PIKE COUNTY
STRATEGIC TECHNOLOGY PLAN

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A. Executive Summary

A. Executive Summary

Purpose

This document provides a "road map" for technology-based growth and economic development in Pike County. Detailed assessments and recommendations are provided in Tab 1 of this report. The full report provides an overview of ConnectKentucky's findings and recommendations related to the assessment of Pike County's technology needs, particularly related to computers, broadband and Information Technology.

Summary

Pike County's e-Community Leadership Team is leading the way into a new economy for Pike County, working in partnership with ConnectKentucky. By leveraging the latest in technology and networking, ConnectKentucky is ensuring Kentucky remains the place of choice to work, live and raise a family.

Pursuing the *Five A's to technology acceleration in Kentucky* (Availability, Affordability, Awareness, Applications and Adoption) ConnectKentucky has established the Commonwealth as a national model for technology development. Over the past two years, Kentucky has achieved growth rates in technology availability and adoption that lead the nation.

Today, the world is smaller because technology makes it easier to work and to live nearly anywhere. In order to compete on a global scale, we must provide our citizens and businesses with the best available technology in the world, wherever they choose to live, learn, work or play. Central to technology-based development is access to and usage of computers and high-speed Internet, commonly referred to as "broadband."

The need for improved technology in Kentucky is great. In 2003 rankings, Kentucky was 44th in its proportion of high-tech companies, 45th in household computer use, and 43rd in resident Internet use. But that is changing fast, as Kentucky transforms from a technology laggard into a national leader in universal access and innovative technology solutions. Some evidence of the progress Kentucky has made:

- According to the Federal Communications Commission, Kentucky leads the nation in its rate of broadband adoption over the past two years.
- In 2003, about 60 percent of Kentucky households had the ability to subscribe to broadband. Now, an estimated 77 percent of households can access broadband, an addition of 240,000 households over two years. Increased investment from telecommunications companies is expected to bring the broadband coverage rate to 90 percent by the end of 2006.

Though Kentucky's recent progress has been swift, there remains much to be accomplished. If we do not act on our dreams, we are destined to remain at the bottom of most technology rankings.

With this vision of hope for all Kentuckians, Governor Fletcher introduced his *Prescription for Innovation*, a comprehensive initiative to achieve aggressive goals for broadband deployment and technology adoption in Kentucky. ConnectKentucky is working community by community, provider by provider to ensure that each of these goals is achieved by 2007, including:

1. Broadband availability for all Kentuckians, businesses and local governments;
2. Dramatically improved usage (adoption) of computers and the Internet;
3. Meaningful online applications for local government, businesses, educators, etc.;
4. Establishment of local technology leadership teams in every county promoting technology growth for: local government, business and industry, education, healthcare, agriculture, libraries, tourism and community-based organizations.

Governor Fletcher's *Prescription for Innovation* is being implemented through ConnectKentucky, in partnership with local community leaders. The leadership of Pike County asked ConnectKentucky to facilitate an evaluation of its current uses of technology, identifying and filling broadband coverage gaps and developing a strategic plan to increase the use of technology in each sector of the local community, including:

- Local government
- Business and industry
- K-12 education
- Higher education
- Healthcare
- Libraries
- Agriculture
- Tourism, recreation & parks
- Community-based organizations

This project has culminated in the development of initiatives to increase the competitiveness of Pike County through the expansion of broadband availability and the increased usage of computers and broadband-related applications. In completing this analysis, ConnectKentucky engaged local leaders in all economic sectors, led the group through a visioning exercise and developed a unique strategic plan for the county.

Additionally, ConnectKentucky has engaged its network of telecommunications and Information Technology resources to determine which technology resources are currently available to Pike County and which services are expected in the near future.

ConnectKentucky found that broadband is readily available in larger cities and communities, which contain more than 75% of the county's population, and there are broadband services of some kind available in various locations throughout the county. ConnectKentucky will work with current and potential broadband providers to achieve full broadband availability to all residents of Pike County by 2007.

ConnectKentucky recommends that Pike County focus on these general areas in order to encourage further build-out of broadband throughout the community and to create awareness of the broadband-related services that already exist.

- Creating awareness of the many available digital applications that provide convenience, growth, productivity and empowerment.

- Developing and expanding community applications that will drive the use of broadband access and ultimately encourage residents to become more technologically savvy.

Methodology

Activity 1 – Kickoff meeting and follow-up benchmarking meetings defined existing and future uses of broadband:

- How stakeholders currently use telecommunications and broadband services and applications
- What telecommunications and broadband needs are not currently being met
- What applications would be useful to increase the economic competitiveness of the area
- What telecommunications and broadband services and applications key stakeholders desire for the future

Activity 2 – Interviews with key telecommunications and Information Technology providers in the community determined what services and infrastructure are in place now and what services and infrastructure are planned for the future.

Activity 3 – ConnectKentucky reported the findings, provided analysis of potential alternatives and made recommendations on potential future initiatives:

- Benchmarked current uses of technology
- Researched applications that will enhance the economic vitality of the community in various participating sectors
- Recommended a strategic approach to adopting appropriate applications
- Provided project management to assure successful implementation
- Collected coverage data from existing broadband providers in the Commonwealth. In GIS format, mapped coverage footprints of all providers
- Provided data for areas not served by broadband
- Shared relevant market data with potential providers to encourage additional investment

- Identified possible grant and low-interest loan availability to areas not currently served

- Encouraged investment from all providers, including cable, telecommunications companies, municipals, satellite and wireless, to fill remaining gaps.

How Do We Get There?

ConnectKentucky will continue to assist the e-Community Leadership Team, working together to ensure that Pike County remains a strong place to work, live and raise a family. ConnectKentucky will remain engaged with the leadership and stakeholders from each sector to implement the recommendations provided in this report.

B. WHY DOES THIS MATTER?

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Business and Industry

Today, a number of factors are forcing businesses to change time-honored models of operation, including global competition, a trend toward partnering/outsourcing for all but core functions, and a demand for more personalized services. Each of these trends can save businesses time and money, but they require a sound technological infrastructure. The good news is that while these trends are emerging, the costs of technology are falling. Businesses cannot be sheltered from competitors. The reality is that Pike County businesses must adapt to the changing world in which they operate. Businesses have to learn the tools of the networked economy and innovate to survive.

Business and industry often experience the most direct benefit of high-speed Internet with increased sales, profit and growth. However, many businesses and industries are utilizing high-speed Internet to simplify processes, increase efficiency and develop new marketing methods. While the employees benefit immediately, the consumer ultimately sees lower prices and better quality.

Gaining benefits from the implementation of high speed Internet is not just for large corporations. For smaller businesses, technology creates an even playing field with companies much bigger than themselves. E-commerce (the buying and selling of goods over the Internet) allows small or even home-based businesses to operate and sell their goods on a national and sometimes international scale. Where small businesses were once limited to whatever local customers they could attract through local advertising and word of mouth, the Internet now allows them to attract customers across the globe.

Technology has allowed larger businesses to maximize efficiency in order to better serve customers. E-mail, intranets, paperless operations and automated logistics processes are just a few examples of how the Internet is allowing large companies to work with much greater efficiency and at lower costs. This allows those businesses to expand into other markets and grow their companies, or even pass the savings on to their customers.

K-12 Education

For our children to succeed in the New Economy, the tools of the Information Age should be as comfortable to use as a pencil and paper. The future health of the nation's economy depends on how broadly and deeply we reach a new level of literacy – that includes strong academic skills, thinking, reasoning, teamwork skills, and proficiency in the use of technology. Our schools must equip every student, regardless of family income, with the ability to use these tools. Equally important is the use of these tools in the educational process itself. The interactive nature of the Web provides a richer learning experience that engages and motivates students to explore and learn.

In Kentucky, Internet applications used in elementary and secondary schools continue to develop. Typically, the Internet is a communication tool for teachers and parents to remain up-to-date on the recent happenings of the classroom. Everything from homework assignments to scheduled activities and pictures can be found on classroom websites,

keeping everyone connected to educational resources. Elementary and secondary schools provide students with the opportunity to learn more about computer technology and explore the Internet with school computer labs. Committed to protecting students and maintaining a safe, educational environment, schools monitor and restrict Internet access of students to ensure the highest quality resources are being viewed and to ensure the safety of our children.

