



CUMBERLAND COUNTY STRATEGIC TECHNOLOGY PLAN

TABLE OF CONTENTS

A. Executive Summary	2
B. Why Does This Matter?	7
C. Where Are We and Where Are We Going?	12
D. How Do We Get There?	32



A. Executive Summary

A. Executive Summary

Purpose

This document provides a “road map” for technology-based growth and economic development in Cumberland 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 Cumberland County’s technology needs, particularly related to computers, broadband and Information Technology.

Summary

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

ConnectKentucky recommends that Cumberland 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 Cumberland 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 Cumberland 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

Cumberland County industries employ 1,652 workers. The leading industry in terms of employees is manufacturing. The trade/transportation/utilities segment employs 212. Public administration employs 88. The leading single employer is Rocore Thermal Systems with 80 workers. Electric Mills KY employs 56. Topps Safety Apparel Inc. employs 45.

The Chamber of Commerce has more than 50 businesses as members, but only a few of them have websites.

Cumberland County has almost 95 percent coverage for broadband access. Duo-County telephone covers approximately 75 percent of the county with broadband service, and Alltel covers the remaining section. There are a couple of small areas where broadband is not currently available, and the school superintendent happens to live in one of those gaps. Duo County provides technical support to its customers for connectivity and computer assistance. Bluegrass Cellular is partnered with Duo County, and is looking at wireless solutions for next year. They may be able to cover some of the gap areas in the county.

Duo County is planning to have video over its DSL copper phone lines sometime in 2006. The company is currently working with several local businesses for wireless hotspots in the community, and it is also working with the Dale Hollow Camp Ground to get wireless access at the park and campground.

The local Subway in Burkesville is the first wireless hotspot available in the county. The public library is the only other wireless hotspot currently accessible for public use.

The Assessment

- **Networked Places** – In the category of networked places, Cumberland 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. Some can access the office network remotely.
- **Applications and Services** – In the area of technology applications and services, business and industry is currently at stage 1 on a 0 to 5 scale. The team found that businesses use basic e-mail services through their connection.
- **Leadership** – In terms of technology leadership within the business community, Cumberland County is currently at stage 2 on a 0 to 5 scale. Some view the internet as essential to their business. Employees are trained on basic applications primarily.

The Vision

While the Cumberland County eCommunity Leadership Team found that while 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 4 in networked places and leadership and stage 3 for applications and services. The team's vision includes:

- Most office employees have **always-on connections** to the Internet at their desks
- Some businesses use **VoIP** (Voice over Internet Protocol) to save money
- Some office workers have converted from desktop computers to **portable devices**

- Some office computers have webcams for **videoconferencing**
- Most businesses have informational **website**
- Some retail websites can **accept credit card** transactions
- Some businesses participate in **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 Cumberland County School District recently upgraded and enhanced its website with more information and easier navigation for the community, students, and families. It is available at www.cland.k12.ky.us

The Cumberland County School District enrolled 1,089 students in the 2003-2004 school year. The Cumberland County School District consists of three schools: Cumberland County Elementary School (K-5), Cumberland County Middle School (6-8), and Cumberland County High School (9-12). All three schools are located in the city of Burkesville and are within one mile of the central office. Following are some important benchmarks related to recent Cumberland County graduates:

	Attendance Rate	Retention Rate	Dropout Rate	College	Military	Work	Voc/Tech Training	Work & Part-Time School	Not Successful
District	94.1%	2.2%	3.9%	53.2%	3.8%	22.8%	3.8%	3.8%	12.7%
State	94.3%	3.4%	2.2%	54.8%	2.9%	26.7%	4.9%	6.7%	4%

The Cumberland County School District provides students and teachers with high-speed Internet access to e-mail, Internet, and instructional programs from all schools and all classrooms. Students can research, write and edit projects entirely on school computers. Several teachers have created web pages containing information and learning areas and individualized instruction. The high school Student Technology Leadership Program received state-wide recognition for its use of global positioning technology in mapping district bus routes. Teachers receive help from the district Technology Resource Teacher. The Technology Resource Teacher provides support and training throughout the school year. Teachers and staff are offered training sessions to upgrade technology related skills. The technology program will continue to work to support learning in the district.

