



ESTILL COUNTY STRATEGIC TECHNOLOGY PLAN

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A. Executive Summary

A. Executive Summary

Purpose

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

Summary

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

ConnectKentucky recommends that Estill 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 Estill 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 Estill 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

Estill County industries employ a total of 2,301 workers. The leading industries in terms of number employed are:

- Trade, Transportation and Utilities with 387 workers
- Manufacturing with 342 workers
- Financial Activities with 109 workers
- Public Administration with 108 workers

The leading single employers are:

1. Carhartt, Inc. with 149 workers (Coveralls, hoods and biballs)
2. Carhartt, Inc. with 51 workers (Administrative offices)
3. Estill Wood Products, Inc. with 40 workers

The Assessment

- **Networked Places** – In the category of networked places, Estill County's business and industry sector is currently at stage 3 on a 0 to 5 scale, with most office employees having always-on connections to the Internet at their desks. Some mobile workers have laptop computers and can access the office network remotely.
- **Applications and Services** – In the area of technology applications and services, the business and industry sector is currently at stage 2 on a 0 to 5 scale with most businesses having an informational website, and some retail websites being able to accept credit card purchases.
- **Leadership** – In terms of technology leadership within the business community, Estill County is currently at stage 1 on a 0 to 5 scale with some businesses viewing the Internet as a possible business enhancement.

The Vision

While the Estill County eCommunity Leadership Team found that business and industry's current use of technology is somewhat limited, the team has an aggressive vision for how the county's business and industry sector will be using technology in two years. The team set goals that would move the business and industry sector from the middle stages to stage 4 in the networked places and applications and services categories outlined above and to a stage 3 in the leadership category on a 0 to 5 scale. The team's vision includes:

- Some businesses 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 businesses **outsource** most of their computing services to **local service providers** to allow for concentration on core business functions
- Some retailers and manufacturers **sell goods out of state or internationally**
- Some employees **work remotely**, some out of state
- 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**

K-12 EDUCATION

Estill County School District enrolled 2,430 students in the 2004-2005 school year. The district's motto is "Every Child Succeeds," and the administrators and teachers work to attain this vision by creating full partnerships among the school, home and community. Ultimately, the district's goal is to provide a quality learning environment for each student. Estill County School District serves over 2,400 students K-12, and its all day preschool program provides services to 95 students ages three and four. The district also offers the Estill Learning Academy for students with identified needs. The district is committed to each student's success as is reflected in its "No Excuses" initiative, which assumes that each student can achieve.

	Attendance Rate	Retention Rate	Dropout Rate	Graduation Rate	College	Military	Work	Voc/Tech Training	Work & Part-Time School	Not Successful
District	94%	3.1%	1.6%	79%	29.9%	4.5%	33.1%	4.5%	16.6%	11.5%
State	94.3%	3.3%	2.2%	81.5%	54.7%	2.6%	27.5%	4.8%	6.4%	4%

Estill County School District has adopted and implemented an acceptable use policy at each school for all students and staff specific to the use of technology. Internet filtering is accomplished through proxy implementation. These regulations conform to the guidelines of Senate Bill 230 (701 KAR 5:120). Teachers are encouraged to use technology to support diverse instructional strategies including remediation and acceleration needs, and are evaluated on technology use in their classroom instructions. Teachers may use professional development opportunities to enhance their professional growth and productivity as related to technology. Several technology applications are utilized to provide diagnostic reports on students' achievement. Kentucky Virtual High School is available at no cost to qualifying students requesting coursework beyond the physical campus offering.

	Spending per Student	Student Teacher Ratio	Student/Computer Ratio	% of Classrooms with at Least One KETS Workstation With Internet Access
District	8792	15:1	4.7:1	100
State	8663	16:1	3.7:1	100

District website: <http://www.estill.k12.ky.us>.

The Assessment

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

- **Networked Places** – In the category of networked places, Estill County's K-12 education sector is currently at stage 3 on a 0 to 5 scale with most schools providing at least one computer for every five students in grades seven and above. Additionally, most classrooms have computers for student use, and some teachers use computer-based presentation tools and projectors for their lessons.
- **Applications and Services** – In the category of technology applications and services, the education sector is currently at stage 3 on a 0 to 5 scale with schools having interactive websites that offer access to homework assignments and communication with teachers and administrators. Many experienced teachers know how to incorporate Internet-based lesson plans into the curriculum, and most teachers welcome e-mail from parents and students.