Healthcare

The healthcare industry has unique challenges. It inherently generates mountains of information yet at the same time is duty bound to keep these mountains hidden for the sake of individual privacy. For companies charged with managing and working with this information, high-speed Internet access and technology innovations are crucial. On a daily basis, doctors must keep up with the latest research; patient records have to be easily accessible and accurate; and images, test results and prescriptions have to be delivered promptly, without errors, to practitioners, pharmacies and insurance providers. In healthcare, errors and delays are not only costly, but also dangerous. Many providers are converting to electronic medical records which can be easily updated and shared on secure, internal networks. Network-based technologies like video-conferencing and digital stethoscopes allow specialists to consult with rural patients, reducing travel time and hazards. This ability to reach rural patients through technology has allowed many people to seek treatment that otherwise might not. Bringing the best of healthcare to every Kentucky citizen is a worthy goal.

Because of the nature of their activities, the healthcare industry has found the perfect partner in high-speed Internet technology. The convenience of the Internet has simplified information transfers and improved medical equipment while maintaining the integrity of confidential patient information.

Libraries

Today, libraries are more than just books on the shelves. Everything from the card catalog to check out can be simplified with the help of high-speed Internet. Public libraries often play a vital role in the community by providing every resident with the opportunity to receive instruction and use the Internet free of charge. Though they are not available 24 hours a day as a home computer is, libraries are still a central point of access to the Internet that is available to each and every citizen in the community. Many businesses have been launched as a result of research done on a computer in a Kentucky library. Many children are able to do their homework online or research reports because of the Internet access provided by the local library. Because the library plays such an important role in the community, it is essential that local libraries are on the cutting edge of technology and continue to develop new methods of keeping their patrons up to date. High speed Internet can help libraries continue their tradition as a trusted and indispensable resource.

Higher Education

Colleges, universities and community and technical colleges in Kentucky continue to find new ways to use the Internet to improve everyday activities. Websites are an important source of information about the institution, from providing news and information concerning campus activities to online registration of classes. Colleges and universities often implement the use of the school websites to attract prospective students, remain connected to alumni and allow for online donations.

The most common application of high-speed Internet on college and university campuses, however, is typically not actually used on-campus. Most colleges and universities offer online classes and academic programs to better equip students with the opportunity to learn. In 2004, 35,000 students participated in higher education classes through Kentucky Virtual University, www.kyvu.org. By bringing the classroom to the students, participants from every walk of life and region of the state were able to participate in higher education classes. However, it is necessary to have high-speed Internet to participate successfully in online classes. High-speed Internet is crucial to supporting the capabilities and the possibilities of higher education in Kentucky.

Community-Based Organizations

Non-profit agencies provide a wide variety of services to citizens, including health services, religious services, community sports and athletic facilities and public entertainment. Like any organization, community-based organizations need technology to manage operations, apply for grants, reduce costs, improve client services and better serve the community. Unfortunately, their budgets are typically limited, and they often depend on outdated technologies and donated services. As a result, community-based organizations must be creative in order to serve their constituents in the best manner possible. Fortunately, there is no shortage of creativity among community-based organizations, and many are using innovative solutions to offer important local services. As with other sectors, the Internet is an enabling factor for these creative solutions.

Government

Government serves citizens in numerous ways, from providing services such as vehicle registration to providing information such as election results. While it is common for people to feel disengaged from the everyday actions of state and local government, technology has allowed governments to begin closing that gap. On the state level, Kentucky has developed Kentucky.gov, a comprehensive website that provides government services and information to all citizens. On this site, residents can purchase and update hunting licenses; car dealers can access title searches on cars; and citizens can monitor the progress of legislation when the General Assembly is in session. By bringing the services of the state government to the convenience of residents' homes, the Kentucky.gov site provides participants a greater sense of relevance in the actions of state government.

Local governments have also seen the importance of an online presence. Local governments provide communities with many services, offer a great deal of local information and encourage public involvement and awareness. With a web presence, local governments can distribute information to more citizens, provide more opportunities for interaction with the agencies that affect them and make more convenient transactions that previously required a drive to the courthouse.

Tourism, Recreation, and Parks

As citizens become more comfortable with the Internet, they typically continue to find more uses for it. One of the industries benefiting from this trend is the tourism industry. Increasingly, people are using the Internet to research, book and pay for airline tickets, hotels, rental cars, and to make other logistical arrangements for their vacations and business travel. In light of this fact, hotels, travel agents, restaurants, attractions and other support businesses in the tourism industry are taking advantage of this trend and making their information and services available on the Internet.

Additionally, with the help of high-speed Internet and computer technology, the leisure time planned and purchased over the Internet can also be used more efficiently, allowing for a more enjoyable experience. Whether it is vacation, recreation or a visit to a local park, high-speed Internet is making the travel experience more enjoyable and more convenient. Already, a number of innovative tourism attractions are using high-speed Internet to improve services and meet the changing demands of their guests.

Agriculture

Too often, the agricultural community sees little need for broadband technology in the day-to-day activities of maintaining farms and livestock. However, broadband technology allows for growing innovation in agriculture, simplifying and mainstreaming important daily tasks, and developing marketing and sales. With high-speed Internet, farmers can remain up-to-date with everything from the weather to the conditions of the chicken coops equipped with temperature-sensitive monitors. Livestock farmers can access market prices and gain access to the latest in livestock management techniques. Farmers can advertise and even sell goods on the Internet, generating customers from all over the world. The Internet can also help Kentucky farmers diversify their operations and develop cutting edge revenue streams thus alleviating some of the loss of revenue from the Tobacco Quota Buyout Program. Internet resources can give Kentucky farmers an edge on production and results. The possibilities are virtually endless. The marriage of agriculture and high-speed Internet can produce abundant success for farmers across Kentucky by creating opportunities.

C. WHERE ARE WE AND WHERE ARE WE GOING?

WHERE ARE WE AND WHERE ARE WE GOING?

BUSINESS AND INDUSTRY

Pike County industries employ 22,779 workers. The leading industry sector by employment is trade/transportation/utilities with 4,902 employees. Mining employs 4,074, and the service industry employs 3,616. The leading single employer is Kellogg-Pikeville Plant with 412 workers. Missouri Fraternal Order of Police Fundraising Center employs 100. Appalachian News-Express has 39 employees. The Pike County Chamber website is located at: http://www.pikecountychamber.org/index.php.

The Assessment

- **Networked Places** – In the category of networked places, Pike County's business and industry sector is currently at stage 4 on a 0 to 5 scale, with some office workers having converted from desktop computers to portable devices.
- **Applications and Services** – In the area of technology applications and services, the business and industry sector is currently at stage 4 on a 0 to 5 scale, with some businesses outsourcing most of their computer services and some employees working remotely.
- **Leadership** – In terms of technology leadership within the business community, Pike County is currently at stage 4 on a 0 to 5 scale. Some businesses permit employees to telework and some encourage employees to take work-related courses online.

The Vision

While the Pike County eCommunity Leadership Team found that business and industry's current use of technology is doing very well, the team has set goals that would move the business and industry sector to stage 5 in all the three categories outlined above. The team's vision includes:

- Most businesses use **Voice over Internet Protocol (VoIP)** to save money
- Most computers have **video cameras**
- New hires are required to have **experience using new technology** in business applications

K-12 EDUCATION

The Pike County School District enrolled 9,770 students in the 2004-2005 school year. The Pike County School District is housed in the rural foothills of the Appalachian Mountains in Pike County, the easternmost and largest county in Kentucky. Pike County is the home of 24 public educational facilities administered by the Pike County Board of Education, which is located at the county seat in Pikeville. The Pike County School District is comprised of 16 elementary schools, three middle school programs, five high schools, and two day treatment centers. It is also affiliated with, and is an integral part of, two Kentucky technical/vocational education facilities. The school district, having the sixth largest pupil enrollment in the state, boasts an academic performance level above most state testing indices, placing it among the leading districts in the state. The school system is a diverse combination of educational programs, offering equitable and safe educational environments, which translate into successful learning experiences for all students. Following are some important benchmarks related to recent Pike County graduates:

	Attendance Rate	Retention Rate	Dropout Rate	Graduation Rate	College	Military	Work	Voc/Tech Training	Work & Part-Time School	Not Successful
District	93.3%	2.7%	2.4%	81.6%	54.6%	2.3%	19.7%	14.3%	7.4%	1.8%
State	94.3%	3.3%	2.2%	81.5%	54.7%	2.6%	27.5%	4.8%	6.4%	4%

The primary focus of technology in Pike County School District, http://www.pike.k12.ky.us, is to ensure equity of access to the most modern and effective voice, video and data technology tools and services possible for students, teachers and administrators. The district provides the skills training and resources needed to promote a high level of instructional use of technology in the classroom. A few of the district technology initiatives currently being supported are: Pike's BEST Academy (Better Education with Standards and Technology) for teachers, integrating Kentucky Technology Teaching Proficiency Standards in our curriculums, introduction of web-based instructional software and alignment of curriculums and course content through web-based software which will allow teachers to share resources from classroom to classroom.

