



MADISON 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 Madison 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 Madison County’s technology needs, particularly related to computers, broadband and Information Technology.

Summary

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

ConnectKentucky recommends that Madison 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 Madison 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 Madison 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.

Utilizing broadband and technology, businesses with multiple locations can save money by implementing Voice over Internet Protocol (VoIP). VoIP allows businesses to call between those locations with little or no costs. It allows users to travel anywhere in the world and still make and receive phone calls. Additionally, VoIP allows for collaboration not available using traditional telephone methods.

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 facilities 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

Madison County businesses and industries employ a total of 28,226 workers.

The leading industries by employment are:

1. Services with 9,280;
2. Manufacturing with 5,166; and
3. Trade, Transportation, and Utilities with 5,007 employees.

The leading employers in Madison County are:

1. EnerSys Inc. with 475;
2. Mikron Industries Inc. with 300;
3. Richmond Auto Parts Technology Inc. with 300; and
4. The Okonite Company with 300 employees.

The main broadband providers in Madison County are Adelphia Time Warner Cable and BellSouth DSL. There is currently 85 percent broadband coverage in the county. There are two industrial parks that are approximately a mile apart. The cities of Richmond and Berea are looking at possible city-wide wireless broadband deployments.

The Assessment

- **Networked Places** – In the category of networked places, Madison County's business and industry sector is currently at stage 2 on a 0 to 5 scale with some office employees having always-on connections to the Internet at their desks.
- **Applications and Services** – In the area of technology applications and services, the business and industry sector is currently at stage 3 on a 0 to 5 scale with most businesses having informational websites. Some retail websites can accept credit card transactions. In addition, some businesses participate in the electronic supply chain.
- **Leadership** – In terms of technology leadership within the business community, Madison County is currently at stage 2 on a 0 to 5 scale. In this category some view the Internet as essential to business operations and have employees that are trained on basic applications.

The Vision

While the Madison County eCommunity Leadership Team found that business and industry's current use of technology is somewhat limited, the team has an aggressive vision for how the county's business and industry sector will be using technology in two years. The team set goals that would move the business and industry sector to stage 4 in all three categories outlined above. 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 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

K-12 EDUCATION

Madison County's K-12 system consists of one preschool, 10 elementary schools, three middle schools, two high schools, The Bellevue Education Center and The Madison County Area Technology Center.

Madison County Schools, <http://www.madison.kyschools.us>, had a district enrollment of 9,631 students during the 2004-2005 school year. The Madison County School District serves nearly 10,000 students in the kindergarten through the 12th grade. The district's Early Childhood Program serves about 350 preschoolers. They also operate the Madison County Day Treatment Center, the Madison Alternative School and 11 family/youth resource centers that serve students and their families. They are continually working to improve the instructional programs offered in their schools.

Students receive a well-rounded educational experience. Madison County students consistently excel in many areas, earning state and national recognition for their accomplishments in academics, sports and extra-curricular activities. Facility improvements are an ongoing project throughout the district. A new \$10 million Kingston Elementary School opened in August 2004, a \$1.8 million auditorium was completed at Madison Southern High School in 2005, and a new auditorium is currently under construction at Madison Central High School. A new elementary school is also under construction on the Robert R. Martin By-Pass. The new school was scheduled to open in August 2006.

	Attendance Rate	Retention Rate	Dropout Rate	Graduation Rate	College	Military	Work	Voc/Tech Training	Work & Part-Time School	Not Successful
District	94%	2.5%	1%	91.6%	60%	3.5%	27.3%	3.7%	2.3%	3.3%
State	94.3%	3.3%	2.2%	81.5%	54.7%	2.6%	27.5%	4.8%	6.4%	4%

A wide variety of technology is available within the district's schools. Teachers and administrators utilize various software packages in preparing instruction, presenting lessons and developing curriculum. The district-wide curriculum is available on the district website.

Principals and guidance counselors use software to evaluate student scores from state-mandated tests in order to identify areas of concern within the curriculum.

Students and teachers use an assortment of tools for research and instruction. A selection of software programs are used to promote learning and provide practice in all academic content areas. Students use word processing and spreadsheet skills in the development of reports and portfolios, while Internet-based tools, including the Kentucky Virtual Library and webquests, facilitate online discovery.