- **Leadership** – In terms of technology leadership within the education sector, Estill County is currently at stage 3 on a 0 to 5 scale. The school board sees opportunities to use the network to raise test scores and operate the school more efficiently. Teacher training on new technologies is a priority at most school districts, and schools are using consultants to take advantage of e-rate and other school discounts.

The Vision

The Estill County eCommunity Leadership Team recognizes that the school systems have made technology a priority, and the team has outlined a clear vision for enhanced technology usage and application in the classroom. The goals set forth by the Estill County eCommunity Leadership Team include reaching stage 4 in all three categories above. The vision includes:

- Some students are given **laptop or portable computers** to use at school and home
- Some computer labs close because students have **more access to computers in their classrooms**
- Many classrooms 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 are **trained to use the Internet** for instruction
- Parents and family members are encouraged to participate in **student learning via e-mail and online applications**
- Some seniors are taking **college-level classes** on the Internet
- Some schools have **comprehensive plans for learning activities** utilizing technology in the classroom
- New hires are required to have **experience using new technology** in the classroom
- **Computer labs are made available** to family and community members
- Schools take responsibility for **continuing e-rate** and other discounts

HEALTHCARE

Marcum & Wallace Memorial Hospital is a 25-bed critical access facility. This general medical/surgical hospital is a part of the Catholic Healthcare Partners group and provides both general and pediatric medical and surgical care, as well as an emergency room. The hospital is located at 60 Mercy Court in Irvine.

The Assessment

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

- **Networked Places** – In the category of networked places, Estill County's healthcare sector is currently at stage 2 on a 0 to 5 scale with some doctors regularly using computers to enter and maintain patient records, and digital instruments and imaging equipment are being acquired.
- **Applications and Services** – In the category of technology applications and services, the healthcare sector is currently at stage 1 on a 0 to 5 scale with physicians and/or staff using a dial-up connection in order to access health-related sites.

- **Leadership** – In terms of technology leadership within the healthcare community, Estill County is currently at stage 1 on a 0 to 5 scale with some providers beginning to consider what advantages may come from implementing the Internet in the office.

The Vision

The Estill 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 all three categories to stage 5 on a 0 to 5 scale. The team's vision includes:

- Most equipment has been **converted to digital**
- Desktop **videoconferencing is routine** at all hospitals and major clinics
- 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 emergency room 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, clinic, 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

Estill County Public Library's website, <http://www.youseemore.com/estill/default.asp>, offers extensive information regarding the library. The site comprises an interactive calendar, links to different reference materials and an interactive card catalog.

The Assessment

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

- **Networked Places** – In the category of networked places, the library sector is currently at stage 4 on a 0 to 5 scale. The public library has added network ports or wireless networks and electrical outlets to carrels.
- **Applications and Services** – In the category of technology applications and services, the library sector is currently at stage 4 on a 0 to 5 scale with patrons being able to review their accounts online and pay fines by credit card. In addition, they can access the library online as a portal for other online information services.
- **Leadership** – In terms of technology leadership within the library system, the sector is currently at stage 4 on a 0 to 5 scale. The library helps the community understand copyright issues and how to protect privacy on the Internet. New hires are required to have experience using new technology, and the library takes internal responsibility for

continuing e-rate and other discounts. Lastly, the library has developed network management policies and technologies to prevent patrons from sending spam.

The Vision

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

- Most public libraries offer patrons a **10 mbps or faster wireless network**
- Public libraries offer **live video consultations**
- Public libraries allow patrons to borrow **e-books over the Internet**
- They help patrons conduct research and assist with **legal access to copyrighted databases and publications**, including music and movies
- **Two-way videoconferencing** is available to the general public
- Libraries continue to **upgrade their facilities** to offer the community the next generation in technology, services and training
- Libraries actively **promote information technology literacy** to drive positive impacts on economic performance, skills and innovation in the community

HIGHER EDUCATION

Although there are no higher education facilities in Estill County, there are 42 other facilities within 60 miles of the county. Higher Education is a priority for the citizens in Estill County. Community Leaders routinely call upon the expertise of local institutions like Eastern Kentucky University, the University of Kentucky and Berea College to assist them in the planning and implementation of various community projects.