	Spending per Student	Student Teacher Ratio	Student/Computer Ratio	% of Classrooms with at Least One KETS Workstation With Internet Access
District	\$8,228	15:1	2.9:1	100
State	\$7,007	16:1	3.8:1	100

Faculty and staff can use a VPN connection to access the school's server and files from their homes. They use STI (Student Technology Information) software to record attendance and grades. Parents can also e-mail teachers as needed.

The public school system has a 4:1 ratio for students to computers, and many teachers have their own websites. They currently have fiber to all of the buildings, and two of the three schools also provide wireless access. They plan to have full wireless in all schools by the end of 2006.

Several students were hired in the past to help with the library computers, and the district could also look at using students to help local businesses.

The Assessment

In its evaluation, the Cumberland 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:

- **Network Places** – In the category of network places, Cumberland County's K-12 education sector is currently at stage 4 on a 0 to 5 scale. Many classrooms teachers have access to digital projection capabilities. The middle and high school have video programs that allow students to produce and share shows on a public network. Some schools use wireless sensors to monitor energy consumption.
- **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. Some experienced teachers know how to incorporate Internet-based lesson plans into the curriculum.
- **Leadership** – In terms of technology leadership within the education sector, Cumberland County is currently at stage 4 on a 0 to 5 scale. Some schools have comprehensive plans for utilizing technology in the classroom. Teachers are trained on new technologies and new hires are required to have experience using new technology in the classroom. Schools take responsibility for continuing to take advantage of e-rate and other school discounts.

The Vision

The Cumberland County eCommunity Leadership Team recognizes that the school systems have made technology a priority, and the team has outlined a vision for enhanced technology usage and application in the classroom. The goal is to move to stage 5 on the 0 to 5 scale in all categories. The vision includes:

- **Interactive school websites** that offer access to homework assignments and e-mail contact with teachers and administrators
- Most students bring their own **laptop computers** to school and most computer labs have been closed
- Many classrooms have access to high tech **digital projection** capabilities
- Most schools have **converted to Voice over Internet Protocol (VoIP)** on their phone systems to save money.
- Some schools use wireless sensors to **monitor energy consumption**
- Many 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

Cumberland County residents' healthcare needs are served by Cumberland County Hospital, a 25-bed critical access facility.

The Assessment

The Cumberland County eCommunity Leadership Team found that the healthcare sector is beginning to use technology to its advantage with some providers using technology for information and records needs. They also identified a large opportunity for technology applications within the community.

- **Network Places** – In the category of network places, Cumberland County's healthcare sector is currently at stage 2 on a 0 to 5 scale. Some doctors regularly use computers to enter and maintain patient records, and digital 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 and some providers store patient records electronically. Telemedicine is being evaluated and some offices are electronically transmitting records to insurers for reimbursements.
- **Leadership** – In terms of technology leadership within the healthcare community, Cumberland County is currently at stage 2 on a 0 to 5 scale. Some providers have begun the conversion to electronic medical records. Some providers are also investigating how to deploy wireless technologies for mobile workers.

The Vision

The Cumberland County eCommunity Leadership Team sees great potential for the use of technology in the healthcare sector but understands the industry is limited in its resources and ability to implement changes within a brief period. The team has set goals to move each of the three categories to stage 3 on a 0 to 5 scale. The team's vision includes:

- Most equipment being **converted to digital**
- 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

LIBRARIES

Cumberland County Public Library has a basic informational website, <http://www.cumberlandlibrarylcd.com/Home.htm>.