	Spending per Student	Student Teacher Ratio	Student/Computer Ratio	% of Classrooms with at Least One KETS Workstation With Internet Access
District	$9,038	15:1	1.6:1	100
State	$8,663	16:1	3.7:1	100

The Pikeville Independent School District enrolled 1,249 students in the 2004-2005 school year. Pikeville Independent School District is composed of Pikeville Elementary (grades Preschool-6) and Pikeville High School (grades 7-12); both schools are accredited by the Southern Association of Colleges and Schools. The schools are structured by a curriculum that includes technical, academic and personal skills necessary for lifelong learning and responsible citizenship. In addition to the academic curriculum, a variety of extracurricular activities address student physical, social, emotional and spiritual needs. For nearly a century, the Pikeville Independent School District has provided the Pikeville community with institutions of learning that consistently rank among the top in Kentucky. Following are some important benchmarks related to recent Pikeville Independent graduates:

	Attendance Rate	Retention Rate	Dropout Rate	Graduation Rate	College	Military	Work	Voc/Tech Training	Work & Part-Time School	Not Successful
District	94.8%	1.9%	0.9%	91.3%	84%	1.3%	4%	1.3%	8%	1.3%
State	94.3%	3.3%	2.2%	81.5%	54.7%	2.6%	27.5%	4.8%	6.4%	4%

Technology has become an integral part of the educational process for Pikeville Independent students. Both schools not only utilize traditional computers in each classroom and the computer labs, but also now have wireless labs. Containing 25 laptops, each wireless lab is used throughout the schools to instantly transform any classroom into a highly functioning computer lab with high-speed Internet. Teachers utilize SMART Boards and projectors to deliver Internet or computer content to an entire class. Students at Pikeville High School have the opportunity to learn computer networking during their junior and senior years through enrollment in the Career and Technical Information Technology Program.

	Spending per Student	Student Teacher Ratio	Student/Computer Ratio	% of Classrooms with at Least One KETS Workstation With Internet Access
District	$8,664	16:1	1.8:1	100
State	$8,663	16:1	3.7:1	100

District website: http://www.pikeville.k12.ky.us.

Non-public schools in Pike County are:

- Christ Central School, 70 enrolled in a PK-7 program.
- St Francis of Assisi School, 70 enrolled in a K-6 program.
- Valley Christian Academy, 15 enrolled in PK-6 program.

The Assessment

The Pike County eCommunity Leadership Team found that the K-12 education sector has made significant progress in making technology a priority, and the team set goals for enhanced access and use of technology and its applications. The current assessment includes:

- **Networked Places** – In the category of networked places, Pike County's K-12 education sector is currently at stage 4 on a 0 to 5 scale, with many classroom teachers having access to digital projection capabilities.
- **Applications and Services** – In the category of technology applications and services, the healthcare sector is currently at stage 4 on a 0 to 5 scale. Many schools have an interactive website that offers access to homework assignments and e-mail contact with teachers and administrators.
- **Leadership** – In terms of technology leadership within the K-12 education community, Pike County is currently at stage 4 on a 0 to 5 scale. Some schools have comprehensive plans for learning activities using technology in the classroom and new hires are required to have experience using new technology in the classroom.

The Vision

The Pike County eCommunity Leadership Team recognizes that the school systems have made technology a priority, and the team has outlined a clear vision for enhanced technology usage and application in the classroom. The team has set goals to move each of the three categories to stage 5 on a 0 to 5 scale. The team's vision includes:

- Many classrooms have large, **flat-panel displays** or projectors for **video-based instruction**
- Most schools have converted their phone system to Voice over Internet Protocol **(VoIP)** to save money
- Most high schools have **one-to-one computing** for their students
- Some school **computer labs** have been made **available to the public**
- Schools use the network to connect students, teachers, and parents, improve learning via **online resources**, and manage administrative responsibilities more efficiently
- All students **meet grade level requirements** in the **National Educational Technology Standards**
- **Technology training** is offered in the community
- Many high school students use **online teachers and experts** to explore subjects and execute **individual learning plans**

- All schools have **comprehensive plans for learning activities** utilizing technology in the classroom
- School districts **actively promote information technology** literacy to drive positive impacts on economic performance, skills and innovation in the classroom
- The school system plays a **vital role in raising the skill level** and awareness of community and family members

HEALTHCARE

Pikeville Medical Center, http://www.medicalleader.org, is a 535,000-square-foot facility with 261 beds and 1,300 employees. It also has 16 intensive care unit beds and 16 surgical suites.

Special services include:

- Neurosurgery
- The Heart Institute with Philips Allura Interventional Catheterization Labs
- The Leonard Lawson Cancer Center
- The Family Practice Clinic
- 40-bed Inpatient Rehabilitation Hospital
- Home Health
- Medical Detoxification Unit
- MedFlight of East Kentucky
- Level II +/- III NICU
- Sleep Disorders Clinic
- The Birth Place (largest obstetrical service in the region)
- Pediatric Transitional Care Unit
- Siemens ONCOR Linear Accelerator (second in the nation)
- PET Scanning
- State-of-the-art diagnostic department

The Assessment

The Pike County eCommunity Leadership Team found that the healthcare sector is beginning to use technology to its advantage and identified a large opportunity for technology applications within the healthcare community**.**

- **Networked Places** – In the category of networked places, Pike County's healthcare sector is currently at stage 3 on a 0 to 5 scale, with some doctors and nurses using laptop and palmtop devices connected to wireless networks.
- **Applications and Services** – In the category of technology applications and services, the healthcare sector is currently at stage 4 on a 0 to 5 scale. Some providers store patient records electronically, and some lab images are received electronically.
- **Leadership** – In terms of technology leadership within the healthcare community, Pike County is currently at stage 4 on a 0 to 5 scale. Work is underway by some providers to begin online exchanging of test results and other medical records with appropriate parties.

The Vision

The Pike County eCommunity Leadership Team sees great potential for the use of technology in the healthcare sector but understands the industry is limited in its resources and ability to implement changes within a brief period. The team has set goals to move each of the three categories to stage 5 on a 0 to 5 scale. The team's vision includes:

- Most equipment has been converted to **digital**
- **Desktop videoconferencing** is routine at all hospitals and major clinics
- Remote **monitoring of patients** with chronic conditions is standard procedure
- All providers allow patients to **schedule appointments**, view records, and get advice **online**
- All patient **records are stored electronically** and routinely sent electronically to distant providers to aid diagnosis and treatment for emergency patients
- **Telemedicine** routinely is used to access specialists
- Wireless feeds in ambulances provide **real-time patient assessment** to ER staff
- Healthcare leaders see themselves as a key part of the community's overall **economic strategy**

LIBRARIES

The Pike County Public Library, http://www.pikelibrary.org, maintains six facilities:

- PCPL District Administrative Offices
- Pikeville Public Library
- Belfry Branch
- Elkhorn City Branch
- Phelps Branch
- Vesta Roberts Johnson Memorial Library

The library's website offers an online catalog as well as logon for patrons so that they can monitor their own accounts. The website links to Live Homework Help, as well as Learning Express, which are offered to the patrons of the Library.

The Assessment

The Pike County eCommunity Leadership Team found that the library sector currently offers a great deal of technology services to the community but wishes to realize the goal of implementing more technology services.

- **Networked Places** – In the category of networked places, the library sector is currently at stage 5 on a 0 to 5 scale, with most public libraries offering patrons a 54 mbps or faster wireless network.
- **Applications and Services** – In the category of technology applications and services, the library sector is currently at stage 4 on a 0 to 5 scale. Patrons may review their accounts online and pay fines by credit card. Patrons may also access the library online as a portal for other online information services.
- **Leadership** – In terms of technology leadership within the library system, the sector is currently at stage 4 on a 0 to 5 scale. Libraries help the community understand copyright issues and how to protect privacy on the Internet. New hires are required to have experience using new technology. Libraries take internal responsibility for continuing e-rate and other discounts. Libraries have developed network management policies and technologies to prevent patrons from sending spam.