An automated library system tracks school materials, including books and portable technology, such as laptop computers, scanners, projectors, SMART Boards and digital cameras. E-mail for staff and students, along with classroom telephones, are tools used across the district to improve communication with parents, other teachers and the community.

	Spending per Student	Student Teacher Ratio	Student/Computer Ratio	% of Classrooms with at Least One KETS Workstation With Internet Access
District	8053	17:1	5.3:1	100
State	8663	16:1	3.7:1	100

Madison County currently has three non-public schools. They are:

- Bluegrass Christian School with an enrollment of 45 students in grades PK-6;
- Harvest Academy with an enrollment of 88 students in grades PK-12; and
- St Mark School with an enrollment of 209 students in grades PK-8.

The Assessment

In its evaluation, the Madison 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, Madison County’s K-12 education sector is currently at stage 3 on a 0 to 5 scale. Most schools provide at least one computer for every four students in grades K-12. 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 some schools having an interactive website that offers access to homework assignments and communication with teachers and administrators. Additionally, many teachers can incorporate Internet material into the curriculum and welcome e-mail from parents and students.
- **Leadership** – In terms of technology leadership within the education sector, Madison 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. Schools are using consultants to take advantage of e-rate and other school discounts. In addition, teacher training on new technologies is a priority at most school districts.

The Vision

The Madison 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 Madison County eCommunity Leadership Team include reaching stage 4 in all three categories outlined above. The vision includes:

- Some high school students are **provided their own laptop** computers at school
- Many classroom teachers have access to **digital projection capabilities**
- Most middle and high schools have **video programs that allow students to produce** and share shows on a public network
- Some schools use **wireless sensors to monitor energy** consumption
- Many schools have an **interactive website** that offers access to homework assignments and e-mail contact with teachers and administrators
- **All teachers** meet National Educational Technology Standards
- **Most students** meet National Educational Technology Standards
- Parents and family members are encouraged to **participate in student learning** via e-mail and online applications

- **Online classes are available** to high school students via Internet-based instruction, including college online classes and Kentucky Virtual High School
- Some schools have **comprehensive plans for learning activities** using technology in the classroom
- New hires are required to have **experience using new technology** in the classroom.
- **Computer labs** are made available to family and community members
- Schools take responsibility **for continuing e-rate and other discounts**

HEALTHCARE

Pattie A. Clay Regional Medical Center, www.pattieaclay.org, is a 105-bed acute care facility, steeped in history and tradition, delivering all primary care and extensive secondary level healthcare services for Madison and surrounding counties. The hospital boasts an active medical staff of 69 physicians in 23 specialty areas of care.

The Madison County Health Department is another healthcare provider in the county. The department has a website which gets approximately 700 hits monthly.

The Assessment

The Madison 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, Madison 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. Moreover, digital instruments and imaging equipment are being acquired.
- **Applications and Services** – In the category of technology applications and services, the healthcare sector is currently at stage 2 on a 0 to 5 scale with some providers having informational websites and storing patient records electronically. Some offices are electronically transmitting records to insurers for reimbursement. Furthermore, telemedicine is being evaluated.
- **Leadership** – In terms of technology leadership within the healthcare community, Madison County is currently at stage 2 on a 0 to 5 scale with some providers having begun the conversion to electronic medical records. In addition, some providers are investigating how to deploy wireless technologies for mobile workers.

The Vision

The Madison 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 of moving to stage 4 in all three categories on a 0 to 5 scale. The team's vision includes:

- **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**

LIBRARIES

The Madison County Public Library has three components: the Richmond branch, which is the main branch, the Berea branch and the Bookmobile. The library's two branches have wireless access available and the Bookmobile is able to communicate with the main branch through cellular broadband. In addition, the branches have downloadable media available for patrons to use. Library administrators are looking to add more services to the Bookmobile. There are about 10 public access computers in each building and some laptops on the Bookmobile. However, the Bookmobile can only have one laptop online at a time because of the cellular broadband.

The Madison County Public Library website, www.madisonlibrary.org, is really helpful offering many links, an online catalog and a wealth of information about the libraries in Madison County.

The Assessment

The Madison 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. In Madison County patrons may review their accounts online and pay fines by credit card. Furthermore, patrons 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 3 on a 0 to 5 scale. The library research desk is an online community resource. Staff training on new technologies is a priority at the library and the library is using consultants to take advantage of e-rate and other discounts. Moreover, library policies reflect appropriate filtering requirements.

