



CRITTENDEN 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 Crittenden 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 Crittenden County’s technology needs, particularly related to computers, broadband and Information Technology.

Summary

Crittenden County’s e-Community Leadership Team is leading the way into a new economy for Crittenden 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 Crittenden 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 Crittenden 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 Crittenden 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 Crittenden County by 2007.

ConnectKentucky recommends that Crittenden 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 Crittenden 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 Crittenden 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?

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BUSINESS AND INDUSTRY

Crittenden County industries employ 1,944 workers. The leading sector by employment is the service sector, employing 469. Trade/transportation/utilities employs 386 and manufacturing employs 267. The leading single employer is Par 4 Plastics Inc. with 165 workers. Martin's Tire Recycling employs 58. Safetran, Inc. employs 50. Turner & Conyer Lumber Company, Inc. employs 37, and CeraTech, Inc. has 32.

The Crittenden County Economic Development Corporation, found on the Internet at www.crittendencountyedc.com, offers information about businesses and resources within the community. Its mission is to provide new job growth, expand existing employment opportunities, and enhance workforce education and skills. Through its website, investors and potential investors can find information about the organization, learn about area resources, and learn about the EdTech Center, one of the group's many successful projects.

The Marion-Crittenden County EdTech Training Center was created for three main purposes: providing training programs to develop a skilled workforce; expanding degree programs by partnering with Madisonville Community College, Murray State University, and others; and offering personal enrichment opportunities to enhance the quality of life.

The EdTech Center offers a variety of community and training courses including: specialized computer training, forklift certification, S.O.A.R. (a program through the West Kentucky Education Cooperative focusing on skills, opportunities, advancement and retention), communications, conflict resolution, leadership development, positive thinking, self-esteem, stress management, team building, and work ethics. In addition, the Small Business Development Center from Murray State University provides free, personalized business consulting services and related training programs to anyone interested in starting a business or to an established businessperson wishing to expand.

The Crittenden County Chamber of Commerce, www.marionkentucky.us/chamber, also serves the business and industry sector in Crittenden County. The Chamber provides a great support and help to its member organizations. Through the Chamber of Commerce website, members and individuals can find contact information on all Chamber members, Business After Hours events, Leadership Crittenden County, and information about Crittenden County's business and organizations.

The Assessment

- **Networked Places** – In the category of networked places, Crittenden County's business and industry sector is currently at stage 2 on a 0 to 5 scale, with some office employees having always-on connections to the Internet at their desks.
- **Applications and Services** – In the area of technology applications and services, the business and industry sector is currently at stage 2 on a 0 to 5 scale, with some businesses having an informational website. Some businesses transmit or receive some orders electronically.
- **Leadership** – In terms of technology leadership within the business community, Crittenden County is currently at stage 2 on a 0 to 5 scale. Some view the Internet as essential to business operations. Employees are trained on basic applications.

The Vision

While the Crittenden County eCommunity Leadership Team found that business and industry's current use of technology is somewhat limited, the team has an aggressive vision for how the county's business and industry sector will be using technology in two years. The team set goals that would move the business and industry sector to stage 3 in the categories of networked places and applications and services, and to stage 4 in the leadership category. The team's vision includes:

- 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 purchases**
- Some businesses participate in the **electronic supply chain**
- 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**

K-12 EDUCATION

The Crittenden County School District, www.crittenden.k12.ky.us, enrolled 1,277 students in the 2004-2005 school year. Collaboration among the Extended Learning Opportunities Center, Even Start, Family Resource and Youth Service Center, Kentucky Literacy, community-based organizations and the three schools provides support for children and families in order to provide a quality education based on high academic standards. The goal is to have each student become a productive, working member of the community and the state.

The faculty and staff of the district provide quality teaching in an environment that encourages and supports learning that will ensure that students become successful in adult life. The district is comprised of three schools: Crittenden County Elementary (Pre-kindergarten through 5), Crittenden County Middle School (6-8), and Crittenden County High School (9-12).