The Vision

The Pike County eCommunity Leadership Team has set forth a two-year vision for enhancing the library so that it serves the community more effectively and efficiently, concentrating on networked places and leadership. The team set a goal of maintaining or moving to stage 5 on a 0 to 5 scale in all three categories. The vision includes:

- Most public libraries offer patrons a **54 mbps or faster wireless network**
- Public libraries offer **live video consultations**
- Public libraries allow patrons to borrow **e-books over the Internet**
- They help patrons conduct research and assist with **legal access to copyrighted databases and publications**, including music and movies
- **Two-way videoconferencing** is available to the general public
- Libraries continue to **upgrade their facilities** to offer the community the next generation in technology, services, and training
- Libraries actively **promote information technology literacy** to drive positive impacts on economic performance, skills and innovation in the community

HIGHER EDUCATION

The National College of Business & Technology's, http://www.ncbt.edu, purpose is to educate men and women for the duties and responsibilities of business life and to help place them in positions where there is opportunity for advancement. It aims to have the resources, curriculum, staff and faculty that motivate students to be fully prepared for well-defined fields of employment.

Pikeville College, http://www.pc.edu, was founded in 1889 by Presbyterians. It is committed to offering a broad liberal arts and sciences education. This foundation provides opportunities for students to develop their full academic and personal potential and prepare for specific careers. Pikeville College is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award the associate, baccalaureate and doctoral degrees. Total enrollment is over 1,100 students from 32 states and seven countries, including approximately 850 undergraduate students and 285 medical students.

Big Sandy Community and Technical College, Pikeville Campus, http://www.bigsandy.kctcs.edu, provides learning experiences for those preparing for immediate entry into the workforce upon graduation, for those transferring to a baccalaureate institution, and for community members seeking to enhance their knowledge and skills.

The Assessment

The Pike County eCommunity Leadership Team found that the higher education sector is currently taking advantage of technology more than most others in the community; however, there is also a large opportunity to expand current services with technology applications.

- **Networked Places** – In the category of networked places, Pike County's higher education sector is currently at stage 4 on a 0 to 5 scale, with many students bringing laptop computers or other network-enabled devices to class and some classrooms having video equipment for recording lectures.
- **Applications and Services** – In the category of technology applications and services, the higher education sector is currently at stage 4 on a 0 to 5 scale. Most of the faculty are trained to use the Internet for instruction. Some undergraduate students take distance learning classes for specialized subjects and graduate-level research.

- **Leadership** – In terms of technology leadership within the higher education community, Pike County is currently at stage 4 on a 0 to 5 scale. Community colleges are expanding their capacity by using distance learning technologies to reduce the need for classroom time.

The Vision

The Pike County eCommunity Leadership Team sees great potential for the use of technology in the higher education sector but understands that colleges and universities are limited in their resources and ability to implement changes within a brief period. The team has set aggressive goals of reaching stage 5 out of 5 in all three categories over the next two years. The team's vision includes:

- Many classrooms have been remodeled to include **network connections** and power outlets **at every seat**
- Most students bring **laptop computers** or other network-enabled devices to class
- Many classrooms have **video equipment** for recording lectures
- Many undergraduate students take **distance learning classes** for specialized subjects and graduate-level research
- All aspects of **higher education** are **available through the network** including instruction and administration
- **Colleges and universities** see themselves as a **vital partner in** the **community's economic development strategy** and have formed partnerships with local businesses to provide skilled technology workers and innovative solutions
- Colleges and universities actively **promote information technology** literacy to drive positive impacts on economic performance, skills and innovation in the classroom

COMMUNITY-BASED ORGANIZATIONS

There are approximately 200 community-based organizations in Pike County.

Assessment

The Pike County eCommunity Leadership Team found that the community-based organization sector is beginning to use technology to its advantage and identified a greater opportunity for technology applications within the community-based organizations.

- **Networked Places** – In the category of networked places, Pike County's community-based organization sector is currently at stage 3 on a 0 to 5 scale, with most organizations having e-mail.
- **Applications and Services** – In the category of technology applications and services, the community-based organization sector is currently at stage 3 on a 0 to 5 scale, with many organizations having an informational website and many being able to share data electronically with the national parent organization. Some even accept online donations.
- **Leadership** – In terms of technology leadership within the community-based organization community, Pike County is currently at stage 4 on a 0 to 5 scale. Many organizations plan to use telecommunications services and technologies within the next year. Some organization leaders are actively involved in community economic development.

The Vision

The Pike County eCommunity Leadership Team sees great potential for the use of technology in the community-based organization sector but understands the sector is limited in its resources and ability to implement changes within a brief period. The team has set aggressive goals to move the networked places and leadership categories to stage 5 on a 0 to 5 scale, while moving the applications and services category to a stage 4. The team's vision includes:

- Many organizations use **Voice over Internet Protocol (VoIP)**
- Every organization is **connected** to the Internet
- Every computer can access the Internet via a **local area network**
- Many computers have **video cameras**
- Most organizations use **affordable videoconferencing** facilities
- Most organizations have an **informational website**
- A **unified portal** provides access to a broad range of **community information and services**
- Most local chapters are able to **share data** with the parent organization.
- **Organizations collaborate** with one another regularly to **share resources** and provide up-to-date training to their employees and volunteers

GOVERNMENT

Government entities in Pike County are:

- Pike County
- Coal Run Village
- Pikeville
-

The official Pikeville City website, http://www.cityofpikeville.com, ranks fourth out of 116 official city websites across the state. This robust website offers citizens multiple points of entry to access their city government services. With advanced features such as online bill pay for utilities as well as online meetings and reports, the site mirrors Pikeville City Government's innovative approach to technology application. The result has been better value for the city tax dollar through increased government services made accessible to all citizens. The other government entities of Pike County do not have official websites.

The Assessment

Although the government entities in Pike County have a limited online presence, the Pike County eCommunity Leadership Team found that the local government is currently using technology to improve processes in other areas.

- **Networked Places** – In the category of networked places, the government sector is currently at stage 3 on a 0 to 5 scale with many employees having e-mail accounts.
- **Applications and Services** – In the category of technology applications and services, the government sector is currently at stage 4 on a 0 to 5 scale. Customers can make some routine payments such as parking fines online using credit cards.
- **Leadership** – In terms of technology leadership within the government community, Pike County and its associated governments are currently at stage 4 on a 0 to 5 scale. Some agencies have a formal policy that allows some employees to telework. Elected officials understand the importance of the network for economic development and quality of life.

The Vision

The Pike County eCommunity Leadership Team has developed goals to provide a framework for robust e-government functions in the next two years, which will bring the sector to stage 5 in each of the three categories above. The team's vision includes:

- The telephone system is being converted to **Voice over Internet Protocol (VoIP)** to save money
- Many field workers use **wireless networks** to upload and download data in the field
- Critical **traffic signals** are connected
- Desktop **videoconferencing** is widely available
- **Interactive applications**, such as customer relationship management, online GIS and video streaming are in regular use
- Employees manage **benefits programs** on an Intranet
- Emergency response teams can **reliably communicate** across jurisdictions
- **Council meetings** are indexed and available for searching and retrieval **online**
  The government has telecommunications, e-government and information **technology master plans in place** to guide its efforts
- Innovative processes are used to **collaborate** with the private sector

TOURISM, RECREATION AND PARKS

Recreational and tourism points of interests for Pike County include:

- Artists Collaborative Theatre, Inc.
- Breaks Interstate Park
- Elkhorn Adventures White Water Rafting
- Elkhorn City Railroad Museum
- Big Sandy Heritage Museum
- Hatfield - McCoy Feud Driving Tour
- Historic Dils Cemetery & Gardens
- Historic Downtown Pikeville Walking Tour
- Mountain Pub Links Golf Course
- Pikeville "Cut-Thru Project"
- Civil War Sites
- Daniel Boone's First Steps into Kentucky
- Elkhorn City Fishpond
- Fishtrap Lake State Park
- Snivley Chapel
- Mountain Pub-Links

Pikeville-Pike County Tourism website: http://www.tourpikecounty.com.

AGRICULTURE

In 2002, Pike County was home to 45 farms, comprising 7,194 acres (averaging 160 acres per farm). The market value of production was $149,000, averaging $3,312 per farm. Crop sales accounted for $79,000, and livestock sales accounted for $70,000. Pike County is ranked 116th in the value of agricultural products sold in the state. The leading agricultural products in sales in Pike County are:

- Cattle and calves – $54,000
- Grains, oilseeds, dry beans and dry peas – $36,000
- Horses, ponies, mules, burros and donkeys – $8,000

The Assessment

The Pike County eCommunity Leadership Team found that the agricultural sector is beginning to use technology to its advantage and identified a large opportunity for technology applications within the farming community.