The Vision

The Madison 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 in the categories of networked places and applications and services and also moving to stage 4 in the category of leadership on a 0 to 5 scale. The vision includes:

- Most public libraries offer patrons a **54 mbps or faster wireless network**
- Public libraries offer **live video consultations**
- Public libraries allow patrons to **borrow e-books** over the Internet
- They help patrons **conduct research and assist with legal access** to copyrighted databases and publications, including music and movies
- **Two-way videoconferencing** is available to the general public

- Libraries 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**

HIGHER EDUCATION

The higher education sector in Madison County consists of Berea College, Eastern Kentucky University and National College of Business and Technology. The vision of the higher education sector is to facilitate a regional stewardship initiative which entails using regional university assets to help the local communities.

At Eastern Kentucky University, www.eku.edu, visitors will find a dynamic, vibrant community of teachers and learners. The school offers outstanding academic and mentoring programs, exciting opportunities for personal growth and a students-first philosophy that guides all they do.

Berea College, www.berea.edu, founded in 1855 as the first interracial and co-educational college in the South, promotes understanding and kinship among all people, service to communities in Appalachia and beyond and sustainable living practices which set an example of new ways to conserve their limited natural resources.

The Assessment

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

- **Networked Places** – In the category of networked places, Madison County's higher education sector is currently at stage 5 on a 0 to 5 scale with many classrooms having been remodeled to include network connections and power outlets at every seat. Most students bring laptop computers or other network-enabled devices to class. In addition, many classrooms have video equipment for recording lectures.
- **Applications and Services** – In the category of technology applications and services, the higher education sector is currently at stage 4 on a 0 to 5 scale. Many of the faculty are trained to use the Internet for instruction and use digital content and/or web-based content for instruction for their classes. Students use chat rooms to discuss lessons and ask questions of instructors outside of class hours. Moreover, online registration, catalogs and payment are available in Madison County.
- **Leadership** – In terms of technology leadership within the higher education community, Madison County is currently at stage 5 on a 0 to 5 scale. 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.

The Vision

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

- 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

COMMUNITY-BASED ORGANIZATIONS

There are approximately 323 community-based organizations in Madison County, including the Humane Society Animal League for Life, Kiwanis, Rotary, the Boy Scouts, Daniel Boone Chapter of the American Red Cross, Battle of Richmond Association and the Girl Scouts.

Assessment

The Madison 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, Madison County's community-based organization sector is currently at stage 2 on a 0 to 5 scale. Some organizations have computers that are no older than three years old, many organizations have e-mail, and some office employees have always-on connections to the Internet at their desks.
- **Applications and Services** – In the category of technology applications and services, the community-based organization sector is currently at stage 2 on a 0 to 5 scale with some organizations having an informational website.
- **Leadership** – In terms of technology leadership within the community-based organization community, Madison County is currently at stage 2 on a 0 to 5 scale with organizations being minimally involved in community economic development issues. Little or no plans exist for better utilizing telecommunications services and technologies. In addition, some organizations provide technology training to their staff at least once a year.

The Vision

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

- Most community-based organizations with at least five paid staff have at least **one computer for every three employees**
- Many organizations have **e-mail**
- Many organizations have an **informational website**
- Many local chapters are able to **share data electronically** with the national parent organization
- Some organizations **accept online donations**

- Some organizations are **involved in specific economic development initiatives**, but most do not participate
- Some organizations plan to use **telecommunications services and technologies** within the next year
- Some organizations provide **technology training to their staff** at least once a year

GOVERNMENT

Government entities in Madison County are:

- Madison County
- Richmond (County Seat)
- Berea

The official Madison County website: <http://www.madisoncountky.us/>, ranks 9th out of the 60 official county websites across the state.

The official Richmond city website: <http://www.richmond.ky.us/>, ranks 21st out of the 116 official city websites across the state.

The official Berea city website: <http://www.cityofberea.com/>, ranks 27th out of the 116 official city websites across the state.

The EMS in Madison County recently had mobile data terminals put in place. The vision of the local government is to improve inter-governmental cooperation with respect to technology development within the county.