Following are important benchmarks related to recent Crittenden County graduates:

	Attendance Rate	Retention Rate	Dropout Rate	Graduation Rate
District	95.2%	4.8%	3.3%	86.7%
State	94.3%	3.3%	2.2%	81.5%

Transition to Adult Life						
	College	Military	Work	Voc/Tech Training	Work & Part-Time School	Not Successful
District	51.1%	2.1%	13.8%	9.6%	18.1%	5.3%
State	54.7%	2.6%	27.5%	4.8%	6.4%	4%

Crittenden County Schools utilize technology as a multi-functional tool to enhance student performance in all content areas. Each school houses a computer lab and one wireless lab, and each classroom has at least one networked computer workstation. Examples of integration are: development of Power Point presentations, use of SMART Board, student completion of web quests, development of spreadsheets and graphs, publishing of school newspapers and completion of research. Other resources include PLATO for credit recovery; various software programs such as Microsoft Office, Accelerated Reader and STAR Reading Diagnostic Test; and computer and multi-media classes. In addition, schools have a technology club and Student Technology Leadership Program (STLP), and the district is categorized as a Platinum STLP District. The high school also has Technology Students of America. Crittenden County uses technology daily to help prepare students for a technology-based society.

	Spending per Student	Student Teacher Ratio	Student/Computer Ratio	% of Classrooms with at Least One KETS Workstation With Internet Access
District	\$8,765	15:1	3.9:1	100
State	\$8,663	16:1	3.7:1	100

Each school within the Crittenden County School District uses technology a great deal. According to each school's 2004-2005 School Report Card, the following is a description of how each school uses technology to teach:

- Crittenden County Elementary School** – Technology is an important part of instruction at Crittenden Elementary, and its uses are evident throughout the building. Our computer lab is designed to ensure that all students in kindergarten through fifth grade are taught the basics of computer skills and use. Students participate in the computer lab for two 30-minute sessions weekly. The curriculum builds each year on what was taught the previous year. Each classroom has Internet and e-mail access. All teachers have participated in hands-on professional development for use with SMART Board, Accelerator Reader, Read-Write Gold and other related computer programs.
- Crittenden County Middle School** – Crittenden County Middle School integrates the use of technology into every content area. Our teachers incorporate technology in their classrooms in various and creative ways, including student completion of literature web quests, development of graphs, trend analysis and calculation of central tendency measures through spreadsheet software, use of SMART Board, development of Jeopardy games, use of multi-media projector for Power Point presentations, use of the CPS assessment system and use of CATS Online Testing with Text Reader Software. Every classroom houses computers for student and teacher access. Students receive training not only in word processing, but also in information retrieval and responsible use of the Internet. They learn the use of several software programs, including Word, Excel, Publisher and Power Point. Keyboarding classes are taught for improvement of typing skills while Desktop Publishing enhances writing for portfolios. The Internet is utilized for teaching and research. Students use computer programs such as Accelerated Reader, Accelerated Math and PLATO for further enhancement of content skills. Also, STLP students use their skills to assist.
- Crittenden County High School** – Technology is an integral part of the Crittenden County High School program. Students have access to a computer workstation in each class with Internet capabilities. Students have the opportunity to learn keyboarding skills, as well as the use of various software programs, such as Microsoft Office. An

articulation agreement with Madisonville Community College allows students to earn college credit for a computer applications class. We also offer Computer Assisted Design (CAD), computer graphics and multi-media classes. PLATO offers students a self-paced program for enrichment or remediation in content areas. In addition, the school has two technology clubs, Student Technology Learning Program and Technology Students Association. Both programs provide opportunities for students to explore advanced technological applications and to promote leadership skills.

Outside of the Amish community, Marion Church of God Christian School is the only non-public school in Crittenden County. It enrolls six students in a grade 4-12 program.

The Assessment

In its evaluation, the Crittenden County eCommunity Leadership Team determined 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, Crittenden County's K-12 education sector is currently at stage 3 on a 0 to 5 scale. 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.
- **Applications and Services** – In the category of technology applications and services, the education sector is currently at stage 3 on a 0 to 5 scale. Some schools have an interactive website that offers access to homework assignments and communication with teachers and administrators. Many experienced teachers know how to incorporate Internet information into the curriculum. Many teachers welcome e-mail from parents and students.
- **Leadership** – In terms of technology leadership within the education sector, Crittenden County is currently at stage 3 on a 0 to 5 scale. 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.