Currently, there are four computers at the library with public Internet access. The library also has a wireless network in place. The library received funding from The Gates Foundation to replace its old computers, and as of February 2006, there are four new desktops plus four laptops. The library currently uses Kentucky Virtual Library for online

reference and would like to provide more training on how to use these online resources. The biggest challenge the library faces is keeping current with technology, and the staff would like to have a full-time technology support person.

The Assessment

The Cumberland County eCommunity Leadership Team found that the library was more technologically advanced in some areas than the other sectors.

- **Network Places** – In the category of network places, libraries is currently at stage 4 on a 0 to 5 scale. There are network ports and wireless networks and electrical outlets in carrels.
- **Applications and Services** – In the category of technology applications and services, libraries is currently at stage 4 on a 0 to 5 scale. The library has a catalog 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. Patrons may review their accounts on-line and access the library as a portal to other informational services.
- **Leadership** – In terms of technology leadership within the library system, the sector is currently at stage 3 on a 0 to 5 scale. The library research desk is an online community resource. Staff training on new technologies is a priority. The library is using consultants to take advantage of e-rate and other discounts. Library policies reflect appropriate filtering requirements.

The Vision

The leadership team has set forth a goal to maintain stage 4 on the 0 to 5 scale in networked places and services and also maintain stage 3 in leadership.

The vision includes:

- Public libraries have added network ports or **wireless networks** and electrical outlets to carrels
- Patrons may **pay fines online by credit card**
- Patrons can access the library online as a portal for other **online information services**
- 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**

HIGHER EDUCATION

Although there are no higher education facilities in the county, there are eight Kentucky higher education facilities within 60 miles.

Both Western Kentucky University and Lindsey Wilson College offer classes at the ATC (Area Technology Center). Also, the Clinton Center Community and Technical College campus in Clinton County is only a few minutes east, with a very modern facility.

Some people are currently taking online classes and earning their master's degrees through distance learning programs.

The Assessment

The Cumberland County eCommunity Leadership Team found that the higher education sector, which is served by nearby Adair and Clinton Counties, is using technology to its advantage and identified a large opportunity for technology applications within the higher education community.

- **Network Places** – In the category of network places, Cumberland County's higher education sector is currently at stage 3 on a 0 to 5 scale. Some classrooms in the college/university network are equipped with digital projection capabilities.
- **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 classes use digital content and/or web-based content for instruction and many faculty members are trained to use the Internet for instruction.
- **Leadership** – In terms of technology leadership within the higher education community, Cumberland County is currently at stage 3 on a 0 to 5 scale. 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 Cumberland County eCommunity Leadership Team sees great potential for the use of technology in the higher education sector. The team has set goals to improve application and services of technology to stage 4 in every category. The team's vision includes:

- Many classrooms will have projection equipment that allows the instructor to display videos **from the Internet into the classroom**
- 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/or **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-BASED ORGANIZATIONS

There are approximately 20 community-based organizations in Cumberland County. The community is looking to develop a Community Center for education and recreation for youth and adults. They would like this to include a cyber cafe with online gaming and monitored web access, in addition to online research and study, to make it a fun and safe place for all ages.

The Methodist churches and the Baptist church have websites. The 17 Methodist churches in the area share a site at www.CumberlandParish.org.

The Chamber of Commerce has a static web page connected to the Burkesville.com site. This is not a city government site, but a private site for the community managed by Computer Solutions, Inc.

Assessment

The Cumberland 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.

- **Network Places** – In the category of network places, Cumberland County's community-based organization sector is currently at stage 2 on a 0 to 5 scale. 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.
- **Applications and Services** – In the category of technology applications and services, the community-based organization sector is currently at stage 2 on a 0 to 5 scale with some organizations have an informational website.
- **Leadership** – In terms of technology leadership within the community-based organization community, Cumberland County is currently at stage 2 on a 0 to 5 scale. Organizations are minimally involved in community economic development issues. Little or no plans exist for better utilizing telecommunications services and technologies. Some organizations provide technology training to their staff at least once a year.