The Assessment

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

- **Networked Places** – In the category of networked places, the government sector is currently at stage 3 on a 0 to 5 scale with many employees having e-mail accounts, and some field workers collecting data on laptop computers or palmtops. Additionally, webcams are starting to be deployed.
- **Applications and Services** – In the category of technology applications and services, the government sector is currently at stage 3 on a 0 to 5 scale. Some e-government applications are available, such as simple building permit applications, e-mail listservs and some downloadable forms. E-mail from residents is manually routed to the appropriate departments. Lastly, some agencies routinely use the network to share data.
- **Leadership** – In terms of technology leadership within the government community, Madison County and its associated governments are currently at stage 4 on a 0 to 5 scale with some agencies having 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. Furthermore, elected officials understand the importance of the network for economic development and quality of life.

The Vision

The Madison County eCommunity Leadership Team has developed goals to provide a framework for robust e-government functions in the next two years, which will move the categories of applications and services and leadership to stage 5 and move the category of networked places to stage 4 on a 0 to 5 scale. The team's vision includes:

- 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
- **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

Some of the recreational and tourism points of interest in Madison County include Eastern Kentucky University's Hummel Planetarium, Bybee Pottery, Deer Run Stable, Fort Boonesborough State Park, White Hall State Historical Site, 11th Kentucky Cavalry, Gibson Bay Golf Course and Hometown Greetings.

The Assessment

The Madison 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, Madison County's tourism, recreation, and parks sector is currently at stage 3 on a 0 to 5 scale. Most office employees have always-on connections to the Internet at their desks and some mobile workers have laptop computers and can access the office network remotely. Moreover, affordable videoconferencing facilities are available.
- **Applications and Services** – In the category of technology applications and services, the tourism, recreation, and parks sector is currently at stage 3 on a 0 to 5 scale with most facilities having an informational website and accepting credit card purchases. In addition, some facilities participate in an electronic supply chain
- **Leadership** – In terms of technology leadership within the tourism, recreation, and parks sector, Madison County is currently at stage 3 on a 0 to 5 scale with some facilities permitting some employees periodically to telework and some facilities encouraging employees to take work-related classes online. Thus, employee training on new technology is a priority.

The Vision

The Madison 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 all categories to stage 4 on a 0 to 5 scale. The team's vision includes:

- Some facilities use **Voice over Internet Protocol (VoIP)** to save money
- Some office workers have converted from **desktop computers to portable devices** with wireless connections
- Some office computers have **webcams for videoconferencing**
- Some facilities outsource most of their **computing services**
- 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

AGRICULTURE

In 2002, there were 1,396 farms in Madison County comprising 218,304 acres with an average of 156 per farm. The total market value of production was \$35,640,000 with an average of \$25,530 per farm. Crop sales accounted for \$12,139,000, and livestock sales accounted for \$23,501,000 of the total value in 2002. Government payments totaled \$510,000, averaging \$1,833 per farm. Madison County is ranked 27th in the value of agricultural products sold in the state. The leading agricultural products in sales in Madison County are:

1. Cattle and calves with \$21,853,000;
2. Tobacco with \$9,082,000; and
3. Other crops and hay with \$1,528,000.

Madison County tobacco farmers received \$17,288,187 in burley payments from the Tobacco Buyout Program in 2002, and there were no dark payments.

The Assessment

The Madison 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, Madison County's agricultural sector is currently at stage 2 on a 0 to 5 scale with some growers, suppliers and processors having always-on connections to the Internet at their desks.
- **Applications and Services** – In the category of technology applications and services, the agriculture sector is currently at stage 2 on a 0 to 5 scale with some growers, suppliers, and processors having an informational website, and some growers, suppliers and processors transmitting or receiving some orders electronically.
- **Leadership** – In terms of technology leadership within the agricultural community, Madison County is currently at stage 2 on a 0 to 5 scale with the Internet being seen as essential to business operations. Therefore, employees are trained on basic applications.