The Vision

The Crittenden 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 goals set forth by the Crittenden County eCommunity Leadership Team include reaching stage 4 in all three categories outlined above. The vision includes:

- 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**

HEALTHCARE

Crittenden Health Systems, www.crittenden-health.org, is the primary healthcare provider in Crittenden County. Part of the West Kentucky Rural Healthcare Network, Crittenden Health Systems strive to excel in every aspect of its service, while recognizing that people are the greatest resource. Its purpose is to make its patients and residents healthier through caring service. Crittenden Health Systems serves Crittenden, Caldwell, Lyon, and Livingston Counties. It offers prenatal classes, EMS ambulance service and planned surgical service. It also offers home-health and personal health classes, such as weight management and smoking cessation.

The Crittenden Health Systems website contains information about services offered, as well as a physician directory and patient information. Also available are health-related links with information on disease and illness, health and wellness and much more. Crittenden Health Systems also offers a Kid's Corner, which provides cool links for kids and information regarding the Safe Sitter classes.

The Assessment

The Crittenden 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, Crittenden County's healthcare sector is currently at stage 2 on a 0 to 5 scale, with some doctors regularly using computers to enter and maintain patient records. Digital instruments and imaging equipment are being acquired.
- **Applications and Services** – In the category of technology applications and services, the healthcare sector is currently at stage 2 on a 0 to 5 scale. 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.
- **Leadership** – In terms of technology leadership within the healthcare community, Crittenden County is currently at stage 3 on a 0 to 5 scale. Many providers have begun the conversion to electronic medical records. Many providers are investigating how to deploy wireless technologies for mobile workers.

The Vision

The Crittenden 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 to stage 4 on a 0 to 5 scale in the networked places and leadership categories, and to stage 3 in the applications and services category. The team's vision includes:

- **Internet-based videoconferencing** 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
- 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
- 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

LIBRARIES

The Crittenden County Public Library has 11 computer terminals, with four of those being Internet terminals for public access, according to the Kentucky Department of Library and Archives records for 2003-2004. The library converted all data to digital using Winnebago. The library's collection contains more than 40,000 books, including 1,200 audio books, more than 500 videos and 90 subscriptions.

Understanding the value of technology, the Crittenden County Public Library believes that advanced communications will make it more successful as the public begins to look upon the library as an extension of other education and public agencies in the community. As public awareness of technology increases, the library will get more funding and have more success in connecting Crittenden County to the rest of the world. In the coming months, the library will add a webpage connected to the automation system, allowing patrons and businesses to browse for books online.

The Assessment

The Crittenden County eCommunity Leadership Team found that the library sector had a great deal of potential with technology and could benefit a great deal from the implementation for more.

- **Networked Places** – In the category of networked places, the library sector is currently at stage 3 on a 0 to 5 scale. There is rarely more than a 10-minute wait to use the Internet-enabled computers.
- **Applications and Services** – In the category of technology applications and services, the library sector is currently at stage 1 on a 0 to 5 scale. Some employees are accessing e-mail and library-related websites.
- **Leadership** – In terms of technology leadership within the library system, the sector is currently at stage 2 on a 0 to 5 scale. The library was the first to offer free access and instruction in the use of the Internet.

The Vision

The Crittenden 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 moving to stage 4 in the networked places category, and to stage 3 in both the applications and services category and the leadership category. The vision includes:

- The public library has added network ports or **wireless networks** and electrical outlets to carrels
- The library has **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
- The library **hosts 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 the library**
- The library uses consultants to **take advantage of e-rate** and other discounts
- Library **policies reflect appropriate filtering requirements**

HIGHER EDUCATION

The Marion/Crittenden County Ed Tech Training Center offers classes via Madisonville Community College, Murray State University and the Pennyryle Area Development District. No other higher education facilities exist in Crittenden County. However, there are 20 higher education facilities within 60 miles of Crittenden County.

Madisonville Community College, www.madisonville.kctcs.edu, is changing lives by providing a supportive educational environment that will help its students reach their postsecondary goals and start them on the road to lifelong learning. MCC has three campuses in Madisonville – Health, Technology, and North – and the newest facility is the Muhlenberg County Campus. Madisonville Community College offers classes in Caldwell, Crittenden, Henderson, Hopkins, McLean, Muhlenberg and Webster counties. MCC can give students ready access to postsecondary education and workforce training with day, evening and weekend classes, off-campus locations, the Internet, Kentucky Educational Television telecourses, Kentucky Virtual University, interactive television and short-term training.