- **Networked Places** – In the category of networked places, Pike County's agricultural sector is currently at stage 3 on a 0 to 5 scale. Some mobile workers have laptop computers and can access the network remotely.
- **Applications and Services** – In the category of technology applications and services, the agriculture sector is currently at stage 3 on a 0 to 5 scale with some growers, suppliers, and processors participating in an electronic supply chain.
- **Leadership** – In terms of technology leadership within the agricultural community, Pike County is currently at stage 3 on a 0 to 5 scale. Some suppliers and processors encourage employees to take work-related classes online.

The Vision

The Pike County eCommunity Leadership Team sees great potential for the use of technology in the agricultural sector but understands the industry is limited in its resources and ability to implement changes within a brief period. The team has set goals to move to stage 4 on a 0 to 5 scale in all three of the above categories. The team's vision includes:

- Some growers, suppliers and processors use **Voice over Internet Protocol (VoIP)** to save money
- Some workers have converted from desktop computers to **portable devices** with **wireless connections**
- Some office computers have **webcams for videoconferencing**
- Some suppliers and processors **outsource most of their computing services**.
- Some growers, suppliers and processors **sell goods** nationally or **internationally**. Training on new technology is a priority
- Some processors and suppliers permit employees to **telework** one or two days a week

Business and Industry — Pike County

● Pike County's Benchmark Assessment Results are presented in red.
■ Pike County's Vision for this Sector is presented in blue.

Stage	Networked Places	Applications & Services	Leadership
0	Not using the Internet.	No computer use or website. Customers use phone and postal mail.	No technology or telecom plan.
1	Some employees have limited access to the Internet through a dial-up connection.	Some employees use basic e-mail services through their connection.	The Internet is considered a possible business enhancement.
2	Some office employees have always-on connections to the Internet at their desks.	Some businesses have an informational website. Some businesses transmit or receive some orders electronically.	Some view the Internet as essential to business operations. Employees are trained on basic applications.
3	Most office employees have always-on connections to the Internet at their desks. Some mobile workers have laptop computers and can access the office network remotely. Affordable videoconferencing facilities are available in the community.	Most businesses have an informational website. Some retail websites can accept credit card transactions. Some businesses participate in the electronic supply chain.	Some businesses permit some employees periodically to telework. Some businesses encourage employees to take work-related classes offline. Employee training on new technology is a priority.
4	● Some businesses use Voice over Internet Protocol (VoIP) to save money. Some office workers have converted from desktop computers to portable device. Some office computers have webcams for videoconferencing.	● Some businesses outsource most of their computer services. Some retailers and manufacturers sell goods out of state or internationally. Some employees work remotely, some out of state.	● Some businesses permit some employees to telework one or two days a week. Some businesses encourage employees to take work-related courses online. Businesses are working with educational partners to raise workforce skill levels.
5	■ Most businesses use Voice over Internet Protocol (VoIP) to save money. Most computers have video cameras. Some retailers and manufacturers use RFID (radio frequency identification) to track inventory and equipment.	■ Some businesses send and receive video mail. Some businesses outsource most of their computing services. Some businesses routinely use multiparty videoconferencing to coordinate operations.	■ Some businesses have restructured to focus on their core contribution and outsource nonessential functions. New hires are required to have experience using new technology in business applications.

Education: K-12 — Pike County

● Pike County's Benchmark Assessment Results are presented in red.
■ Pike County's Vision for this Sector is presented in blue.

Least Connected → Most Connected

Stage	Networked Places	Applications & Services	Leadership
0	Not using the Internet.	Schools use phone and postal mail. Schools have no website.	There is no technology or telecom plan.
1	Few middle and high schools have computer labs for students. Few classrooms/teachers have access to computer projectors.	Few schools have an informational website. The Internet is not used as a resource for instruction or homework assignments.	Few experienced teachers are trained on how to incorporate material from the Internet into their curriculum.
2	Many middle and high schools have computer labs for students. Some classrooms and teachers have access to computer projectors.	Many schools have an informational website. The Internet is rarely used as a resource for instruction or homework assignments.	Few schools have plans for better using telecommunications services and technologies in their classrooms. Some experienced teachers are trained on how to incorporate material from the Internet into their curriculum.
3	Schools provide at least one computer for every four students in grades K-12. Most classrooms have computers for student use. Some teachers use computer-based presentation tools and projectors for their lessons.	Some schools have an interactive website that offers access to homework assignments and communication with teachers and administrators. Many teachers can incorporate Internet material into the curriculum. Teachers welcome e-mail from parents and students.	The school board sees opportunities to use the network to raise test scores and operate the school more efficiently. Teacher training on new technologies is a priority at most school districts. Schools are using consultants to take advantage of e-rate and other school discounts.
4	● Some high school students are provided their own laptop computers at school. Many classroom teachers have access to digital projection capabilities. Most middle and high schools have video programs that allow students to produce and share shows on a public network. Some schools use wireless sensors to monitor energy consumption.	● Many schools have an interactive website that offers access to homework assignments and e-mail contact with teachers and administrators. All teachers meet National Educational Technology Standards. Most students meet National Educational Technology Standards. Parents and family members are encouraged to participate in student learning via e-mail and online applications. Online classes are available to high school students via Internet-based instruction, including college online classes and Kentucky Virtual High School.	● Some schools have comprehensive plans for learning activities using technology in the classroom. New hires are required to have experience using new technology in the classroom. Computer labs are made available to family and community members. Schools take responsibility for continuing e-rate and other discounts.
5	■ Many classrooms have large, flat-panel displays or projectors for video-based instruction. Most schools have converted their phone system to Voice over Internet Protocol (VoIP) to save money. Most high schools have one-to-one computing for their students. Some school computer labs have been made available to the public.	■ Schools use the network to connect students, teachers and parents, improve learning via online resources, and manage administrative responsibilities more efficiently. All students meet grade level requirements in the National Educational Technology Standards. Technology training is offered in the community. Many high school students use online teachers and experts to explore subjects and execute individual learning plans.	■ All schools have comprehensive plans for learning activities utilizing technology in the classroom. School districts actively promote information technology literacy to drive positive impacts on economic performance, skills and innovation in the classroom. The school system plays a vital role in raising the skill level and awareness of community and family members.

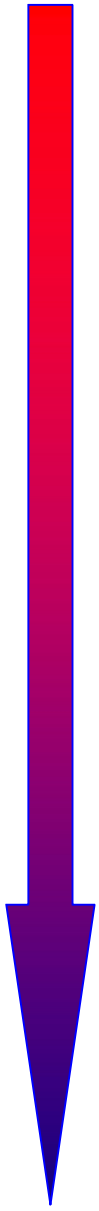
Healthcare	Pike County

● Pike County's Benchmark Assessment Results are presented in red.
■ Pike County's Vision for this Sector is presented in blue.

	Stage	Networked Places	Applications & Services	Leadership
Least Connected	0	Not using the Internet.	Customers use phone and postal mail. No website.	No technology or telecom plan.
	1	Some physicians and/or staff have access to the Internet through a dial-up connection.	Physicians and/or staff use a dial-up connection in order to access health-related sites.	Healthcare providers are considering what advantage may come from using the Internet in the office.
	2	Some doctors regularly use computers to enter and maintain patient records. Digital instruments and imaging equipment are being acquired.	Some providers have informational websites. Some providers store patient records electronically. Telemedicine is being evaluated. Some offices are electronically transmitting records to insurers for reimbursement.	Some providers have begun the conversion to electronic medical records. Some providers are investigating how to deploy wireless technologies for mobile workers.
	3	● Some doctors and nurses are using laptop and palmtop devices connected to wireless networks to enter patient information and access databases.	Many providers have informational websites. Many providers store patient records electronically. Telemedicine is being evaluated. Some offices are electronically transmitting records to insurers for reimbursement.	Many providers have begun the conversion to electronic medical records. Many providers are investigating how to deploy wireless technologies for mobile workers.
	4	Internet-based video conferencing is used to consult experts and for training programs. Some patients are being monitored at home and at work via portable devices with wireless transmitters.	● Some providers allow patients to e-mail doctors. Most providers store patient records electronically. Some lab results and images are received electronically.	● Work is underway by some providers to begin online exchanging of test results and other medical records with appropriate parties. Healthcare leaders are talking with the community about enhancing online services and using the network to improve communitywide healthcare.
Most Connected	5	■ Most equipment has been converted to digital. Desktop videoconferencing is routine at all hospitals and major clinics. Telephone systems have converted to Voice over Internet Protocol (VoIP) to save money. Remote monitoring of patients with chronic conditions is standard procedure.	■ All providers allow patients to schedule appointments, view records and get advice online. All patient records are stored electronically and routinely sent electronically to distant providers to aid diagnosis and treatment for emergency patients. Telemedicine routinely is used to access specialists. Wireless feeds in ambulances provide real-time patient assessment to ER staff.	■ Healthcare leaders see themselves as a key part of the community's overall economic strategy. Leaders are visible and active in strategy development and implementation. Executives of the region's hospitals, clinics, insurers, employers and other healthcare providers are meeting regularly to find ways to collaboratively reduce the cost of healthcare without compromising quality of service.