The Vision

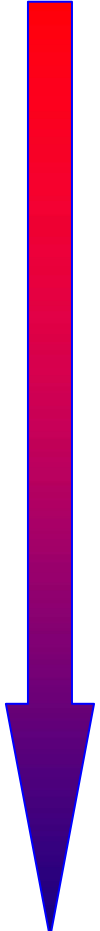
The Madison County eCommunity Leadership Team sees great potential for the use of technology in the agricultural sector but understands the industry is limited in its resources and ability to implement changes within a brief period. The team has set goals to move to stage 3 on a 0 to 5. The team's vision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

- Most growers, suppliers and processors have **always-on connections** to the Internet
- Some mobile workers have laptop computers and can access the **network remotely**
- **Affordable videoconferencing facilities** are available in the community
- Most growers, suppliers and processors have **informational websites**
- Some websites can **accept credit card** purchases
- Some growers, suppliers and processors participate in an **electronic supply chain**
- Some suppliers and processors permit employees **periodically to telework**
- Some growers, suppliers and processors encourage employees to take **work-related classes online**

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

■ Madison 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.

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


■ Madison 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.	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	<p>● 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.</p>	<p>● 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.</p>	<p>● 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.</p>
	4	<p>■ 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.</p>	<p>■ 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.</p>	<p>■ 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.</p>
5	<p>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.</p>	<p>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.</p>	<p>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.</p>	

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

■ Madison 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.	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

Madison County


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

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

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

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


	Stage	Networked Places	Applications & Services	Leadership
<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 20px;">Least Connected</div>  <div style="margin-top: 20px;">Most Connected</div> </div>	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

Madison County

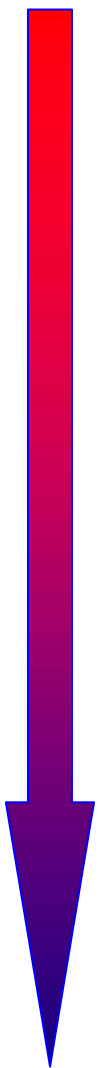
● Madison County's Benchmark Assessment Results are presented in red.

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

	Stage	Networked Places	Applications & Services	Leadership
 <p>Least Connected</p>	0	Not using the Internet.	No computer use. No website. Use phone and postal mail.	No technology or telecom plan.
	1	Accessing the Internet through a limited dial-up connection.	Currently using e-mail and possibly other basic Internet functions.	The Internet is seen as a possible enhancement and marketing tool.
	2	<p>● Some organizations have computers that are no older than three years old. Many organizations have e-mail. Some office employees have always-on connections to the Internet at their desks.</p>	<p>● Some organizations have informational websites.</p>	<p>● Organizations are minimally involved in community economic development issues. 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.</p>
	3	<p>■ Most organizations with at least five paid staff have at least one computer for every three employees. Many organizations have e-mail.</p>	<p>■ 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.</p>	<p>■ 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.</p>
	4	<p>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.</p>	<p>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.</p>	<p>Some organization leaders are actively involved in community economic development issues and there are visible leaders taking a significant role in economic development. 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.</p>
	5	<p>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.</p>	<p>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.</p>	<p>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.</p>
Most Connected				

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

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

Tourism, Recreation and Parks	Madison County
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● Madison County's Benchmark Assessment Results are presented in red.


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

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

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



D. HOW DO WE GET THERE?

D. HOW DO WE GET THERE?

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

eAwareness – Education & Promotion

Project Leaders: tbd

Team Members: tbd

This project will be a cooperative effort between schools, the chamber, the public library and local government to improve knowledge, awareness, skills and the use of technology in community.

- Overcome the Internet fear factor creatively using basic training to educate citizens about the benefits of going online, including online banking and bill payment, entry fees, registration, shopping and eBay.
- Address safety and security issues by offering i-safe training, Info Ethics, identify protection, etc.
- Develop and implement a “Reverse Mentoring” program to engage students in technology support issues.
- Work with KDE (Ann Riggs) to provide discounts on computers and software via schools.
- Host a “Technology Weekend” at the Mall - Identify creative ways to inform people of what is available (marketing and public relations) working with all organizations as a community service to raise awareness, peak interest and show the benefits.
- Engage parents with online access to schools via STI Home module & Online Tutor

eCommerce - Online Information

Project Leaders: tbd

Team Members: tbd

Members of this team will work toward educating small businesses on what technology is available and how it can help them. In addition, they will improve the online presence for the entire county, and keep information relevant, integrated and useful to ensure that the right information is available online, and is easily obtainable.