The Information Technology program at Madisonville Community College leads to an Associate of Applied Science degree that prepares graduates for entry-level positions as Information Technology professionals. Students will learn the skills needed to problem-solve and communicate effectively within the complex information technology industry. The IT curriculum is supported by a solid foundation of general education and core courses that include writing, communications, computer and math skills. Students will obtain hands-on training to develop skills in local area networks and how they operate, computer programming, networking, hardware and software maintenance, database design and web page development.

Murray State University, www.murraystate.edu, is a tax-supported institution composed of five academic colleges and a school of agriculture. Fifty-eight percent of the students come from Murray State's 18-county service area. Nearly a third of the students are from out of state. With 316 international students and 31 percent of the student body being older than 25, technology plays a major role in Murray's learning community. Students access the Internet for research and to communicate with teachers, etc. With an approximate \$50 million budget, technology is an important tool for making those funds a catalyst for student achievement.

Murray State University has expanded its traditional course offerings to include a range of online and distance learning degree programs. Current programs online include Murray State's Program of Distinction in Telecommunications Systems Management, Business Administration, Bachelor of Independent Studies, ESL Certificate Endorsement Program for Kentucky Teachers, and Gifted and Talented Certificate Endorsement Program for Kentucky Teachers. These online courses and programs allow students the ability to participate in on-campus life without needing to be physically present. Courses are not time- and place-specific. Second, online courses are highly interactive with a constant flow of communication between the instructor and the student through various methods.

Murray State University's Continuing Education & Academic Outreach Unit, ceao.murraystate.edu, has taken the issue of technology education to the community by offering a number of non-credit courses targeting technology and computers. These courses range from basic computer courses to advanced publisher and Microsoft Office courses to the Basics of Website Construction.

In addition, Madisonville Community College and Murray State University have joined efforts to promote technology in the community. MCC and MSU established a transfer agreement between the Associate in Applied Science in Information Technology offered by MCC and the Bachelor of Science Degree in Telecommunications Systems Management offered by Murray State University. Students completing IT programs at MCC can enter the MSU program without losing any credits. In addition, students can complete this four-year technology degree without leaving Crittenden County.

Kentucky Virtual University (KYVU), www.kyvu.org, is the state's official virtual campus. It has a mission to be a student-centered, technology-based utility for the support of lifelong learning. Consistent with the statewide strategic agenda for postsecondary education, the primary purposes of KYVU are to: enhance and expand educational access and increase educational attainment across Kentucky; upgrade workforce skills and expand professional development through basic and continuing education; increase collaboration and foster efficiency and effectiveness in delivering courses and programs; and increase global competitiveness of Kentucky's educational resources.

KYVU provides college credit, professional development and supplemental studies, while providing a single access point to statewide learning support services over the Internet. KYVU serves as a clearinghouse for a growing list of online learning opportunities. Kentucky was the first state in the country to offer its residents a comprehensive package of online educational resources: a virtual university, a virtual high school, www.kvhs.org, and a virtual library, including research help from reference librarians, www.kyvl.org.

The Assessment

The Crittenden 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, Crittenden County's higher education sector is currently at stage 3 on a 0 to 5 scale. Some classrooms have projection equipment that allows the instructor to display videos from the Internet into the classroom.
- **Applications and Services** – In the category of technology applications and services, the higher education sector is currently at stage 3 on a 0 to 5 scale. 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.

- **Leadership** – In terms of technology leadership within the higher education community, Crittenden County is currently at stage 3 on a 0 to 5 scale. 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.

The Vision

The Crittenden 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 goals of reaching stage 5 out of 5 in the categories of networked places and leadership, and stage 4 in the applications and services category 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**
- Most of the faculty are trained to use the **Internet for instruction**
- Most classes **use digital content and/or web-based content** for instruction
- Some undergraduate **students take distance learning classes** for specialized subjects and graduate-level research
- 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 50 community-based (non-profit) organizations in Crittenden County. These community organizations include religious, educational, charitable, scientific or literary organizations. Some examples of community-based organizations in Crittenden County are:

- Crittenden County Senior Citizen
- Mantle Rock Native Center, www.mantlerock.org
- International Association of Lions Club, www.lionsclub.org
- Words for Living Ministries, www.wordsforlivingmin.org
- Habitat for Humanity International, www.habitat.org

Assessment

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

- **Networked Places** – In the category of networked places, Crittenden County’s community-based organization sector is currently at stage 1 on a 0 to 5 scale, with most organizations accessing the Internet through a limited dial-up connection.
- **Applications and Services** – In the category of technology applications and services, the community-based organization sector is currently at stage 1 on a 0 to 5 scale. Currently, organizations use e-mail and possibly other basic Internet functions.
- **Leadership** – In terms of technology leadership within the community-based organization community, Crittenden County is currently at stage 1 on a 0 to 5 scale. The Internet is seen as a possible enhancement and marketing tool.