The Vision

The Cumberland 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 3 on a 0 to 5 scale. The team's vision includes:

- Most community-based 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

GOVERNMENT

Government entities in Cumberland County are Burkesville and Cumberland County. The government entities of Cumberland County do not have official websites.

The new Justice Center in Burkesville currently uses video-arraignment teleconferencing for legal prosecutions and testimonies. This system is being used by both government officials and the county attorney.

The government has software programs available, but employees don't know how to use them. Many current office-holders are resistant to technology-related projects.

There is no official city or county website. The city of Burkesville has a basic website, www.cumberlandcounty.com, which is a sub-site off of the Chamber of Commerce, but the city does not manage or maintain it directly. Eric Garland at Computer Solutions maintains it.

The city also received some funding from Homeland Security – a \$10,000 grant that is being shared with Clinton County on an existing Commercial Mobile Radio System project.

The Assessment

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

- **Network Places** – In the category of network 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 2 on a 0 to 5 scale. The current site contains a list of elected officials and staff directory. Customers rely mostly on postal mail and telephone to conduct business.
- **Leadership** – In terms of technology leadership within the government community, Cumberland County and its associated governments are currently at stage 2 on a 0 to 5 scale. 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.

The Vision

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

- Some field workers use **wireless networks** to upload and download data in the field
- Some employees are using **desktop videoconferencing**
- Sensors and **webcams monitor locations**, such as rivers, that are critical 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
- Building **inspections and violations** can be entered from the field
- Some agencies have a formal policy that allows some employees to **work at 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

Tourism and recreational points of interest in Cumberland County include:

- Dale Hollow Lake State Resort Park
- Dale Hollow Public Wildlife Area
- Hendricks Creek Resort

- Mud Camp Creek Public Wildlife Area
- Sulphur Creek Resort

Tourism is a big part of the community because of Cumberland Lake State Park. The tourism website is being hosted by Cumberland Computer Solutions, but it is difficult to update and manage the content. One of the first things people ask about when looking for real estate in the county is the availability of broadband.

The Assessment

The Cumberland 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.

- **Network Places** – In the category of network places, Cumberland 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, Cumberland 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 Cumberland 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:

- 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 to local service providers**
- Some facilities **market 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 are working with educational partners to **raise workforce** skill levels

AGRICULTURE

In 2002, Cumberland County was home to 437 farms that comprised 89,389 acres (189 acre average per farm). The total market value of production was \$7.4 million (\$15,697 average per farm). Crop sales accounted for \$2.4 million; livestock sales accounted for \$5 million. Government payments in Cumberland County in 2002 averaged \$911 (\$117,000 total for the county).

Cumberland County is ranked 85th in the value of agricultural products sold in the state. Cumberland County is the 15th leading producer in the category of “other animals and other animal products.” The leading agricultural products in sales in the county:

- Cattle and calves – \$1,691,000
- Tobacco – \$1,621,000
- Milk and other dairy products from cows – \$1,041,000

Cumberland County tobacco farmers in 2002 received \$13.4 million in government payments from the Tobacco Buyout Program. There were no dark payments.

Many farmers have computers and are using the web to search and send e-mail. The local UK Extension office has a DSL connection and has literature and publications available on its website. However, many farmers are not aware of the availability of online services.

The Assessment

The Cumberland 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.

- **Network Places** – In the category of network places, Cumberland County’s agricultural sector is currently at stage 2 on a 0 to 5 scale. Some growers, suppliers and processors have always-on connections to the Internet at their desks.
- **Applications and Services** – In the category of technology applications and services, the agriculture sector is currently at stage 2 on a 0 to 5 scale with some growers, suppliers, and processors have an informational website. Some growers, suppliers and processors transmit or receive some orders electronically.
- **Leadership** – In terms of technology leadership within the agricultural community, Cumberland County is currently at stage 1 on a 0 to 5 scale. There is no technology or telecom plan in progress.