COMMUNITY-BASED ORGANIZATIONS

There are approximately 50 community-based organizations in Estill County. Estill County prides itself in maintaining small town charm while being located near a variety of metropolitan centers. Community-based organizations in Estill County focus on working together to grow the community, while also recognizing and preserving its small town heritage.

Assessment

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

- **Networked Places** – In the category of networked places, Estill County's community-based organization sector is currently at stage 3 on a 0 to 5 scale. Most organizations with at least five paid staff have at least one computer for every three employees, and many organizations have e-mail.
- **Applications and Services** – In the category of technology applications and services, the community-based organization sector is currently at stage 3 on a 0 to 5 scale with many organizations having an informational website.
- **Leadership** – In terms of technology leadership within the community-based organization community, Estill County is currently at stage 3 on a 0 to 5 scale. Some organizations are involved in specific economic development initiatives, but most do not

participate. In addition, some organizations plan to use telecommunications services and technologies within the next year.

The Vision

The Estill 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 4 on a 0 to 5 scale. The team's vision includes:

- Many organizations with at least five employees have **direct connections** to the Internet
- All paid staff have **e-mail accounts**
- Some organizations use **Voice over Internet Protocol (VoIP)** to save money
- Some office workers have converted from desktop computers to **portable wireless devices**
- Some office computers have **video cameras**
- Most organizations have an informational website
- A unified portal provides access to a **broad range of community information and services**
- Most local chapters are able to **share data** with the parent organization
- Some organization leaders are actively involved in **community economic development issues** and there are visible leaders taking a significant role in economic development
- Many organizations plan to **use telecommunications services and technologies** within the next year
- Most organizations provide **technology training** to their staff at least once a year

GOVERNMENT

Government entities in Estill County are:

- Estill County
- Irvine
- Ravenna

The official Estill County website, <http://www.estill.net/>, ranks 43rd out of 60 official county websites in the state. The other government entities of Estill County do not have official websites. Government leaders recognize this shortcoming and are aggressively working to rebuild Estill County's online presence.

The Assessment

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

- **Networked Places** – In the category of networked places, the government sector is currently at stage 2 on a 0 to 5 scale with some office employees having e-mail accounts.
- **Applications and Services** – In the category of technology applications and services, the government sector is currently at stage 3 on a 0 to 5 scale. E-mail from residents is manually routed to the appropriate departments, and some agencies routinely use the network to share data.

- **Leadership** – In terms of technology leadership within the government community, Estill County and its associated governments are currently at stage 3 on a 0 to 5 scale. Processes are underway for enhancing connectivity, rights-of-way management and IT innovation. Additionally, employees are trained and knowledgeable on basic applications

The Vision

The Estill 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 networked 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 EFT
- **Parks and recreation classes** can be registered for online
- 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 interests in Estill County include:

- Appalachian Crafts
- Artrageous
- Cat's Paw Antiques
- Cedar Village Restaurant
- Domain Farm
- Free Spirits Creations
- Front Porch Gallery
- Railroad Café
- Soggy Bottom Farm
- Stonegate Artwork
- Aldersgate Camp & Retreat Center
- Cottage Furnace
- Creekside Treasures
- Fitchburg Furnace
- Glass Garden Stained Glass
- McClanahan's Gallery

The Assessment

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

- **Networked Places** – In the category of networked places, Estill County's tourism, recreation and parks sector is currently at stage 2 on a 0 to 5 scale with some office employees having always-on connections to the Internet at their desks.
- **Applications and Services** – In the category of technology applications and services, the tourism, recreation and parks sector is currently at stage 2 on a 0 to 5 scale with some facilities having an informational website.
- **Leadership** – In terms of technology leadership within the tourism, recreation, and parks sector, Estill County is currently at stage 1 on a 0 to 5 scale with the Internet being seen as a possible way to enhance operations.