The Vision

The Crittenden 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 goals to move each of the three categories to stage 2 on a 0 to 5 scale. The team’s vision includes:

- 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
- Some organizations **provide technology training to their staff** at least once a year

GOVERNMENT

Government entities in Crittenden County are Crittenden County and the City of Marion. Crittenden County’s official website through the Crittenden County Property Valuation Administrator’s Office, crittendenpva.ky.gov, ranked 32nd out of 60 county websites. The PVA website contains information regarding property located in Crittenden County, Kentucky. The Crittenden County PVA Office maintains the website to assist the public with any questions regarding the Kentucky Property Tax System. New policies, procedures and current statutes will be posted to keep taxpayers informed. The current certified tax roll (assessments), characteristics (when available), and ownership information will be available.

Marion does not have an official city website.

The Assessment

Although the government entities in Crittenden County have a limited online presence, the Crittenden 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 2 on a 0 to 5 scale, with some employees having e-mail accounts.
- **Applications and Services** – In the category of technology applications and services, the government sector is currently at stage 3 on a 0 to 5 scale. 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.
- **Leadership** – In terms of technology leadership within the government community, Crittenden County and its associated governments are currently at stage 3 on a 0 to 5

scale. 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.

The Vision

The Crittenden 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 3 in the category of networked places; the rating for applications and services to a stage 5; and the rating for leadership to stage 4. The team's vision includes:

- Many employees **have e-mail accounts**
- Some field workers are **collecting data on laptop computers** or palmtops
- Webcams are starting to be deployed
- **Interactive applications**, such as customer relationship management, online GIS and videostreaming 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
- 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**

TOURISM, RECREATION AND PARKS

The tourism, recreation and parks Sector is primarily served by Marion's Tourism Commission. The Tourism Commission offers a website, www.marionkentucky.us, which takes an extensive look at many tourist attractions in Crittenden County. Through the website, a visitor can find information regarding attractions, lodgings, dining, parks, outdoor recreation and group tours. Information regarding the large Amish community, the multiple antique stores and the rich history of Crittenden County is also available through the website. Some the attractions available through the tourism site include:

- Amish Community
- Antique Malls
- Blackford Bridge/Veterans Walk of Honor, www.blackfordky.com
- Ben E. Clement Mineral Museum, www.clementmineralmuseum.org
- Cave-In Rock Ferry
- Copperhead Run, www.copperheadrun.com
- Crittenden County Historical Museum, www.marionkentucky.us/historicalmuseum
- Fohs Hall Community Arts Foundation, www.marionkentucky.us/CAF
- Mantle Rock Native Education and Cultural Center, www.mantlerock.org
- Paddy's Bluff Retreat, www.paddysbluff.com

Understanding the value of technology, The Mantle Rock Native Education and Cultural Center created a website, www.mantlerock.org, to help relay its history and events to potential visitors. Through its website, Mantle Rock promotes its events, genealogy, and upcoming powwows. A visitor can learn about the creation of the center, view its newsletter and contact the center.

The Assessment

The Crittenden County eCommunity Leadership Team found that the tourism, recreation and parks sector is beginning to use technology to its advantage and identified a large opportunity for technology applications within the tourism, recreation and parks sector.

- **Networked Places** – In the category of networked places, Crittenden County's tourism, recreation, and parks sector is currently at stage 2 on a 0 to 5 scale. Some office employees have always-on connections to the Internet at their desks.
- **Applications and Services** – In the category of technology applications and services, the tourism, recreation and parks sector is currently at stage 2 on a 0 to 5 scale. Some facilities have an informational website. Some facilities transmit or receive some reservations electronically.
- **Leadership** – In terms of technology leadership within the tourism, recreation and parks sector, Crittenden County is currently at stage 2 on a 0 to 5 scale. The Internet is seen as essential to business operations. Employees are trained on basic applications.