The Vision

The Cumberland 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 all categories. The team’s vision includes:

- Some growers, suppliers, and processors use **Voice over Internet Protocol (VoIP) to save money**
- Some workers have converted from desktop computers to **portable devices** with wireless connections
- Some office computers have **webcams for video conferencing**
- Most growers, supplier, 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	Cumberland County
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● Cumberland County's Benchmark Assessment Results are presented in red.
 ■ Cumberland County's Vision for this Sector is presented in blue.

	Stage	Networked Places	Applications & Services	Leadership
<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 10px;">Least Connected</div>  <div style="margin-top: 10px;">Most Connected</div> </div>	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.

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

■ Cumberland 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

Cumberland County

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

■ Cumberland 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

Cumberland County

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

■ Cumberland County's Vision for this Sector is presented in blue. Blue is used when Assessment and Vision are the same.


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.	<p>● ■ 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.</p>
	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

Cumberland County

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

■ Cumberland 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

Cumberland County

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

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

Government

Cumberland County

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

■ Cumberland 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 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

Cumberland County

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

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


<p style="text-align: center;">Least Connected</p>  <p style="text-align: center;">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

Cumberland County

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

■ Cumberland 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?

D. HOW DO WE GET THERE?

The Leadership Team identified the following project ideas during an extensive meeting process. The first three projects listed are the most important areas to focus on over the next 12 to 18 months. Project teams are already underway in each of these areas. Brief project overviews for each, followed by initial concept plan outlines, are described below.

Project Overviews

Awareness and Education

Project Leaders: Dennis Henson, Amy Morgan, David Spears

Team Members: Robin Sharp, Ginger Garmon, Lucille Garner, Margaret Riddle
Cooperative effort among colleges, high school, library, business, and the Adult Education Center to develop a strategy to help the community become more aware of the benefits of using the Internet and computers. The following areas should be included:

- Overcoming fear factor – basic training, show how to use and what can be done online
- Scheduling vacations and trips, online buying and selling, online banking, etc.
- Classes and seminars to promote Internet and computer use in community
- Work with the library and schools to offer classes to citizens and farmers on technology use in home, business and agriculture
- Online calendar of classes available and locations
- Use students to help teach and assist

Website Development

Project Leaders: Carl Black, Richard Alexander

Team Members: TBD

Focus on the development and enhancement of websites for local businesses, organizations, and agencies, plus a community portal to provide a user-friendly interface to integrate local sites with easier navigation and linkages. Having an increased web presence will help improve communications and marketing, business processes, and economic development in the community.

- Show how to set up and maintain or enhance websites for current online activity
- Possibly include an online farmer's market, online festival info, etc.
- Primary focus on business, agriculture and tourism
- List all businesses and organizations in county and their websites

Government Communications

Project Leaders: Stacey Thrasher, Gina Watson, Tim Hicks

Team Members: County Clerk, Circuit Clerk, PVA, EMS, Employee Services, etc.

Create official government website(s) and put more citizen services, information, forms, records, and events online.

- Both county and city government entities working in collaboration

- Create official county and city government website(s)
- Encourage more online government services
- Online payments – viewing and paying bills and fees online
- Identify existing public access places and try to expand these. Look at using recycled computers from schools

Project Concept Outline - Awareness and Education

Goal

Organize, promote and deliver technology education, training and awareness to the community. Develop a strategy to help the community become more aware of the benefits available through using the Internet and computers in their daily lives and activities. This could include creating an awareness of need and providing easy access to technology.

Importance

An educated community is essential in today's global economy. There are opportunities to leverage existing resources to expand and enhance workforce training programs, encourage more post secondary education, and create additional awareness within the community in regards to broadband and technology use.