- Create a directory of various services, websites, and technology resources available so individuals and businesses can easily find technology related support and guidance.
- Enable small businesses about how to implement technology and have an online presence.
- Encourage Chamber to offer “Lunch and Learn” type programs on technology solutions.
- Provide training on products such as Quickbooks, Open Office, VoIP, VPN, etc.
- Integrate information and provide an easy user interface for the entire community to reduce the number of isolated pockets “doing their own thing.”

eGovernment – Online Services

Project Leaders: tbd

Team Members: tbd

This project will work to improve collaboration and cooperation between government agencies, schools, businesses and citizens, as well as provide available products and services more effectively throughout the county

- Enable online bill payment.
- Create a community-wide shared calendar.
- Utilize community centers as shared technology resource areas for mentoring and public technology support services - Richmond to create the same in basement of City Hall.
- Enhance City/County collaboration for improving online information and services.
 - Work with business and schools on community centers.
 - Include application and registration forms for tourism, recreation and sports, among others.
- Enable online constituent responses for each Magistrate.
- Enhance online information available for tourism and parks.

Project Concept Outline: Awareness & Education

Goal

The goal of this project is to organize, promote and deliver technology education, training and awareness to the community. Members will develop a strategy and plan to help the community become more aware about the opportunities and benefits available through the use of the Internet and computers for regular daily activities. Some suggestions mentioned include adult coaching, awareness of need and easy access.

Importance

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

Outcomes

1. An integrated approach to the organization, promotion and delivery of technology education, training and awareness for the community.
2. Inventory of all technology training resources available in the county.
3. Increased citizen training and usage of computers and the Internet.
4. Improved basic computer skills and knowledge levels for residents encouraging greater economic opportunities.
5. Affordable computers and software via KDE contract.

Steps

1. Identify all organizations performing technology education and training services.
2. Create a list of training classes currently being offered.
3. Determine what additional classes need to be included.
4. Develop a collaborative and cooperative approach for delivery between all organizations.
5. Educate community through local banks about online banking.
6. Partner with local media to provide knowledge to community through local newspaper and radio.
7. Host a "Technology Weekend" event at the local mall.
8. Partner with local schools for a reverse mentoring program.
9. Engage high school students to provide part-time help.
10. Provide computers and training for senior citizens

Participants

Eastern Kentucky University
Berea College
Madison County Public Library
Madison County Adult Education
Madison County Extension Service
Madison County Schools

Project Concept Outline: eCommerce – Online Information

Goal

This project will work toward an increased online presence for local organizations via technology training and the development of a community portal and websites for local businesses, organizations and agencies.

Importance

Businesses of all sizes and industries benefit from the implementation of high-speed Internet. For smaller businesses, technology creates an even playing field with companies much bigger than themselves. E-commerce allows the small or even home-based business 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.

Outcomes

1. New and enhanced websites for local businesses and organizations.
2. Improved communications and marketing via increased online presence.
3. Enable business-to-business interaction and social networking.
4. Directory of available technology resources within county and surrounding area.
5. Coop program for students to assist local businesses.
6. Increased information available online for every sector of the community, including government, business and tourism.

Steps

1. Enhance websites for Chamber of Commerce with list of businesses, technology resources and useful sites.
2. Integrate community portal for easier navigation and consistency in linking sites together.
3. Create a community calendar for all local events and activities.
4. Enhance websites for tourist facilities and attractions.
5. Offer classes for website design and maintenance for local businesses in conjunction with the Education project team.
6. Provide basic information online about resources, services, meetings, forms and events in the county.

Participants

Madison County Chamber of Commerce
Madison County Public Library
Madison County Economic Development
Madison County Schools
County and City Government

Project Concept Outline: eGovernment – Online Services

Goal

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

Importance

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

Outcomes

1. Create county-wide calendar.
2. Determine the public need for electronic access to government.
3. Develop a strategy for significantly reducing visits by the public to government offices for routine transactions.
4. Identify applications specifically designed to help businesses interface with governments more efficiently.
5. Integrate information and provide an easy user interface for the entire community.

Steps

1. Create an online shared calendar for Madison County.
2. Review current e-government applications to identify areas for improvement.
3. Examine potential e-government applications desired - eg., accepting credit cards.
4. Identify high-volume services to target for automation/online service.
5. Identify partners and entities to assist in implementation.
6. Coordinate efforts for shared community technology centers.