The Vision

The Crittenden County eCommunity Leadership Team sees great potential for the use of technology in the tourism, recreation and parks 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 above to stage 4 on a 0 to 5 scale. The team's vision includes:

- 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**

AGRICULTURE

In 2002, Crittenden County was home to 698 farms comprising 156,656 acres (averaging 224 acres per farm). The market value of production was \$12.3 million (\$17,576 per farm average). Crop sales accounted for \$4.3 million; livestock sales accounted for \$7.8 million. Government payments in 2002 totaled \$1.8 million (averaging \$5,322 per farm). Crittenden County is ranked 70th in the value of agricultural products sold in the state. The leading agricultural product in sales in Crittenden County are:

- Cattle and calves – \$4.3 million
- Grains, oilseeds, dry beans and dry peas – \$3.3 million
- Other crops and hay – \$668,000

Crittenden County is the 21st leading producer of sheep, goats and their products. In 2002, Crittenden County tobacco farmers received \$177,053 in burley payments and \$21,360 in dark payments from the Tobacco Buyout Program.

Within Crittenden County, agricultural education is performed through the local cooperative extension service. The Crittenden County Cooperative Extension Service, ces.ca.uky.edu/Crittenden, has embraced technology and has been a leader in this area. The extension's website acts as a portal where farmers can find a great deal of information such as agricultural news, market pricing, weather forecasting and current Department of Agriculture regulations.

The Marion Feed Mill, Inc. surveyed 225 of its customers to find out their technology usage. The results of this informal survey showed that technology is being used within the agricultural community. The survey also showed that the age of the person was a factor in technology use. The survey asked three questions: (1) if the customer was under/over the age of 50; (2) did the customer have a computer in his or her house; and (3) did the customer have the Internet. Overall, 39 percent did not have a computer or the Internet, and 55 percent of those surveyed did. Of those under the age of 50, 76 percent had a computer and the Internet. Of those over the age of 50, the percentage of those with a computer and the Internet dipped down to 46 percent.

The Assessment

The Crittenden County eCommunity Leadership Team found that the agricultural sector is just 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, Crittenden County's agricultural sector is currently at stage 1 on a 0 to 5 scale. Some growers, suppliers and processors have limited access through a dial-up connection.
- **Applications and Services** – In the category of technology applications and services, the agriculture sector is currently at stage 1 on a 0 to 5 scale, with some growers, suppliers and processors using e-mail and Internet.
- **Leadership** – In terms of technology leadership within the agricultural community, Crittenden County is currently at stage 1 on a 0 to 5 scale. The Internet is seen as a possible enhancement to the way daily business is conducted.

The Vision


The Crittenden 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 3 on a 0 to 5 scale in networked places, applications and services, and leadership categories. The team's vision includes:

- 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**

Business and Industry	Crittenden County
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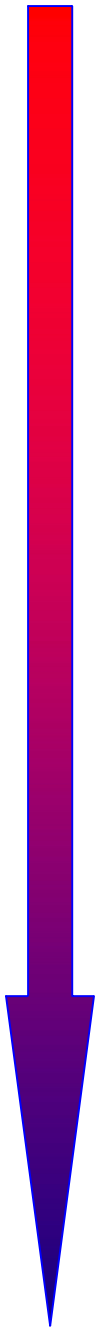
● Crittenden County's Benchmark Assessment Results are presented in red.

■ Crittenden County's Vision for this Sector is presented in blue.

	Stage	Networked Places	Applications & Services	Leadership
 <p style="text-align: center;">Least Connected</p> <p style="text-align: center;">Most Connected</p>	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.

● Crittenden County's Benchmark Assessment Results are presented in red.

■ Crittenden County's Vision for this Sector is presented in blue.


	Stage	Networked Places	Applications & Services	Leadership
<p style="text-align: center;">Least Connected</p>  <p style="text-align: center;">Most Connected</p>	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

Crittenden County

● Crittenden County's Benchmark Assessment Results are presented in red.

■ Crittenden County's Vision for this Sector is presented in blue.


	Stage	Networked Places	Applications & Services	Leadership
<p style="text-align: center;">Least Connected</p>  <p style="text-align: center;">Most Connected</p>	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.
	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

Crittenden County

● Crittenden County's Benchmark Assessment Results are presented in red.