Outcomes

- An integrated approach to the organization, promotion and delivery of technology education, training and awareness for the community
- Inventory of all technology training resources available in the county
- Increased citizen usage of computers and the Internet
- Improved basic computer skills and knowledge levels for residents encouraging greater economic opportunities

Steps

- Identify all organizations performing technology education and training services.
- Create a list of training classes currently being offered.
- Determine what additional classes need to be included.
- Develop a collaborative and cooperative approach for delivery between all organizations.
- Educate community through local banks about online banking.
- Partner with local media to provide knowledge to community through local newspaper and radio.
- Use Mobile Skill Unit for training and awareness in outlying areas.

- Partner with local ADD to provide more education and training as needed
- Engage high school students to provide part-time help.

Participants

Cumberland County High School
 Cumberland County Public Library
 Cumberland County Adult Education Center
 Clinton Center – Somerset Community College
 UK Cooperative Extension Service

Project Concept Outline - Website Development

Goal

Increased online presence for local organizations via the development of a community portal and websites for local businesses, organizations and agencies.

Importance

Citizens and businesses of all sizes benefit from the implementation of high-speed internet. For smaller businesses, technology creates an even playing field with larger companies. E-commerce allows even the smallest businesses to 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.

Outcomes

- New and enhanced websites for local businesses and organizations
- Improved communications and marketing via increased online presence
- Co-op program for students to assist local businesses
- Increased information available online for every sector of the community, including government, business, and tourism

Steps

- Enhance website for Chamber of Commerce
- Create an online calendar for local events and training and education classes and activities
- Enhance websites for tourist facilities and attractions
- Create an integrated community portal for easy access to various online services and information

- Offer classes for website design and maintenance for local businesses – in conjunction with education project team

Participants

Downtown Renaissance Program
Cumberland Chamber of Commerce
Cumberland County Library
Cumberland Economic Development

Project Concept Outline - Government Communications

Goal

Enabling local government agencies, both city and county, to improve their internal and external communications and provide more online information and citizen services.

Importance

Like any organization, local government needs technology to manage operations, reduce costs, improve client services, and better serve the community. Improving online communications will enable local governments to deliver more applications and improved services to constituents while saving money and reducing costs. With growing public acceptance of online transactions and ecommerce growing dramatically, a well-planned e-government strategy will provide for the request for and delivery of local government services over the Internet.

Outcomes

- Government forms and information available online
- Online calendar of events and activities
- Create interactive county and city website(s)
- Develop a strategy for significantly reducing visits by the public to government offices for routine transactions
- Identify applications specifically designed to help businesses and citizens interface with government more efficiently

Steps

- Determine what forms and information need to be available online
- Review current e-government applications to identify gap areas
- Determine what services need to be provided, and identify potential providers

- Map out the phases for short term and long range plans
- Create a ky.gov website for county government
- Put basic information online about offices, services, meetings, forms and events on county website
- Look at linking county and city information for an integrated look and feel

Participants

Cumberland County Fiscal Court
 City of Burkesville
 Lake Cumberland ADD
 Local Emergency Management Services

Potential Action Items

Business and Industry

- Promote awareness and training to overcome fear factor
- Offer basic training classes – how to use email, searching/surfing Internet
- Use adult education facility as central training location – they already have wireless access available and offer basic computer literacy
- Provide training for online banking
 - Several banks do not even offer online banking
 - Show the benefits - faster, safer, convenient, cheaper, etc.
- Enable employees to work from home to encourage economic growth for the community
- Train businesses on website creation and online marketing
- Create a technologically capable workforce through training and skills development
- Provide technical support and problem solving for local users
- Encourage more hotspots at the library, businesses, etc.
- Develop a directory for local information technology services
 - List local providers for technical support – individuals, businesses, schools
- Develop a media campaign to help consumers and businesses understand the benefits of high-speed services and the Internet

Education: K-12

- Keep existing technology current
- Continue to train staff in new technology
- Continue to improve test scores
- Partner with businesses to provide training for community
- Lobby General Assembly to properly fund technology in schools
- Promote technology integration in classrooms and teacher websites
- Encourage parent involvement through technology