The Vision

The Estill 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 the networked places and leadership categories above to stage 4 on a 0 to 5 scale, and the applications and services to a stage 3 of 5. 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**
- 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 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 level**

AGRICULTURE

In 2002, there were 457 farms in Estill County totaling 64,105 acres with the average farm in Estill County having 140 acres. The total market value of production was \$3.9 million. Crop sales accounted for \$1.6 million and livestock sales accounted for \$2.2 million. The average market value of production per farm in 2002 was \$8,444. Government payments totaled \$105,000. Estill County is ranked 95th in the value of agricultural products sold in the state. The leading agricultural products in sales in Estill County are:

- Cattle and calves \$1,839,000
- Tobacco \$1,068,000
- Horses, ponies, mules, burros, and donkeys \$202,000

Tobacco farmers in Estill County received \$8,218,660 in burley payments from the Tobacco Buyout Program. There were no dark payments.

The Assessment

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

- **Networked Places** – In the category of networked places, Estill County’s agricultural sector is currently at stage 1 on a 0 to 5 scale with some growers, suppliers and processors have limited access through a dial-up connection.
- **Applications and Services** – In the category of technology applications and services, the agriculture sector is currently at stage 2 on a 0 to 5 scale with some growers, suppliers and processors having an informational website.
- **Leadership** – In terms of technology leadership within the agricultural community, Estill County is currently at stage 1 on a 0 to 5 scale with the Internet being seen as a possible enhancement to the way daily business is conducted.


The Vision

The Estill County eCommunity Leadership Team sees great potential for the use of technology in the agricultural sector but understands the industry is limited in its resources and ability to implement changes within a brief period. The team has set goals to move to stage 3 on a 0 to 5 scale in networked places and applications and services and to stage 4 on a 0 to 5 scale in the leadership category. The team’s vision includes:

- Most growers, suppliers and processors have **always-on connections** to the Internet
- Some **mobile workers have laptop computers** and can access the network remotely
- **Affordable videoconferencing** facilities are available in the community
- Most growers, suppliers and processors have **informational websites**
- Some websites can accept **credit card purchases**
- Some growers, suppliers and processors participate in an **electronic supply chain**
- **Training on new technology** is a priority
- Some processors and suppliers permit employees to **telework** one or two days a week


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

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

■ Estill 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

Estill County

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■ Estill 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

Estill County


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

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

Higher Education

Estill County


	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

Estill County

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

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


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

Government

Estill County

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

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


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

Tourism, Recreation and Parks

Estill County

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

■ Estill 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

Estill County

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

■ Estill 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?

PROJECT CONCEPT: Creation of a Computer Recycling Program Combined with Basic Computer Training

LONG-TERM GOAL

The goal of this project is to create a mechanism for organization, promotion and delivery of recycled computers to a target population of Estill County, along with technology education training. This program will be a partnership with local organizations (school board, hospital, banks, etc.) to recycle their old computers and give them to those who cannot afford them, provided that participants complete a basic computer skills training course offered by the community.

WHY IT'S IMPORTANT

A technologically-educated community is essential in today's global economy. There are opportunities to leverage existing resources in Estill County to expand and enhance workforce training programs, encourage more post-secondary education and create additional awareness within the community in regard to technology. Specifically, the community agrees that a Basic Computer Skills Training course component should accompany the distribution of each recycled computer.

Education, training and awareness are essential in our ability to expand technology within each sector of the community. These community sectors include: agriculture, business and industry, community-based organizations, government, healthcare, higher education, K-12 education, libraries, and tourism, parks and recreation. By putting recycled computers along with basic computer training into the hands of Estill County citizens who would otherwise have very limited exposure to broadband technology, a path is being forged for greater economic development for *all* citizens of Estill County.

SPECIFIC MEASURABLE OUTCOMES

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

1. Inventory of all possible recycling resources within the area (local businesses, schools, etc. who would be able and willing to donate used computers)
2. Inventory of all technology education/training/awareness resources currently available in Estill County.
3. Creation of a Computer Refurbish and Distribution plan for Estill County.
4. Development of additional education, training and awareness materials to further the use of technology and broadband applications.
5. Increase the comfort level and citizen usage rates of computers and broadband in Estill County.