Participants

Madison County Fiscal Court
Emergency Management Services
Madison County Planning and Zoning
City of Richmond
City of Berea
Madison County Parks and Recreation
Madison/Richmond/Berea Tourism

POTENTIAL ACTION ITEMS

Business and Industry

- Increase variety of broadband providers for the two industrial parks within the county - one already has fiber installed.
- Educate small businesses about telecommunications services and the benefits of using technology in business.
- Develop a local directory of information technology services.
- Teach businesses how to use e-commerce to sell to public agencies.
- Promote awareness and training to overcome the Internet fear factor.
 - How to determine good information from bad – scams, phishing, etc.
 - How to protect yourself
- Provide training for online banking to educate citizens about the benefits of online banking including speed, safety, convenience and cost savings.
- Encourage Internet access from home for education, business, shopping, eBay and banking.

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 and community centers.

- Expand student, parent and teacher access to student information such as homework assignments and attendance records.
- Create training, internships or career ladders for technical support staff.
- Encourage parent involvement through technology
 - Provide iSafe training for students and parents
 - Encourage parents to access and use STI and i-High sites
 - Provide laptops for students to check out for home use
- Add links to teachers' webpages for homework assignments, tests and other school-related materials.

Healthcare

- Facilitate the adoption of electronic medical records.
- Increase usage of the county health department's website.
- Educate providers on available technologies and the benefits of technology in medicine.
- Provide safe, vendor-neutral, information technology training for healthcare providers, using the state and community and technical colleges, adult education programs and libraries.
- Using public and private partnerships, ensure that small providers and rural areas have access to affordable, high-speed networks so they can participate in telemedicine and teleconferencing services.
- Seek grants to upgrade technology and train medical staff.
- Develop better strategies to retain technical and professional healthcare staff.
- Create a focus group to identify the barriers to using technology in private practice.
- Educate doctors about how they can use technology in their offices.

Library

- Provide kiosks in community designed to keep people interested and connected to library services.
- Expand Bookmobile network to cover more rural areas.
- Provide more staff training for Internet usage.
- Provide high-speed Internet access in Bookmobile to allow Internet access at community stops.
- 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.
- Improve the current website and expand the library's ability to interact with patrons.
- Make library services more user-friendly.
- Offer more instruction on how to take advantage of the web's resources.
- Support county applications for technology grants that will also benefit the library system.

Higher Education

- Provide affordable Internet training for the community.
- Develop advanced applications like Voice over Internet Protocol (VoIP) to save resources and enhance services.
- Substantially increase the number of web-enhanced and fully web-based courses.
- Improve countywide access to distance learning classes.
- Identify an ongoing source of funds for technology acquisition and support.
- Provide continuous training to all educators and staff on technology use and applications.
- Provide information technology resources to the community as well as educate the end-users in the use of technology.
- Inventory and market existing online training opportunities in the county.
- Encourage institutions of higher education to work together to develop online courses and programs.
- Encourage citizens to take advantage of the online classes already available.

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.
- Introduce a community portal that expands use of a variety of applications.
- Help community-based organizations find locations to access the Internet.
- Facilitate collaboration to share the costs of technology and expertise.

Government

- Improve the City of Berea's website so that it is more interactive.
- Improve intergovernmental cooperation within the county in the area of technology development.
- 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.
- Allow the donation of appropriate surplus computers to non-governmental organizations and individuals.
- Develop more thorough employee technology training programs.
- Seek grant funding to improve infrastructure and support functions.
- Develop partnerships with businesses and grassroots organizations to improve technology usage countywide.
- Increase city-county collaboration.

- Enable online license renewals, voter registration, and court record searches and voting.
- Digitize Property Valuation Administration records, maps and utilities for online access.
- Create a partnership of public and private entities to develop a regional portal.

Tourism, Parks and Recreation

- 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.
- Develop programs to set up public access points in malls, public buildings and farm worker communities.
- Use webcams at the parks for online viewing.
- Make electronic brochures and information available for downloading.

Agriculture

- Increase broadband awareness among the agricultural community.
- Create a list of providers to help the agricultural sector understand what service is available and from whom.
- 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.
- Promote online sales and auctions.
- Use GPS and Radio Frequency Identification on farms.