- Use iSafe training for students and parents
 - Expand STI usage
- Provide technical support - offer classes to students to assist in local support issues
- Add links to teachers' web pages – for homework assignments, tests, etc.
- Create an interactive online calendar for school and community events
- Expand student, parent, and teacher access to student information such as homework assignments and attendance records
- Develop informational websites with interactive features for each school
- Ask businesses to donate surplus computers to low-income parents

Healthcare

- Show doctors how to use technology in their offices
 - Look at monitoring patients from home
- Provide basic education on technology for healthcare providers using state and community colleges, adult education, distance learning and the library
- Keep general patient data on a shared central database between all medical providers in an effort to eliminate redundancy of forms patients need to fill out each visit
- Provide online appointments and appointment checking

Libraries

- Hire a full time staff technology librarian
- Make more e-books available
- Communicate what training classes are currently available to the community
- Develop expanded Internet training programs for the public, targeting specific needs
 - Coordinate with schools, businesses, adult ed, UK extension office
 - Offer more instruction on how to take advantage of the web's resources
- Enhance the current website
- Improve technical support for the public computers and library website
- Digitize genealogy and historic information

Higher Education

- Put newer technology in the hands of students
- Provide staff to implement technology standards
- Increase technology equipment in classrooms
- Use web for instruction
- Encourage citizens to take advantage of online classes to reduce drive time and cost
- Many technology certification programs are available online
- Form partnership between all education organizations
- Increase awareness of national research information available across the country

Community-Based Organizations

- Provide training on webpage development
 - Using personal webspace – 20M free with user account
- Identify and list the community-based organizations in the county and websites
- Develop a networking event to share information, ideas and innovations in technology deployment within community-based organizations
- Encourage community-based organizations to use e-mail and the web to reduce the cost of paper mail
- Introduce a community portal with an online community calendar
- Facilitate collaboration and cooperation among community-based organizations to help them share the costs of technology and expertise

Government

- Increase awareness of the public to what is available and what can be done online
- Ensure elected officials understand the importance of having a network in place
- Make GIS applications more available
- Enable the public to access all offices on the Internet
- Create a county website and post all meeting agendas, minutes and attachments online
- Enable additional government services online
 - Permits, licenses, forms, renewals, payments, etc
 - Online records and information
- Digitize Property Valuation Administration records, maps and utilities, etc. for online access
- Send emergency notifications to the public via e-mail and the website - road closures, safety issues, etc.
- Provide training and awareness to senior citizens on what is available and how to use it, for example, online access for Medicare forms
- Seek grant funding to improve technology infrastructure and information technology support functions. Work with Homeland Security
- Encourage city-county collaboration

Tourism, Parks and Recreation

- Get all organizations and hotels online with links to/from tourism website
- Offer video conference capability
- Create websites that are both informative and interactive to market county attractions to potential in-state and out-of-state tourists
 - Use webcams at the parks for online viewing
 - Make electronic brochures and info available for downloading
- Establish a countywide portal to share information, market the community, list attractions and hotels and provide a calendar of events.
- Encourage more local companies to sell their goods and services online to promote businesses and increase sales.
- Encourage local hotels to provide wireless hotspots for online access
- Provide wireless access at Dale Hollow Lake State Park

Agriculture

- Increase broadband awareness among the agriculture community.
 - Develop educational materials to help the agriculture community understand the importance of broadband.
- Create a listing of the providers in the community to help the agriculture sector better understand what service is available and from whom.
- Provide high-speed wireless Internet access at the UK Cooperative Extension office.
- Create and/or promote materials for the new eXtension service, a national web-based information and education network providing 24/7/365 access to objective, science-based information from universities and partners nationwide.
- Promote online sales and auctions
- Use GPS and Radio Frequency Identification (RFID) on farms