STEPS TO ACHIEVE OUTCOME

1. Identify all organizations within Estill County who are willing and able to provide used computers to be refurbished and distributed to deserving and interested citizens in Estill County.

2. Identify all organizations within Estill County who are currently performing community education, training and awareness.
3. Divide current resources offered by organizations into three categories: education, training and awareness.
4. Determine which sectors could benefit from education/training/awareness opportunities.
5. Create new ways to market and promote opportunities to appropriate groups within the community.
6. Determine gaps in education/training/awareness and ways to fill those gaps.
7. Develop a plan for the identification, collection, refurbishment and distribution of recycled computers into the Estill County target population who otherwise may not have access to a computer.
8. Implement recycling and training plan.

NAMES OF IMPLEMENTATION CHAMPIONS

Estill County Schools

Estill County Economic Development

Estill County Business Community

Estill County along with Irvine and Ravenna Local Governments

PROJECT CONCEPT: Creation of a Local County/Community Website Portal

LONG TERM GOAL

The goal of this project is to create a Local County/Community Website Portal to serve as a clearinghouse of information by providing access to all pertinent links and websites for the citizens of Estill County.

WHY IT'S IMPORTANT

A county/community website portal would provide a new and vital way of delivering required services to citizens living in Estill County. By harnessing the power of the Internet, an electronic "one stop shop" could eventually be realized. A growing range of services could be accessed by residents of Estill from either their own homes, or from community facilities within the county. This would bridge the problem of rural isolation by making needed services available at a touch.

SPECIFIC MEASURABLE OUTCOMES

1. Increase community access to pertinent information and services
2. Creation and implementation of an established clearinghouse of information for Estill County residents
3. Increase in community comfort level of Estill County citizens through use of the Website Portal.
4. Promote technology usage through website portal communication device

STEPS TO ACHIEVE MEASURABLE OUTCOMES

1. Engage services of Kentucky.gov to assist with technical hosting, design and implementation.
2. Identify and decide on all pertinent links to be included
3. Create webpage design
4. Launch webpage
5. Market webpage to increase usage by the community

NAMES OF IMPLEMENTATION CHAMPIONS

Estill County Schools
Estill County Economic Development
Estill County Business Community
Estill County along with Irvine and Ravenna Local Governments

PROJECT CONCEPT: Creation of a Wireless Mesh Network for Estill County

LONG TERM GOAL

Focusing primarily on the city area, this project will increase public availability and technology comfort level by creating a “blanket” of Internet coverage over the community in the form of a wireless mesh network in Estill County.

WHY IT'S IMPORTANT

Creating this concentrated coverage area and increasing technology will allow all entities to deliver more applications and improved access and services to citizens in Estill County. With a goal of dramatically increasing public availability, awareness and acceptance of technology including online transactions and e-commerce, a wireless mesh network will provide for the increased comfort level and delivery of a variety of services over the Internet. This will allow Estill County to compete on a level playing field and create a positive environment for all facets of economic development within the county.

SPECIFIC MEASURABLE OUTCOMES

1. Increase broadband coverage to Estill County by creating a wireless network.
2. Identify and increase appropriate application offerings to citizens of Estill County.
3. Increase economic development by implementing additional technology applications.

STEPS TO ACHIEVE MEASURABLE OUTCOMES

1. Inventory local service providers to ascertain applications and coverage currently offered to the community.
2. Work with local county and city governments and local business to create a wireless mesh network of coverage for Estill County.
3. Develop a survey instrument to explore and identify applications of public interest. Use the survey to examine potential new applications.

4. Identify and consider implementation of technology applications specifically designed to allow businesses to interface with customers more readily and also assist in completing government applications, such as paying taxes, more efficiently.
5. Identify partners and entities to assist in implementation.
6. Develop and launch network.

NAMES OF IMPLEMENTATION CHAMPIONS

Estill County Economic Development

Estill County Business Community

Estill County along with Irvine and Ravenna Local Governments

PROJECT CONCEPT: Internet Safety and Awareness Program for Parents

LONG-TERM GOAL

This goal of this project is to raise the awareness and understanding of parents and children alike so they can better protect themselves from the perils and safety hazards on the Internet.

