a single infrastructure. Again, a mutually beneficial partnership. That's the only way a digital community can thrive and grow, which OneCleveland is doing. We are expanding to Akron, Canton, Youngstown, and other cities in Ohio, and will soon be known as OneCommunity. By driving down costs, eliminating barriers, and simplifying technologies, there's no limit to what we can accomplish."

## MORE INFORMATION

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