Libraries	Pike County

● Pike County's Benchmark Assessment Results are presented in red.
■ Pike County's Vision for this Sector is presented in blue. (Blue is used when Assessment and Vision are the same.)



Stage	Networked Places	Applications & Services	Leadership
0	Libraries do not provide Internet access.	Customers use postal mail or phone. No website.	There is no technology or telecom plan.
1	Some employees have access to a dial-up connection.	Some employees are accessing e-mail and library-related websites.	Employees are accessing the Internet in order to help the patrons of the facility.
2	Public libraries provide several computers with free access to the Internet.	Most libraries have a website with basic information about hours of operation and location.	Libraries are the first to offer free access and instruction in the use of the Internet.
3	There is rarely more than a 10-minute wait to use the Internet-enabled computers.	Most libraries have catalogs online. Patrons may use the Internet to place books on hold and request books from other libraries in the library system. Patrons can search online databases from home, school, or work. Libraries host live video feeds of public interest events.	The library research desk is an online community resource. Staff training on new technologies is a priority at most libraries. Libraries are using consultants to take advantage of e-rate and other discounts. Library policies reflect appropriate filtering requirements.
4	Public libraries have added network ports or wireless networks and electrical outlets to carrels.	● Patrons may review their accounts online and pay fines by credit card. Patrons can access the library online as a portal for other online information services.	● Libraries help the community understand copyright issues and how to protect privacy on the Internet. New hires are required to have experience using new technology. Libraries take internal responsibility for continuing e-rate and other discounts. Libraries have developed network management policies and technologies to prevent patrons from sending spam.
5	● ■ Most public libraries offer patrons a 54 mbps or faster wireless network.	■ Public libraries offer live video consultations. Public libraries allow patrons to borrow e-books over the Internet. They help patrons conduct research and assist with legal access to copyrighted databases and publications, including music and movies. Two-way videoconferencing is available to the general public.	■ Libraries continue to upgrade their facilities to offer the community the next generation in technology, services and training. Libraries actively promote information technology literacy to drive positive impacts on economic performance, skills, and innovation in the community.

Higher Education — Pike County

● Pike County's Benchmark Assessment Results are presented in red.
■ Pike County's Vision for this Sector is presented in blue.

Least Connected → Most Connected

Stage	Networked Places	Applications & Services	Leadership
0	Not using the Internet.	Use phone and postal mail.	There is no technology or telecom plan.
1	Some on-campus residents have broadband connections through non-university providers.	Few faculty members are trained to use the Internet for instruction. Few classes use digital content and/or web-based content for instruction.	Few departments have plans for better utilizing telecommunications services and technologies in their operations.
2	Most on-campus residences have a 10 mbps connection to the network. Some classrooms are wired to the college/university network and are equipped with digital projection capabilities.	Some faculty members are trained to use the Internet for instruction. Some classes use digital content and/or web-based content for instruction.	Few departments have plans for better utilizing telecommunications services and technologies in their operations.
3	Most on-campus residences have connections to the network in every room at least 10 mbps. Some classrooms have projection equipment that allows the instructor to display videos from the Internet into the classroom.	Many of the faculty are trained to use the Internet for instruction. Many classes use digital content and/or web-based content for instruction. Students use chat rooms to discuss lessons and ask questions of instructors outside of class hours. Online registration, catalogs and payment are available.	Specialized courses have been developed to cater to area businesses seeking to improve the skills of workers. Some colleges and universities have or are developing online classes to provide greater convenience for students and to increase student enrollment. Faculty training on new technology is a priority.
4	● Some classrooms have been remodeled to include network connections and power outlets at every seat. Many students bring laptop computers or other network-enabled devices to class. Some classrooms have video equipment for recording lectures.	● Most of the faculty are trained to use the Internet for instruction. Most classes use digital content and web-based content for instruction. Some undergraduate students take distance learning classes for specialized subjects and graduate-level research.	● Higher education and local businesses are working together to raise the skill level of the current workforce. Community colleges are expanding their capacity by using distance learning technologies to reduce the need for classroom time. Some colleges and universities are developing online classes to market to students in other parts of the country and the world.
5	■ Many classrooms have been remodeled to include network connections and power outlets at every seat. Most students bring laptop computers or other network-enabled devices to class. Many classrooms have video equipment for recording lectures.	■ Many undergraduate students take distance learning classes for specialized subjects and graduate-level research. All aspects of higher education are available through the network including instruction and administration.	■ Colleges and universities see themselves as a vital partner in the community's economic development strategy and have formed partnerships with local businesses to provide skilled technology workers and innovative solutions. Colleges and universities actively promote information technology literacy to drive positive impacts on economic performance, skills, and innovation in the classroom.

Community-Based Organizations — Pike County

● Pike County's Benchmark Assessment Results are presented in red.
■ Pike County's Vision for this Sector is presented in blue.

Stage	Networked Places	Applications & Services	Leadership
0	Not using the Internet.	No computer use. No website. Use phone and postal mail.	No technology or telecom plan.
1	Accessing the Internet through a limited dial-up connection.	Currently using e-mail and possibly other basic Internet functions.	The Internet is seen as a possible enhancement and marketing tool.
2	Some organizations have computers that are no older than three years old. Many organizations have e-mail. Some office employees have always-on connections to the Internet at their desks.	Some organizations have informational websites.	Organizations are minimally involved in community economic development issues. Little or no plans exist for better using telecommunications services and technologies. Some organizations provide technology training to their staff at least once a year.
3	● Most organizations with at least five paid staff have at least one computer for every three employees. Many organizations have e-mail.	● Many organizations have an informational website. Many local chapters are able to share data electronically with the national parent organization. Some organizations accept online donations.	Some organizations are involved in specific economic development initiatives, but most do not participate. Some organizations plan to use telecommunications services and technologies within the next year. Some organizations provide technology training to their staff at least once a year.
4	Many organizations with at least five employees have direct connections to the Internet. All paid staff have e-mail accounts. Some organizations use Voice over Internet Protocol (VoIP) to save money. Some office workers have converted from desktop computers to portable wireless devices. Some office computers have video cameras.	■ Most organizations have an informational website. A unified portal provides access to a broad range of community information and services. Most local chapters are able to share data with the parent organization.	● Some organization leaders are actively involved in community economic development issues and there are visible leaders taking a significant role in economic development. Many organizations plan to use telecommunications services and technologies within the next year. Most organizations provide technology training to their staff at least once a year.
5	■ Many organizations use Voice over Internet Protocol (VoIP). Every organization is connected to the Internet. Every computer can access the Internet via a local area network. Many computers have video cameras. Most organizations use affordable videoconferencing facilities.	Most organizations accept online donations. Some organizations use an interactive service to further engage the community and make their services more broadly available. Electronic data sharing is a common practice between organizations locally and with national parent organizations.	■ Organizations collaborate with one another regularly to share resources and provide up-to-date training to their employees and volunteers. Organizations have a defined role in supporting local economic development initiatives. Most organizations plan to use telecommunications services and technologies within the next year.

Government	Pike County

● Pike County's Benchmark Assessment Results are presented in red.
■ Pike County's Vision for this Sector is presented in blue.