■ Crittenden County's Vision for this Sector is presented in blue.


Least Connected	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.
Most Connected				

Higher Education

Crittenden County

● Crittenden County's Benchmark Assessment Results are presented in red.

■ Crittenden County's Vision for this Sector is presented in blue.

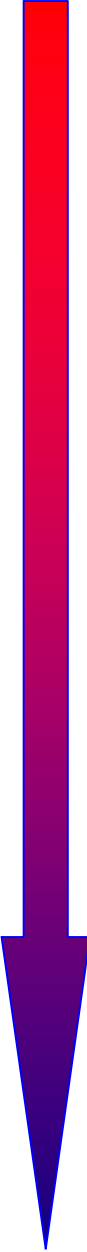
	Stage	Networked Places	Applications & Services	Leadership
<p style="text-align: center;">Least Connected</p>  <p style="text-align: center;">Most Connected</p>	0	Not using the Internet.	Use phone and postal mail.	There is no technology or telecom plan.
	1	Some on-campus residents have broadband connections 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

Crittenden County

● Crittenden County's Benchmark Assessment Results are presented in red.

■ Crittenden County's Vision for this Sector is presented in blue.


	Stage	Networked Places	Applications & Services	Leadership
 <p>Least Connected</p> <p>Most Connected</p>	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

Crittenden County

● Crittenden County's Benchmark Assessment Results are presented in red.

■ Crittenden County's Vision for this Sector is presented in blue.


	Stage	Networked Places	Applications & Services	Leadership
<p>Least Connected</p>  <p>Most Connected</p>	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 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

Crittenden County

● Crittenden County's Benchmark Assessment Results are presented in red.

■ Crittenden County's Vision for this Sector is presented in blue.


<p>Least Connected</p>  <p>Most Connected</p>	Stage	Networked Places	Applications & Services	Leadership
	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.
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

Crittenden County

● Crittenden County's Benchmark Assessment Results are presented in red.

■ Crittenden County's Vision for this Sector is presented in blue.

	Stage	Networked Places	Applications & Services	Leadership
 <p>Least Connected</p> <p>Most Connected</p>	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.
	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?

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PROJECT CONCEPT: Education, Training and Awareness for Crittenden County

LONG-TERM GOAL

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

WHY IT'S IMPORTANT

An educated community is essential in today's global economy. There are opportunities to leverage existing resources in Crittenden 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 education/training/awareness resources in Crittenden County.
2. Development of additional education, training and awareness materials to further the use of technology and broadband applications.
3. Increase the citizen usage rates of computers and broadband in Crittenden County.

STEPS TO ACHIEVE OUTCOME

1. Identify all organizations within Crittenden County performing community education, training and awareness.
2. Divide current resources offered by organizations into three categories: education, training and awareness.
3. Determine which sectors could benefit from education/training/awareness opportunities.
4. Create new ways to market and promote opportunities to appropriate groups within the community.
5. Determine gaps in education/training/awareness and ways to fill those gaps.

NAMES OF IMPLEMENTATION TEAM

Crittenden County Schools, www.crittenden.k12.ky.us

Crittenden County Ed-Tech Center, www.crittendencountyedc.com/edtechoverview.htm

Crittenden County Economic Development Corporation, www.crittendencountyedc.com

Crittenden County Chamber of Commerce, www.marionkentucky.us/chamber

Crittenden County Cooperative Extension Service, ces.ca.uky.edu/Crittenden

Crittenden County Public Library

Crittenden County Senior Citizen Center

Crittenden Health Systems, www.crittenden-health.org

Madisonville Community College, www.madisonville.kctcs.edu
Murray State University, www.murraystate.edu
Pennyrile Area Development District, www.peadd.org

PROJECT CONCEPT: Conceptual Plan for E-Government Services in Crittenden County

LONG TERM GOAL

Using technology, improve internal and external efficiencies within city and county government, allowing for better communication between the different government entities and the citizens of Crittenden County.

WHY IT'S IMPORTANT

Technology will allow local governments to deliver more applications and improved services to constituents while saving money. With growing public acceptance of online transactions and e-commerce growing dramatically, a well-planned e-government strategy will provide for the request for and delivery of local government services over the Internet.

