



# Gigabit Services Delivery

## Blue Valley Tele-Communications Improves Quality of Life and Economic Growth in Rural Kansas



### About Blue Valley Tele-Communications

BVTC has been providing telecommunications services since 1956 and has grown to serve 17 rural Kansas communities. The company is committed to connecting even the most rural customer.

### The Challenge

The current network was not able to provide the speed and reliability needed to spur economic growth and help raise the quality of life. Local and regional business development, health care and education were affected by not having the resources needed.

### The Solution

BVTC purchased the ADTRAN® Total Access® 5000 broadband platform with Optical Networking Edge (ONE) solution, supporting both the delivery of Gigabit FTTH and Carrier Ethernet service, as well as the advanced packet optical transport capabilities required to effectively carry those premium services.

### The Benefit

Students are now enrolled in distance learning courses from other districts and adults are earning degrees from far away universities. Patients at local health providers benefit from top experts being able to read their charts and review diagnostic images. Additionally, small businesses now have increased their customer bases and supply chains allowing increased profitability and job growth.

Blue Valley Tele-Communications (BVTC) has been providing telecommunications services since 1956 and has grown to serve 17 different communities spanning four counties in rural northeast Kansas. BVTC's predominately rural customer base spans nearly 2,000 square miles, and the company has placed a priority on providing fast and reliable service to its business and residential customers. BVTC was one of the first telecommunications carriers in the country to deploy a complete fiber optic network. In a commitment to reach every customer, technicians spent recent years installing over 17.5 million miles of fiber optic cable.

### Real People

There are many benefits to living in a rural community, including a slower, less-stressful pace of daily activities and a healthier work-life balance. However, many rural communities face challenges as well, and slower bandwidth speeds is one of the factors that the families and business that BVTC serves faced. The nearest colleges and universities are located approximately one hour away, making it a challenge for non-traditional students to physically attend class while working full-time. Local high schools offer college classes through nearby community colleges, but students' course selection is limited and they are unable to earn certificates or degrees locally. Additionally, adults who wanted to continue their education often did not have the bandwidth needed to participate in distance learning classes through video conferencing and other technologies.

If a resident in the community had a serious medical need or emergency, patients were limited to the expertise of medical professionals located within—or visiting—the area. The nearest medical specialists and trauma centers are located in larger cities. With drive times nearly two hours one-way, appointments become day trips—meaning time away from work, family and other responsibilities. Not to mention the added cost of fuel, food and even hotels.

Small businesses were also confined by strained connectivity. Companies were not able to take advantage of next-generation IT strategies, such as cloud computing and video conferencing due to the limited amount of bandwidth. Business owners were also at a disadvantage without the level of broadband needed to host substantial websites that could market their products and/or services outside the traditional rural boundaries.



BVTC recognized the need to build a network that would not only improve the quality of life, but provide additional opportunities to the people it serves. “Looking out for each other and supporting each other is a real part of rural life.”

Brian Thompson, CEO, BVTC

Outward migration is an eminent threat to many rural communities throughout the country, which is why economic growth, healthcare and education are such critical elements. BVTC recognized the need to build a network that would not only improve the quality of life, but provide additional opportunities to the people it serves. “Looking out for each other and supporting each other is a real part of rural life,” says Brian Thomason, CEO of BVTC.

### Real Networks

Blue Valley Tele-Communications turned to KPG Logistics, who had been a network equipment partner with for many years. It was critical to find broadband solutions that would offer reliable, high-bandwidth service access and transport capabilities via the two 10 Gigabit transport rings needed for the community at an affordable price. After researching a number of solutions, BVTC decided to purchase





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“The versatility of ADTRAN’s FTTH solutions enable us to have a single vendor to partner with us in deploying transport and access services—that, combined with ADTRAN’s overall knowledge of the market, helps us deliver best-in-class services while providing our customers with peace-of-mind in knowing that their needs are in safe hands.”