Stage	Networked Places	Applications & Services	Leadership
0	Not using the Internet.	No website.	There is no technology or telecom plan.
1	Select employees have access to the Internet through a dial-up connection.	Some employees use the Internet for e-mail purposes.	The Internet is seen as a possible way to enhance the basic daily operations.
2	Some employees have e-mail accounts.	Most public agency websites offer informational features such as a community calendar, staff directory and downloadable forms. Customers rely mostly on postal mail and telephone to conduct business.	Public agencies do not have a strategy for how best to use e-government. Minimal telecommunications planning has occurred. Elected officials are not involved in telecommunications issues.
3	● Many employees have e-mail accounts. Some field workers are collecting data on laptop computers or palmtops. Webcams are starting to be deployed.	Some e-government applications are available, such as simple building permit applications, e-mail listservs and some downloadable forms. E-mail from residents is manually routed to the appropriate departments. Some agencies routinely use the network to share data.	Government staff is actively involved in framing technology and telecommunications issues. Processes are underway for enhancing connectivity, rights-of-way management, and information technology innovation. Employees are trained and knowledgeable about basic applications.
4	Some field workers use wireless networks to upload and download data in the field. Some employees use desktop videoconferencing. Sensors and webcams monitor locations, such as rivers, that are important to public safety.	● Customers can make routine payments, such as parking fines, online using credit cards or electronic fund transfer. Parks and recreation classes have online registration. Employees can enter building inspections and violations from the field.	● Some agencies have a formal policy that allows some employees to work from home at least one day a week. Rights-of-way and tower siting policies are in place. Elected officials understand the importance of the network for economic development and quality of life.
5	■ The telephone system is being converted to Voice over Internet Protocol (VoIP) to save money. Many field workers use wireless networks to upload and download data in the field. Critical traffic signals are connected. Desktop videoconferencing is widely available.	■ Interactive applications, such as customer relationship management, online GIS and video streaming are in regular use. Employees manage benefits programs on an intranet. Emergency response teams can reliably communicate across jurisdictions. Council meetings are indexed and available for searching and retrieval online.	■ The government has tele-communications, e-government and information technology master plans in place to guide its efforts. Innovative processes are used to collaborate with the private sector.

Tourism, Recreation and Parks	Pike County

	Stage	Networked Places	Applications & Services	Leadership
Least Connected	0	Not using the Internet.	No computer use. No website. Customers use phone and postal mail.	There is no technology or telecom plan.
	1	Some employees can access the Internet through a dial-up connection.	Some employees currently use the Internet for e-mail.	The Internet is seen as a possible way to enhance operations.
	2	Some office employees have always-on connections to the Internet at their desks.	Some facilities have an informational website. Some facilities transmit or receive some reservations electronically.	The Internet is seen as essential to business operations. Employees are trained on basic applications.
	3	Most office employees have always-on connections to the Internet at their desks. Some mobile workers have laptop computers and can access the office network remotely. Affordable videoconferencing facilities are available.	Most facilities have an informational website. Some websites can accept credit card purchases. Some facilities participate in an electronic supply chain.	Some facilities permit some employees periodically to telework. Some facilities encourage employees to take work-related classes online. Employee training on new technology is a priority.
	4	Some facilities use Voice over Internet Protocol (VoIP) to save money. Some office workers have converted from desktop computers to portable devices with wireless connections. Some office computers have webcams for videoconferencing.	Some facilities outsource most of their computing services. Some facilities market themselves out of state or internationally. Some employees work remotely.	Some facilities permit some employees to telework one or two days a week. Some facilities encourage employees to take work-related classes online. Facilities work with educational partners to raise workforce skill levels.
Most Connected	5	Most facilities use Voice over Internet Protocol (VoIP) to save money. Most computers have video cameras.	Some facilities send and receive video mail. Some facilities outsource most of their computing services. Some facilities routinely use multiparty videoconferencing to coordinate operations.	Some facilities have restructured to focus on their core contribution and outsource nonessential functions. New hires are required to have experience using new technology in business applications.

Agriculture — Pike County

● Pike County's Benchmark Assessment Results are presented in red.
■ Pike County's Vision for this Sector is presented in blue.

Stage	Networked Places	Applications & Services	Leadership
Least Connected **0**	Not using the Internet.	No computer use. No website. All contacts via phone and postal mail.	There is no technology or telecom plan.
1	Some growers, suppliers and processors have limited access through a dial-up connection.	Some growers, suppliers and processors use e-mail and Internet.	The Internet is seen as a possible enhancement to the way daily business is conducted.
2	Some growers, suppliers and processors have always-on connections to the Internet at their desks.	Some growers, suppliers and processors have an informational website. Some growers, suppliers, and processors transmit or receive some orders electronically.	The Internet is seen as essential to business operations. Employees are trained on basic applications.
3	● Most growers, suppliers and processors have always-on connections to the Internet. Some mobile workers have laptop computers and can access the network remotely. Affordable videoconferencing facilities are available in the community.	● Most growers, suppliers and processors have informational websites. Some websites can accept credit card purchases. Some growers, suppliers and processors participate in an electronic supply chain.	● Some suppliers and processors permit employees periodically to telework. Some growers, suppliers and processors encourage employees to take work-related classes online.
4	■ Some growers, suppliers and processors use Voice over Internet Protocol (VoIP) to save money. Some workers have converted from desktop computers to portable devices with wireless connections. Some office computers have webcams for videoconferencing.	■ Some suppliers and processors outsource most of their computing services. Some growers, suppliers and processors sell goods out of state or internationally.	■ Training on new technology is a priority. Some processors and suppliers permit employees to telework one or two days a week.
Most Connected **5**	Most growers, suppliers and processors use Voice over Internet Protocol (VoIP) to save money. Most computers have video cameras. Some use Radio Frequency Identification (RFID) to track inventory and equipment.	Some growers, suppliers and processors send and receive video mail. Some outsource most of their computing services. Some routinely use multiparty videoconferencing to coordinate operations.	Some suppliers and producers have restructured to focus on their core contribution and outsource nonessential functions. New hires are required to have experience using new technology.

D. HOW DO WE GET THERE?

D. HOW DO WE GET THERE?

PROJECT CONCEPT: Create a Healthcare Technology Task Force to Focus Efforts on Advancing Technology in Medicine

LONG-TERM GOAL

Create a taskforce of health care administrators and providers with the specific charge of finding and implementing technical applications that will increase usage, comfort-level, and adoption of technology in the delivery of healthcare services in Eastern Kentucky.

WHY IT'S IMPORTANT

Used not as a substitute for care, but as a supplement to care, Telemedicine has the potential to bring expertise, which might not otherwise be readily available, directly to the point of care. Telemedicine can reduce mortality rates and even aid homeland security by assisting in the management of infectious diseases in the event of a bio-terrorism attack. Telemedicine can be delivered to homebound patients, as well as prisons, and rural areas that lack an adequate number of specialists. Additionally, enhanced diagnostic and remote monitoring/communications systems allow patients to stay more connected with their provider without leaving the comforts of their own homes. The providers in turn are able to improve patient care by allowing technology to assist the watchful eye of healthcare providers. The creation of a Healthcare Technology Task Force, with the specific goal of increasing the usage and adoption of healthcare technologies, would enable the adoption and implementation of this 21st century medical tool on a much wider scale and within a much accelerated timeframe over just simply waiting on natural markets forces.

SPECIFIC MEASURABLE OUTCOMES

1. Patient records can be viewed remotely/electronically by specialists.
2. Patients may be evaluated by specialists via videoconferencing.
3. Tele-consultation is available between healthcare providers.
4. Healthcare is delivered in real time to patients in underserved and remote areas.

STEPS TO ACHIEVE OUTCOME

1. Create an active, involved taskforce from a group of professionals from all levels and areas of healthcare in Pike County.
2. Explore new healthcare technologies that may be particularly applicable to patients in the region.
3. Find ways to increase the technology comfort-level within the provider community, including directly training and highlighting progressive physicians.
4. Assist in finding cost-efficient ways to add technology in the offices of providers.
5. Decide on an implementation plan and timeline for adding technology to healthcare.
6. Implement and launch programs.
7. Highlight stories of success with particular emphasis on demonstrating the progressive policies of the region's providers as compared to national benchmarks.

NAMES OF IMPLEMENTATION CHAMPIONS

Pikeville Medical Center, http://www.medicalleader.org
Pike County Health Department
Pike County Medical Association
Various healthcare providers, including physicians and equipment providers

PROJECT CONCEPT:
PATE
Partnership for the Advancement of Technology Education

LONG-TERM GOAL

Facilitate economic growth in Pike County through the formation of a collaborative partnership between schools, business and community members with the primary objective being to increase the technology comfort level of the community and to implement new and innovative technology solutions for area businesses.

WHY IT'S IMPORTANT

In today's world, the true potential for growth and economic prosperity in any location, centers around the ability of a community to implement new and innovative technology solutions. At the center of this goal is the additional need to increase the comfort level of community members in the use of new technology applications and to train a more tech-savvy workforce. This partnership would address both of these barriers to economic development and would open the way for increased prosperity to Pike County.

SPECIFIC MEASURABLE OUTCOMES

1. Offer school technology resources to both businesses and community members during hours when school is not in session.
2. Increased access to advanced information technology to populations that would otherwise find them inaccessible.
3. Increase potential workforce technology training opportunities within the Pike County area.
4. Within the Pike County community, increase technology strength in all areas as follows:
    - Networking
    - Promoting visibility of technology offerings to the community
    - Entrepreneurial opportunities using technology
    - Building trust within the community regarding technology

STEPS TO ACHIEVE OUTCOME

1. Determine "best practices" in the creation of a partnership between schools, businesses, and community to focus on ways to increase community technology training and comfort level.
2. Open the schools to use of technology after hours in partnership with local businesses.
3. Provide advanced classes through the schools to students.