SPECIFIC MEASURABLE OUTCOMES

1. Determine the public need for electronic access to government.
2. Develop a strategy for significantly reducing visits by the public to government offices for routine transactions.
3. Identify applications specifically designed to help businesses interface with governments more efficiently.

STEPS TO ACHIEVE MEASURABLE OUTCOMES

1. Review current e-government applications to identify areas containing gaps.
2. Develop a survey instrument to identify applications of public interest. Use the survey to examine potential e-government applications.
3. Identify high-volume services to target for automation/online service.
4. Identify partners and entities to assist in implementation.
5. Develop and launch applications.

E-GOVERNMENT TEAM

City of Marion
Crittenden County, crittendenpva.ky.gov
Pennyrile Area Development District, www.peadd.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 directory for local IT-related services in the county.
- Identify ways to reduce the cost of connecting to the Internet and find potential funding sources for small businesses.
- Get businesses together to aggregate demand for high-speed services, create a more attractive market for infrastructure providers and ensure that the services meet local needs.
- Organize demonstrations of the new technologies and present local role-model users.
- Encourage Internet access from home for education, business, shopping, eBay and banking.
- Offer basic training classes on how to use e-mail, search the Internet and perform research.

Education

- Provide training in information technology resources, especially for support staff and classified personnel.
- Seek technology proficiency of Level 1-3 for K-12 teachers.
- Expand student, parent and teacher access to student information such as homework assignments and attendance records.
- Establish a countywide consortium (made up of public and private schools and adult education) to consolidate technology planning in the education sector.
- Win the support of school boards for increased resources for technology and training.
- Make it easier for low-income families to access computers and the Internet to facilitate communications with teachers and schools.
- Develop school websites with interactive features.
- Expand wide-area resources and increase bandwidth.

Healthcare

- Identify funding methods for enhancing educational infrastructure.
- Seek grants to upgrade technology and train medical staff.
- Develop better strategies to retain technical and professional healthcare staff.
- 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.
- Educate providers on available technologies and the benefits of technology in medicine.
- 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.
- Provide basic technology education for healthcare providers, using state and community and technical colleges, adult education, distance learning and the library.

Library

- Increase the number of public-access computers.
- Provide ports or wireless access points where patrons with laptop computers can connect to high-speed lines.
- Support county applications for technology grants that will also benefit the library system.
- Complete automation and networking.
- Improve the current website and expand the library's ability to interact with patrons by explore options to increase customer-initiated transactions online, such as paying fines and accessing subscription databases.
- 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.

- Market the current capabilities and services of the library system.
- Offer more instruction on how to take advantage of the web's resources.

Higher Education

- Develop wireless networks to allow students and faculty seamless access to the campus network.
- Substantially increase the number of web-enhanced and fully web-based courses.
- Provide continuous training to all educators and staff on technology use and applications.
- Provide information technology resources to the community .
- Inventory and market existing online training opportunities in the county.

Community-Based Organizations

- Identify and list the community-based organizations in the county as well as their websites.
- 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.
- Encourage community-based organizations to use e-mail and the web to reduce the use of paper mail.
- Facilitate collaboration to share the costs of technology and expertise.
- Provide training on web page development, including the use of free web pages.

Government

- Seek grant funding to improve infrastructure and support functions.
- Improve the ability to conduct business with government over the Internet. Possibilities include: permitting, purchasing, payments, downloading tax forms, paying ambulance bills, applying for dog tags, online license renewals, voter registration, court record searches and voting.
- Encourage inter-governmental sharing of software, information and e-commerce concepts.

- Build a public-private consortium to identify best practices in GIS, website design, and content, such as ADA compliance, multiple language support and navigation techniques.
- Allow the donation of appropriate surplus computers to non-governmental organizations and individuals.
- Develop partnerships with businesses and grassroots organizations to improve technology usage countywide.

Tourism, Parks and Recreation

- Improve and correct local links and identification.
- Encourage more local companies to sell their goods and services online to promote local businesses and increase sales.
- Develop affordable, high-speed services for rural parts of the county.
- Use technology to market county attractions to potential in-state and out-of-state tourists.
- Get all organizations and hotels online with links to the tourism website.

Agriculture

- Increase broadband awareness among the agricultural community.
- Develop educational materials to help the agricultural community understand the importance of broadband and what is available.
- Create a list of providers to help the agricultural sector understand what service is available and from whom.
- Consider creating 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.