WHY IT'S IMPORTANT

The Internet has completely changed the way people access information. People now have a world of opportunity right at their fingertips. Unfortunately though, this also means that those with malicious or even criminal intent have the ability to access that same information. In fact, what was once considered private, personal information may in fact be widely available for all to see on the Internet. While some people may be vaguely aware of the risks this could pose, most do not fully understand the potential harm that an online predator could bring to a family or a community. Yet, with just minimal effort, community members can protect themselves from these risks if they know basic Internet safety tips. Thus, a course explaining how to employ these safeguards will add a heightened awareness and better protection from online predators for Estill County's most vulnerable - its children.

SPECIFIC MEASURABLE OUTCOMES

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

1. Hold an evening-long training course to assist local parents in protecting themselves and their children from the hazards of the Internet
2. Development of additional education and awareness materials to focus Internet safety precautions and dangers of online predators.
3. Increase the citizen usage rates of computers and broadband in Estill County.

STEPS TO ACHIEVE OUTCOME

1. Organize a core group of community leaders to sponsor and host the Internet safety training program.
2. Identify pre-packaged Internet safety courses to serve as a model.
3. Customize this model to fit the concerns and needs of the Estill County citizens.

4. Set a date, time and place for the course and then publicize and promote the availability of the course.
5. Hold the Internet safety course.
6. Review course feedback and determine when/how other courses may be needed.

NAMES OF IMPLEMENTATION CHAMPIONS

Estill County Schools

Estill County Public Library

Estill County along with Irvine and Ravenna Local Governments

PROJECT CONCEPT: E-commerce Resource Center for Local Businesses

LONG-TERM GOAL

This project aims to diversify Estill County's economic base by increasing the number of local businesses who sell their products online.

WHY IT'S IMPORTANT

E-commerce has become the fastest growing method of commerce in the world. By using the Internet to open worldwide markets, e-commerce has enabled even the smallest businesses to prosper and grow through online sales. While many small businesses may believe an online presence is too costly or too difficult to maintain, emerging technologies are making online sales nearly as simple and easy to operate as a traditional storefront. As a result, the Internet is proving to be a valuable marketplace for small business and in some cases online sales are actually surpassing traditional sales. Such unprecedented new markets provide small communities like those in Estill County the opportunity to diversify their economic base while growing their own hometown, small businesses. This economic growth means more jobs and more opportunities for the people in Estill County.

SPECIFIC MEASURABLE OUTCOMES

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

1. Create a working team of local businesses, local economic development and government representatives, and school technology representatives to develop the concept.
2. Pilot the project with one or two local businesses who are interested in e-commerce.
3. Measure success based on online availability and sales.

STEPS TO ACHIEVE OUTCOME

1. Organize a core group of community leaders to sponsor and host the internet safety training program.
2. Identify one or two local businesses that have an interest and products suitable for sales on the Internet.
3. Work with school technology programs to identify and assemble a knowledgeable web development team of students.
4. Design, launch and market Internet presence for pilot businesses.

5. Review website traffic and tailor marketing efforts to target specific markets for products being sold.
6. Measure and track traffic and online sales.

NAMES OF IMPLEMENTATION CHAMPIONS

Estill County Schools
Estill County Economic Development
Estill County Business Community
Estill County along with Irvine and Ravenna local governments

OTHER POTENTIAL ACTION ITEMS

Business and Industry

- Educate small businesses about telecommunications services and the benefits of using technology in business.
- Create a technologically capable workforce through training and skills development.
- Develop a local directory of information technology services.
- Identify ways to reduce the cost of connecting to the Internet and find potential funding sources for small businesses.
- Offer training programs and workshops at night and on weekends to make them more accessible to community-based organizations.
- Provide technical training programs for non-profits and for-profits to meet their special needs.
- Promote awareness and training to overcome the Internet fear factor.
 - How to determine good information from bad – scams, phishing, etc.
 - How to protect yourself
- Encourage Internet access from home for education, business, shopping, eBay and banking.
- Offer basic training classes on how to use e-mail, search the Internet and perform research.
- Encourage more hotspots in locations such as bookstores, businesses and libraries.