4. Provide all users, including students, parents, businesses and community members with opportunities to use teleconferencing after hours and on weekends to enhance training and facilitate communications.

NAMES OF IMPLEMENTATION CHAMPIONS

Pike County Schools, http://www.pike.k12.ky.us
Pikeville College, http://www.pc.edu/
Pikeville College Library
Pike County Government
City of Pikeville, http://www.cityofpikeville.com
Pike County Chamber of Commerce, http://www.pikecountychamber.org
Pikeville Medical Center, http://www.medicalleader.org

PROJECT CONCEPT: Education and Awareness for Pike County

LONG-TERM GOAL

Organization, promotion and delivery of technology education and awareness to the entire community of Pike County.

WHY IT'S IMPORTANT

An educated community is essential in today's global economy. There are opportunities to leverage existing resources in Pike County to expand and enhance workforce training programs, encourage more post-secondary education, and create additional awareness within the community in regard to technology. Education, training and awareness are essential in our ability to expand technology within each sector of the community. These community sectors include: agriculture, business and industry, community-based organizations, government, healthcare, higher education, K-12 education, libraries, and tourism, parks and recreation.

SPECIFIC MEASURABLE OUTCOMES

(Criteria: clear, compelling, outcome-oriented, achievable within one year)

1. Inventory of all technology education/awareness resources in Pike County and development of resource tool to help facilitate collaboration between these various entities.
2. Development of additional education and awareness materials to focus on the use of technology and broadband applications.
3. Increase the citizen usage rates of computers and broadband in Pike County.

STEPS TO ACHIEVE OUTCOME

1. Identify all organizations within Pike County performing community education and awareness.
2. Divide current resources offered by organizations into two categories: education and awareness.

3. Determine which sectors could benefit from education/awareness opportunities.
4. Create new ways to market and promote opportunities to appropriate groups within the community and divide up market sectors between community entities.
5. Determine gaps in education/awareness and ways to fill those gaps.

NAMES OF IMPLEMENTATION CHAMPIONS

K-12 Education

Pike County Schools, http://www.pike.k12.ky.us

Higher Education/Community Education

Pikeville College, http://www.pc.edu.
Big Sandy Community Technical College, http://www.bigsandy.kctcs.edu.
Pike County Public Library, http://www.pikelibrary.org.

POTENTIAL ACTION ITEMS

Business and Industry

- Educate small businesses about telecommunications services and the benefits of using technology in business.
- Create a technologically capable workforce through training and skills development.
- Develop a local directory of information technology services.
- Identify ways to reduce the cost of connecting to the Internet and find potential funding sources for small businesses.
- Organize demonstrations of the new technologies and present local role-model users.
- Develop a media campaign to help consumers and businesses understand the benefits of high-speed services and the Internet.
- Teach businesses how to use e-commerce to sell to public agencies.
- Offer training programs and workshops at night and on weekends to make them more accessible to community-based organizations.
- Provide training for online banking. Show the benefits of online banking: speed, safety, convenience, cost savings, etc.
- Encourage Internet access from home for education, business, shopping and banking.
- Encourage more hotspots in locations such as bookstores, businesses and libraries.

Education

- Provide training in information technology resources, especially for support staff and classified personnel.
- Establish a countywide consortium (made up of public and private schools and adult education) to coordinate technology planning in the education sector.
- Build relationships between schools and broadband providers.
- Develop strategies for bridging the digital divide, such as after-school programs, community centers, etc.
- Identify options for opening school computer labs to the community after hours.
- Expand student, parent and teacher access to student information such as homework assignments and attendance records.
- Develop school websites with interactive features.

Healthcare

- Develop a providers' survey to gather baseline information on usage of technology in healthcare. Topics should include e-mail access, Internet access, websites, electronic records, billing and telemedicine initiatives.
- Identify funding methods for enhancing educational infrastructure.
- Educate providers on available technologies and the benefits of technology in medicine.
- Provide safe, vendor-neutral, information technology training for healthcare providers, using the state and community and technical colleges, adult education programs and libraries.
- Using public and private partnerships, ensure that small providers and rural areas have access to affordable, high-speed networks so they can participate in telemedicine and teleconferencing services.
- Seek grants to upgrade technology and train medical staff.
- Develop better strategies to retain technical and professional healthcare staff.
- Create a focus group to identify the barriers to using technology in private practice.
- Show doctors how to use technology in their offices.
- Provide basic technology education for healthcare providers, using state and community and technical colleges, adult education, distance learning and the library.

- Keep patient data on a central database shared among all medical providers to minimize the number of forms patients have to fill out on each visit. This would enable providers to avoid copying and faxing patient information.

Library

- Investigate cost-efficient ways to increase bandwidth to rural libraries.
- Increase the number of public-access computers.
- Provide ports or wireless access points where patrons with laptop computers can connect to high-speed lines.
- Develop expanded Internet training programs for the public, targeting specific needs and groups.
- Increase the use of mobile computer stations in bookmobiles or outfitted vans, especially in rural areas.
- Increase marketing of the current capabilities and services of the library system.
- Improve the current website and expand the library's ability to interact with patrons.
- Support county applications for technology grants that will also benefit the library system.
- Explore options to increase customer-initiated transactions online, such as paying fines and accessing subscription databases.

Higher Education

- Develop advanced applications like Voice over Internet Protocol (VoIP) to save resources and enhance services.
- Wire all dorms/campuses to provide students with fast access to the campus network.
- Increase the number of web-enhanced and fully web-based courses.
- Provide information technology resources to the community as well as educate the end-users in the use of technology.
- Encourage citizens to take advantage of the online classes currently available.
- Increase computer literacy by introducing new classes and training techniques.
- Form a partnership among all education organizations (the Extension, Community and Technical Colleges and Adult Education).

Community-Based Organizations

- Identify the community-based organizations in the county and list their websites.
- Develop a list of potential funding sources for technology acquisition.
- Develop collaborative partnerships with educational institutions and corporate partners to provide web services/design and equipment.
- Develop a networking event to share information, ideas and innovations in technology deployment.
- Recruit university and high school students to develop websites.
- Introduce a community portal that expands the use of a variety of applications.
- Provide training on web page development, including the use of free web pages.
- Identify and list community-based organizations in the county as well as their websites.

Government

- Improve the ability to conduct business with government over the Internet, such as permitting, purchasing and payments.
- Increase the number of public access terminals in the county.
- Develop more e-government applications that provide value to the consumer.
- Set goals to be completed in one year.
- Seek grant funds to improve infrastructure and support functions.
- Develop partnerships with businesses and grassroots organizations to improve technology usage countywide.
- Increase city-county collaboration.
- Consider using streaming video to broadcast council or court meetings on the Internet.
- Build a public-private consortium to identify best practices in website design and content, such as ADA compliance, multiple language support and navigation techniques.
- Create a county website and post all meeting agendas, minutes and attachments online.
- Enable online government services, such as permitting, purchasing, payments, downloading tax forms, paying ambulance bills and applying for dog tags.
- Enable online license renewals, voter registration, and court record searches and voting.

- Digitize Property Valuation Administration records, maps and utilities for online access.

- Issue emergency notifications, such as road closures, via e-mail and the website.

Tourism, Parks and Recreation

- Improve and correct local links and identification.

- Establish a countywide web portal to share information, market the community, list attractions and hotels and provide a calendar of events.

- Encourage more local companies to sell their goods and services online to promote local businesses and increase sales.
- Promote Internet usage by allowing discounts or coupons to hotels and/or attractions where the customer has to place the order online.

- Use technology to market county attractions to potential in-state and out-of-state tourists.

- Encourage local hotels to provide computers and high-speed Internet access to their occupants.

- Get all organizations and hotels online with links to the tourism website.

- Use webcams at the parks for online viewing.

- Make electronic brochures and information available for downloading

- Create a “business highlight” once a month to showcase on the website.

Agriculture

- Increase broadband awareness among the agricultural community.

- Create a list of providers to help the agricultural sector understand what service is available and from whom, as well as the importance of broadband to the agricultural sector.

- Provide high-speed Internet access at the UK Cooperative Extension office.

- Create a local agricultural portal for sharing news and market information.

- Create and promote materials for the new eXtension service, a national web-based information and education network providing 24/7/365 access to objective, science-based information from universities and partners nationwide.

- Promote online sales and auctions.