**Brian Thompson, CEO, BVTC**

the ADTRAN Total Access 5000 platform with Optical Networking Edge (ONE) solution, supporting the delivery of residential Gigabit FTTH, Carrier Ethernet business and backhaul service, as well as the advanced packet optical transport capabilities required to effectively carry those premium services.

By selecting the Total Access 5000 platform, BVTC now had carrier-class, multi-service access to bridge the gap between the existing and next-generation networks. With a pure Ethernet core, the Total Access 5000 supports both legacy and emerging service interfaces over both copper and fiber, easily scaling to support even the most bandwidth-intensive applications. Environmentally hardened, the Total Access 5000 series is designed with the service provider in mind and is equally capable of deployment at the CO, RT or remote node locations. The ONE solution offers multi-service scalability and pay-as-you-go modularity, which helps BVTC easily grow its local communications services portfolio, and confidently expand revenue. When it is ready to deploy new services, BVTC can leverage integrated WDM, OTN and/or ROADM optical technology to ensure service quality is preserved in the presence of ever growing bandwidth requirements. The right-sized packet optical approach reduces complexity and will allow BVTC operators to accelerate next-generation service delivery and/or migration strategies.

BVTC deployed the Total Access 5000 with ONE solution, connecting 6,889 households, 590 businesses, several large farms, multiple school districts and many healthcare providers to the world beyond rural Kansas. It provided the connectivity needed to provide for their families economically, ensure top-notch educational opportunities and keep them healthy. BVTC replaced its existing FTTH solution on one ring for advanced residential communications services, including IPTV, Voice over IP (VoIP) and high-speed Internet at ultra-broadband speeds.

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Thomason. “That, combined with ADTRAN’s overall knowledge of the market, helps us deliver best-in-class services while providing our customers with peace-of-mind in knowing that their needs are in safe hands.”

#### **Broadband Improving the Quality of Life and Providing Opportunities for Residents**

Broadband service can help level the playing field for small local businesses to compete nationally and—in some instances—globally. When revenues are increased, jobs are added to the community, which is a key element to sustained growth and development. “BVTC’s broadband helps enable our small local businesses to increase their market reach, providing tremendous leverage when competing in a global market,” added Thomason.

For example, a local trust company, who manages more than 100,000 retirement accounts, is now able to more efficiently stay abreast of up-to-the-minute financial market developments, as well as increase communications with customers.

Regardless of size, rural businesses need to continue growing their customer base, product lines and service offerings in order to stay competitive. Dependable broadband is no longer a luxury—it is a necessity. Supporting the technological needs of local businesses inevitably improves the quality of life for residents, as well as helping to attract new people to the area.

Increased broadband capability and coverage significantly impacted local healthcare options within the BVTC area as well. The improved broadband connectivity enables healthcare professionals to send medical records and MRIs to experts across the nation, resulting in many lives saved. Additionally, the increased speed from the broadband network is a critical element in medical diagnosis, especially when every second matters. “We value the relationships we have with our local healthcare providers. We take our responsibility to provide them with the very best in technology seriously,” said Thomason. “Helping ensure our communities receive the latest in care while being afforded the convenience and peace of mind of working with their local, trusted family physicians isn’t just our job—it is our responsibility.”

Educational opportunities are also improved with increased broadband speeds. Students of all ages are benefiting from distance learning venues. For example, at five years old, kindergarten students are learning Spanish from a teacher located half way across the country. In schools with populations of less than 100, on-site second language instructors are viewed as more of a luxury than a necessity. Broadband affords these students the same learning opportunities as students in much larger schools. Likewise, online classes for college students are more feasible with the faster connectivity, easing the stress for working parents trying to earn degrees.

“It’s incredible how quality-of-life is improved by broadband. It’s a commitment and responsibility that we don’t take lightly. Broadband offers our rural communities some of the same benefits as major metropolitan areas,” says Thomason. “Because of broadband, the world is a much smaller place.”

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