Education

- Provide training in information technology resources, especially for support staff and classified personnel.
- Establish a countywide consortium made up of public and private schools and adult education to consolidate technology planning in the education sector.
- Build relationships between schools and broadband providers.
- Develop strategies for bridging the digital divide, such as after-school programs, community centers, etc.
- Expand wide-area resources and increase bandwidth.
- Explore options for opening school computer labs to the community after hours.
- Make it easier for low-income families to access computers and the Internet to facilitate communications with teachers and schools.

Healthcare

- Identify funding methods for enhancing educational infrastructure.
- Educate providers on available technologies and the benefits of technology in medicine.
- Seek grants to upgrade technology and train medical staff.
- Develop better strategies to retain technical and professional healthcare staff.
- Create a focus group to identify the barriers to using technology in private practice.
- Show doctors how technology in their offices is affordable and beneficial to the patient and their practices.
- Provide basic technology education for healthcare providers, using state and community and technical colleges, adult education, distance learning and the library.

Library

- Investigate cost-efficient ways to increase bandwidth to rural libraries.
- Increase the number of public-access computers.
- Provide ports or wireless access points where patrons with laptop computers can connect to high-speed lines.
- Develop expanded Internet training programs for the public, targeting specific needs and groups.

- Increase marketing of the current capabilities and services of the library system.
- Support county applications for technology grants that will also benefit the library system.
- Explore options to increase customer-initiated transactions online, such as paying fines and accessing subscription databases.
- Make more e-books available.
- Communicate which training classes are currently available.
- Coordinate with schools, businesses, adult education and the UK extension office.

Higher Education

- Develop wireless networks to allow students and faculty seamless access to the campus network.
- Develop advanced applications like Voice over Internet Protocol (VoIP) to save resources and enhance services.
- Continue to increase the number of web-enhanced and fully web-based courses.
- Improve countywide access to distance learning classes.
- Provide continuous training to all educators and staff on technology use and applications.
- Encourage citizens to take advantage of the online classes already available.
- Increase computer literacy by introducing new classes and training techniques.
- Explore the option of securing cooperation and funding to supply all incoming freshmen with a laptop computer to level the playing field of incoming students.

Community-Based Organizations

- Identify the community-based organizations in the county and list their websites.
- Develop a list of potential funding sources for technology acquisition.
- Develop collaborative partnerships with educational institutions and corporate partners to provide web services/design and equipment.
- Develop a networking event to share information, ideas, and innovations in technology deployment.

- Recruit university and high school students to develop websites.
- Encourage community-based organizations to use e-mail and the web to reduce the use of paper mail.
- Help community-based organizations find locations to access the Internet.
- Provide training on web page development, including the use of free web pages.
- Identify and list the community-based organizations in the county, as well as their websites.

Government

- Improve the ability to conduct business with government over the Internet, such as permitting, purchasing and payments.
- Increase the number of public access terminals in the county.
- Encourage inter-governmental sharing of software, information and e-commerce concepts.
- Develop more e-government applications that provide value to the consumer.
- Seek grant funding to improve infrastructure and support functions.
- Develop partnerships with businesses and grassroots organizations to improve technology usage countywide.
- Create a strategic plan to improve all automated systems, re-engineer manual procedures and restructure how departments collaborate.
- Increase city-county collaboration.

Tourism, Parks and Recreation

- Improve and correct local links and identification.
- Establish a countywide web portal to share information, market the community, list attractions and hotels and provide a calendar of events.
- Encourage more local companies to sell their goods and services online to promote local businesses and increase sales.
- Develop affordable, high-speed services for rural parts of the county.
- Use technology to market county attractions to potential in-state and out-of-state tourists.

- Get all organizations and hotels online with links to the tourism website.
- Create websites that are both informative and interactive to market local attractions to potential in-state and out-of-state tourists.

Agriculture

- Increase broadband awareness among the agricultural community.
- Develop educational materials to help the agricultural community to understand the importance of broadband.
- Create a list of providers to help the agricultural sector understand what service is available and from whom.
- Provide high-speed Internet access at the UK Cooperative Extension office.
- Consider creating a local agricultural portal for sharing news and market information.
- Create and promote materials for the new eXtension service, a national web-based information and education network providing 24/7/365 access to objective, science-based information from universities and partners nationwide.